

ADVANCING THE PUBLIC GOOD:

Transforming the
University of Minnesota
into a world-class
research university

GOAL:

Become One of the Top Three Public Research Universities in the World.

ESSENTIAL TO ACHIEVING OUR GOAL:

Exceptional Students >

Exceptional Faculty and Staff >

Exceptional Organization >

Exceptional Innovation >

ACADEMIC INITIATIVES PROGRESS REPORT: SNAPSHOT

JULY 2004

President initiates formal strategic positioning effort.

FEBRUARY 2005

Goal of becoming top 3 is endorsed unanimously by Board of Regents.

JULY 2006

6 colleges closed. 3 new colleges open their doors:

- College of Design
- College of Education and Human Development
- College of Food, Agricultural and Natural Resource Sciences

OCTOBER 2006

New undergraduate graduation rate goals endorsed by Board of Regents.

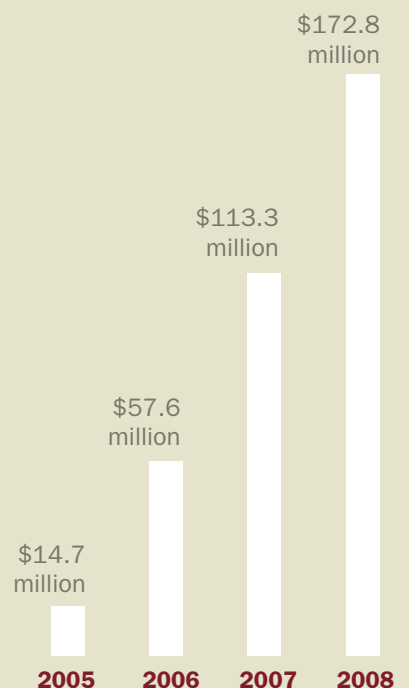
JUNE 2007

Board of Regents endorsed a new faculty tenure code, increasing the rigor of criteria for promotion and tenure and enhancing work-life balance for faculty.

SEPTEMBER 2007

Department of Writing Studies opened and the Baccalaureate Writing Initiative began with 175 sections of first-year writing.

TRANSFORMING THE UNIVERSITY CUMULATIVE INVESTMENT DOLLARS ACADEMIC INITIATIVES



December 2007

Dear Colleague:

It is my pleasure to share with you our annual academic report on **Transforming the University**, the University of Minnesota's journey to become one of the top three public research universities in the world.



The new ideas, energy, and enthusiasm for this bold goal are evident among faculty, staff, and students on campus. Undergraduate applications, for example, have reached an all-time high, up 40.6% since our strategic positioning effort began in 2004. We have recruited 426 new faculty during the past two years, nearly halfway to our 5-year goal of 1,000 new faculty. Measured, dramatic progress is being made in each of our four strategic areas: **exceptional students; exceptional faculty and staff; exceptional organization; and exceptional innovation.**

In the last four budgets, we invested over \$358 million dollars into new academic initiatives, including \$172.8 million dollars this year, with major changes in the Undergraduate Research Program, graduate student financial packages, major interdisciplinary research institutes, and a new campus in Rochester. We are thrilled to be making the state's land-grant university a world-class destination.

Please read about the exciting new academic initiatives at the University of Minnesota during 2007, and for more detail, peruse President Robert Bruininks' report to the Board of Regents (available at www1.umn.edu/systemwide/strategic_positioning/). We are enthusiastic about our progress. We hope you will share our good news with your colleagues and friends.

Sincerely,

A handwritten signature in black ink that reads "E. Thomas Sullivan". The signature is written in a cursive, flowing style.

E. Thomas Sullivan
Senior Vice President for Academic Affairs and Provost

We attract and educate exceptional students through exciting and relevant new academic programs.

UNDERGRADUATE LEARNING AND DEVELOPMENT OUTCOMES

The University attracts exceptional students. We have an obligation to provide an exceptional educational experience. To guide this effort, faculty and staff have developed two sets of outcomes to frame our concept of an undergraduate education: learning outcomes for the curriculum, and developmental outcomes for the “whole” university experience. This innovative approach to developing outcomes that span both the academic and personal side of the undergraduate experience has made the University a national leader in this area.

INTERNATIONAL OPPORTUNITIES FOR UNDERGRADUATES

Our students continue to study abroad in record numbers—ranking 6th in the latest national report—and we continue to attract the best and brightest students from around the world. This fall, the number of international undergraduates on our campus more than doubled. New grants for faculty and staff are supporting innovative ways to bring together study abroad returnees and international students to encourage intercultural engagement and student development.

Exciting new academic support initiatives:

- Summer Bridge Program
- Access to Success Program for incoming students in the College of Education and Human Development; College of Food, Agricultural and Natural Resources Sciences; and the College of Liberal Arts
- SMART Learning Commons—provides a variety of learning support services
- Multicultural Center for Academic Excellence
- Individually-tailored academic advising, mentoring, and tutoring services
- Electronic learning platform



Two students enjoy a hutong tour in Beijing.

IN PROGRESS

Campus-Wide Honors Program (Fall 2008)

Welcome Week Program (Fall 2008)

Promise of Tomorrow Scholarship Drive,
with over \$197 million raised to date

Globalization of our students' experience

BACCALAUREATE WRITING INITIATIVE & DEPARTMENT OF WRITING STUDIES

The new **Baccalaureate Writing Initiative** brings a rigorous, coherent, research-based approach to writing across the entire undergraduate experience. This Writing Initiative ensures that the University of Minnesota will become a national leader in writing instruction, curriculum, and research.

The initiative is made up of these components:

- A new academic department, the **Department of Writing Studies**, in the College of Liberal Arts provides intellectual leadership in research and teaching of writing. This new department was created by bringing together internationally recognized faculty, staff, and programs from four formerly separate units: the Department of Rhetoric, the Department of Postsecondary Teaching and Learning, the Center for Writing, and the English Composition program.
- A new, unified **First Year Writing program**, housed within the department, touches the lives of almost every undergraduate on campus, teaching nearly 175 sections of first-year writing in order to provide writing instruction to every freshman. An emphasis on research-based academic writing gives students the basis to excel as writers in their chosen fields of study.

In 2006-07, the **Center's Student Writing Support** program provided over 5,500 one-to-one writing consultations for approximately 3,500 hours of instructional time.



Nearly 1 million dollar grant from the Bush Foundation

175 sections of First Year Writing

- A merger of all the previously separate campus Writing Centers under the department's Center for Writing, which provides writing assistance both face-to-face and online for students across the entire campus. The Center also offers a program called "Teaching with Writing" that is available to any faculty member, from any department or discipline.
- An innovative **Writing Enriched Curriculum** program weaves writing throughout every undergraduate degree. In March 2007, the University received a Bush Foundation grant of close to one million dollars to launch the first phase of this program.

PROGRAMS INCLUDE:

- **Center for Writing, offering both face-to-face and online student support as well as faculty workshops**
- **Writing Enriched Curriculum, with start-up support from the Bush Foundation**
- **B.S. and M.S. in Scientific and Technical Communication**
- **M.A. and Ph.D. in Rhetoric and Scientific and Technical Communication**
- **Additional courses, minors, certificates and programs**



Students in every undergraduate major will experience a writing intensive program, beginning with a first year writing requirement and continuing with writing in required courses throughout the major.

NEW HEALTH PROFESSIONAL EDUCATION PROGRAMS

- Dental Simulation Clinic in the School of Dentistry, opened in fall 2007, following an investment of \$9.5 million. The clinic uses computerized, 3-D sensing mannequins to provide specific feedback to dental students as they master new procedures.
- Veterinary Food Animal Scholars (VetFAST) Program, an early decision program allowing incoming freshmen to complete both a bachelor's and Doctor of Veterinary Medicine degree in 7, rather than 8, years.
- Masters of Occupational Therapy degree on the newly expanded University of Minnesota Rochester campus began in July 2007.
- Center for Interprofessional Education, established in 2007, prepares health professional students for collaboration and teamwork across health professions.



Dental Simulation Clinic

GRADUATE AND PROFESSIONAL STUDENTS

The Graduate School has increased the number of multi-year financial packages to recruit top graduate students. By partnering with academic programs, the Graduate School has combined graduate school fellowships, block grant awards, and research and teaching assistantships to create multiyear funding packages for entering graduate students. Nearly \$17 million new dollars have been invested in the last three years to support graduate students.

Graduate School initiatives include: The Graduate and Professional School Admissions Initiative, designed to engage academic programs in a process of reflecting on strategies for admitting the most talented and diverse applicants; the Graduate Writing Initiative, which has developed intellectual supports for students at the dissertation proposal and writing stage to increase completion rates and reduce time to degree; and a variety of supports for interdisciplinary academic programs, including competitions for the development of new interdisciplinary programs and for the adoption of best practices in interdisciplinary graduate education.

POSTDOCTORAL PROGRAMS The Office of Postdoctoral Affairs in the Graduate School provides support and resources to 1,100 postdoctoral students in 120 departments and 14 colleges at the University. Over 20 programs are offered, focusing on increasing career development skills to enhance postdoctoral competitiveness in the job market. Examples of programs include: Writing a Compelling NIH Budget Proposal, Building a Successful Publication Record, and workshops on careers in academia and industry.

UNDERGRADUATE RESEARCH PROGRAM

Research is not just for faculty and graduate students. Having world-class scholars as teachers certainly enhances the classroom experience, but nothing can compare to direct engagement in a research experience under the tutelage of one of these scholars. To promote this initiative, physics professor Marvin Marshak was appointed in February as the faculty director of the new Office for Undergraduate Research, which encompasses the Undergraduate Research Opportunities Program (UROP), as well as research programs housed in colleges and elsewhere in the University.

Currently, almost 34 percent of undergraduate students are exposed to a meaningful research experience. The University's goal is for half of undergraduates to have a faculty-mentored research or creative arts experience by the time they graduate.

Student research projects reflect the breadth of the University of Minnesota. Projects include:

- determining how to bring an inexpensive lighting source, solar lanterns, to Nicaraguans;
- designing a rain garden as an ecological and aesthetic solution to capturing pollutants before run-off flows into the Mississippi River from the parking lot of a highly-trafficked regional park;
- exploring memory, the body, the voice, and torture through dance and Kafka's story "In the Penal Colony"; and
- developing a research methodology for analyzing comic books to determine whether post-9/11 changes in society are reflected in popular culture.

**Elizabeth A. Barnes, B.S.,
Institute of Technology 2007:**

Worked with Professor Efi Foufoula-Georgiou in Civil Engineering on "Predicting Algae Biomass in a California River Basin." This eco-hydrology project spanned Elizabeth's double majors in physics and mathematics, and focused on a quantitative analysis of 18 years of algae data to determine the amount of algae necessary for river health. Elizabeth is currently a Ph.D. student at the University of Washington, and hopes to work for NOAA or NASA.



**Senior Kevin Malloy, College
of Liberal Arts, 2008:**

Worked with Dr. John Soderberg, Director of the Anthropology Laboratory, on "Analyzing Irish-Gaelic Society through Animal Motifs and Archaeology." Kevin, a double major in history and anthropology, won an \$8,000 scholarship to study and write a book on the history of a church in Europe. His goal is to study history in graduate school and become a university professor.



**Senior Gita Byraiah, College
of Biological Sciences, 2008:**

Worked with Professor Myron Gross in the School of Public Health on "A Breast Cancer Case-Control Study." Gita, a biology major, collected blood samples and demographic history from patients before analyzing the blood for specific components in their DNA. Her research has inspired her to earn a masters in public health and attend medical school.



We recruit, retain, support, and reward our world-class faculty.

PROMINENT INTERNATIONAL AWARDS

University of Minnesota faculty are recognized on the world stage for their stellar achievements.

- **Nobel Prize:** Regents Professor Emeritus Leonid Hurwicz won the 2007 Nobel Prize in Economics for his pioneering work on “mechanism design theory.” His work has influenced a wide range of economic policies through his research on incentives. Over the years, 20 University-affiliated faculty and alumni have been awarded the Nobel Prize.
- **Wolf Prize:** Regents Professor Ron Phillips received the Wolf Prize for groundbreaking discoveries in genetics and genomics, laying the foundations for improvements in crop and livestock breeding, and sparking important advances in plant and animal sciences.
- **Guggenheim Fellows:** Four University professors won the Guggenheim Prize, a tie for the most of any public research university in 2007.
- Seven University professors were named **American Association for the Advancement of Science (AAAS) Fellows** in 2007: Judith Berman, Robert Herman, David Lilja, John Lipscomb, Stephen Polasky, Jeffrey Roberts, and Lanny Schmidt.
- Three professors were inducted into the **American Academy of Arts and Sciences:** Patricia Hampl, Geoffrey Helman, John Sullivan.
- Professor Kamil Ugurbil was elected into the **Institute of Medicine.**
- Professor Allen Goldman was elected into the **National Academy of Sciences.**

- Professor Emeritus and Alumnus Norman Borlaug received the **Congressional Gold Medal.**



2007 Nobel Laureate in Economics, Regents Professor Emeritus Leonid Hurwicz, Department of Economics



2007 Wolf Prize Recipient, Regents Professor Ron Phillips, Department of Agronomy and Plant Genetics



2007 Guggenheim Fellows (clockwise from top left): Associate Professor David Treuer, Department of English; **Assistant Professor Hisham Bizri,** Department of Cultural Studies and Comparative Literature; **Associate Professor Daphne Berdahl,** Department of Anthropology and Global Studies; **Professor Peter McMurry,** Department of Mechanical Engineering.

UPDATES ON PROMOTION AND TENURE STANDARDS

On June 7, 2007, the Board of Regents unanimously approved historic changes in the Tenure Code. These changes represent a faculty-driven process to increase the rigor and clarity of the tenure and promotion standards. Faculty who receive tenure must have a record of achievement that is the basis of a national or international reputation and show strong promise of achieving promotion to the rank of professor. For those faculty who are being considered for promotion to professor, the promise of academic distinction and a national or international reputation must have been realized.

As the boundaries of scholarship and creative work continue to expand, the Tenure Code has broadened its scope to encompass exciting new areas at the same time it has increased the demand for excellence among the faculty. Now, interdisciplinary work, public engagement, international activities and initiatives, attention to questions of diversity, and technology transfer are explicitly recognized as factors that may be considered in tenure and promotion decisions.

Although the new Tenure Code challenges faculty in new and exciting ways, it recognizes the need for flexibility in order to improve work-life balance. The latest revisions have increased opportunities for extending the probationary period for untenured faculty to accommodate their needs and the needs of their families.

Through changes to the Tenure Code and accompanying administrative policies, the University of Minnesota maintains the highest academic standards in the context of a transparent evaluative culture.

“I’d like to congratulate all of you for your work on this. Not only that there is leadership, but that there’s ownership. I find that to be energizing.”

—Regent David Larson



New faculty meet with Dean Alison Davis-Blake at New Faculty Orientation.



Members of the Academic Freedom and Tenure Committee of the Faculty Senate work on revising the promotion and tenure code.

Our goal is to be best among peers, focused on service, and driven by performance.

INVESTMENT IN UNIVERSITY LIBRARIES

We have invested over \$23 million in the University Libraries, and the Libraries now are ranked 15th nationally. Also noteworthy, the University Libraries joined 11 other Midwest universities in the Committee on Institutional Cooperation (CIC), to enter into a groundbreaking collective agreement with Google to digitize up to 10 million bound volumes. The value of this project to the University of Minnesota could reach \$60 million.

ROCHESTER CAMPUS In December 2006 the University of Minnesota formally established a new campus in Rochester, Minnesota, in order to build on special partnerships with the Mayo Clinic and IBM. The campus focuses on health sciences and biotechnology and now offers over 35 graduate and undergraduate academic programs. The Rochester campus is providing important support to the University's goal of becoming one of the top three research universities in the world.

RESEARCH AND SCHOLARSHIP ADVISORY PANEL

The Vice President for Research appointed the inaugural members of this panel. These prominent researchers and scholars will inform and guide decisions on infrastructure funding, new research facilities, and other resource allocations and prioritizations.

DIVERSITY AND EQUITY The University is strengthening its commitment to diversity and its support for students and faculty. For students, three Living and Learning Communities for historically underrepresented and marginalized groups have been created. Students participating in these Living and Learning Communities live together, take classes together, and learn to express who they are in affirming environments. Several academic initiatives are also in place for faculty, most notably the Bridge Fund for Faculty of Color Hires and the Bridge Fund for Spousal/Partner Hires, both of which support the University's effort to recruit and retain an outstanding and diverse faculty.

Rochester Campus



Through a new partnership with Google, the public will be able to search every word in millions of volumes from the University Libraries.

INSTITUTE ON THE ENVIRONMENT

“Discovering solutions to the earth’s most pressing environmental problems” is more than a motto for the Institute on the Environment. It is a new way of thinking.

Solving complex issues like climate change, water contamination and the loss of biological diversity, means that a silo mentality will no longer do. While the human population continues to grow, the planet’s natural resources will continue to shrink. In response, experts from all sides of environmental scholarship must work together to find answers and deliver results.

This team-based approach is the driving force behind the University of Minnesota’s Institute on the Environment. Using a “transdisciplinary” model, the Institute transcends the traditional boundaries of academia. Research fellows and faculty from the entire University system—experts in the natural and social sciences, economics, public policy, design, engineering and more—have joined forces to address environmental issues of global importance and regional significance.

With vast forests, plains, rivers and lakes as their backdrop, the Institute fellows and other stakeholders can examine the research themes of renewable energy, landscapes and watersheds, climate change adaptation and mitigation, and human and ecosystem health directly.



The Institute’s climate change research will focus on the most effective means to mitigate and adapt to a changing climate in both industrialized and developing countries.

The 21st century calls for a nationwide effort on the order of a “race to the moon” for environmental solutions. The Institute on the Environment is leading this effort by creating a new model for research, communication, and implementation across the state, the country and the globe.

4 research themes

15 founding fellows
from 8 colleges

100 associate research
fellows

\$3.9 million budget

Through the Initiative for Renewable Energy and the Environment, the Institute will facilitate the development of efficient, sustainable and environmentally friendly renewable energy technologies. Pictured here, Regents Professor David Tilman, with native plants that can be refined for fuel.



The Institute will promote research aimed at sustaining and restoring the “critical zone” of landscapes and watersheds, as well as reducing or eliminating the negative health impacts of pollution and other environmental stressors.

We inspire exploration of new ideas and breakthrough discoveries.

RESEARCH POSITION AMONG PEERS

The University of Minnesota ranks 9th among public research universities in total research expenditures according to the National Science Foundation. We have made great strides during the past year, increasing our research expenditures by 8.4%, second in growth among public research universities.

NEW PHYSICS LABORATORY The School of Physics and Astronomy received a \$45.6 million dollar grant from the Department of Energy to build an international physics laboratory in northern Minnesota, further expanding the University's position as an international leader on cutting-edge neutrino research. This facility will foster collaboration with 200 scientists and engineers from seven countries.

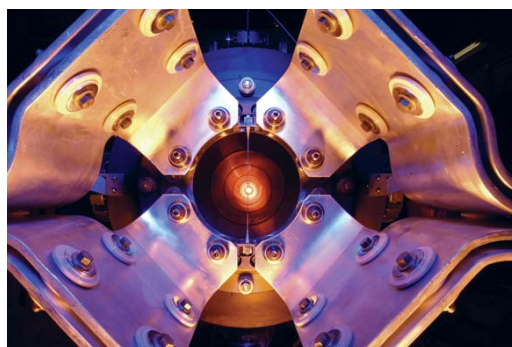
BIOINFORMATICS INITIATIVE The University will invest over \$20 million into this new initiative, which will apply computer and information science to advance biological research. The University of Minnesota is poised to be a pioneer in this area, with substantial recent investments in molecular and cellular biology, genomics, and proteomics faculty, as well as a bioinformatics graduate program.

MINNESOTA FUTURES GRANT PROGRAM

The University established this program in 2007 to propel interdisciplinary teams of investigators toward new pathways of discovery. The first cycle of competitively awarded funding went to three faculty teams to design broad interdisciplinary symposia on important research issues: Predicting Invasive Potential of Exotic Species; Networks & Neighborhoods in Cyberspace; and Pain in Neurodevelopmental Disorders. Additional research funding will be awarded to the most meritorious proposals generated by faculty who participate in these symposia to be held in early spring of 2008.

ACADEMIC AND CORPORATE RELATIONS

CENTER This new center has been established to act as a "front door" to the University, helping to identify high potential ventures and bring together action teams to accelerate commercialization of a variety of products in technology and biosciences. The center received the prestigious Tekne Award for the 2007 Innovative Collaboration of the Year.



The new physics laboratory will detect neutrinos traveling underground from the Fermi National Accelerator Laboratory near Chicago.

QUADRANT PROJECT The University of Minnesota Press and the University received a nearly \$700,000 grant from the Andrew W. Mellon Foundation for the Quadrant Project, a new program dedicated to interdisciplinary research and publication. This project, housed in the University's Institute for Advanced Study, will focus researchers in four areas: design and architecture, environmental sustainability, global cultures, and health and society. Researchers in each area will publish two books, for a total of eight titles showcasing the best of their work.

CORRIDORS OF DISCOVERY To increase opportunities for collaboration across basic science, engineering, and medicine, the Academic Health Center has created virtual corridors of discovery. These corridors speed translation from concept to cure, and create multidisciplinary pathways for traveling from idea and understanding, through testing and refining, to better treatments and cures. Corridor themes include heart and vascular disease, cancer, diabetes, infectious diseases, drug design and development, and brain, nerve and muscle diseases.

New Academic Health Center and University research centers and FY08 investments:

- Center for Translational Medicine—\$1.1 million
- Institute for Clinical and Translational Research—\$350,000
- Institute for Health Informatics—\$640,000
- Institute for Translational Neuroscience—\$800,000
- Institute for Therapeutics Discovery and Development—\$300,000

MINNESOTA PARTNERSHIP FOR BIOTECHNOLOGY AND MEDICAL GENOMICS

To position Minnesota in the forefront of biomedical research, the University of Minnesota, the Mayo Foundation, and the state of Minnesota created this collaborative venture. This new partnership was awarded \$25 million by the state of Minnesota in FY08 and \$8 million recurring starting in FY10.

INNOVATION BY DESIGN This is a University-wide entrepreneurial framework on which to build a series of market-driven, multidisciplinary projects engaging students, faculty, and industry. The first pilot program focuses on breakthrough opportunities in renewable energies technologies that are both environmentally sustainable and commercially viable.

IN PROGRESS

Institute for the Advancement of Science and Engineering—\$800,000 of start-up funds in FY08

New \$72.5 million Science Teaching and Student Services Building being designed

India Center—\$300,000 exploratory campaign



Conducting research in the innovative McGuire Translational Research Facility.

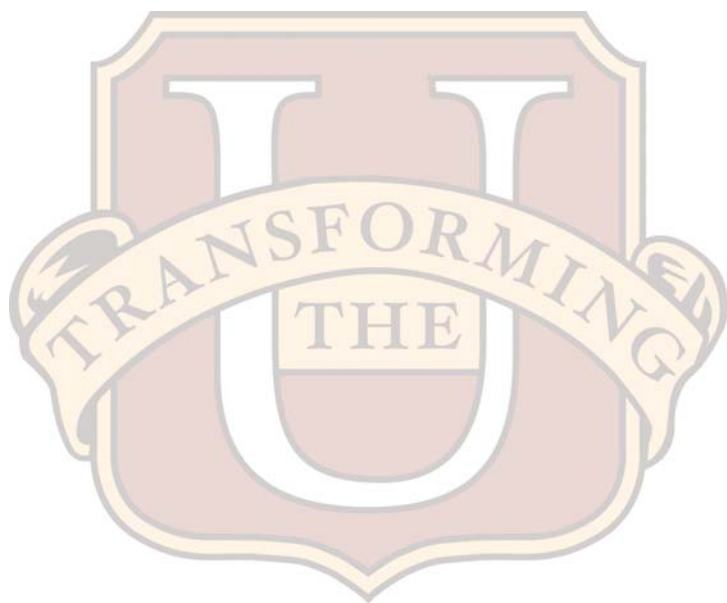
What's Next

As we enter the fourth year of the strategic positioning effort “Transforming the U,” it is clear that we have much to celebrate. We are making enormous strides in the effort to transform the University of Minnesota into one of the top three public research universities in the world. During the past two years alone, new colleges, programs, and institutes have been launched to create new academic synergies that will lead the way to meet many of the challenges society will face in the 21st century.

This is an exciting time on campus. The new College of Education and Human Development just moved into a new home in a restored building along the Mississippi River. Undergraduate business programs will be housed in the new Hanson Hall, opening in fall 2008. The Frank Gehry-designed Weisman Art Museum is ready to begin construction of a Gehry-designed addition. And next to that, also on the banks of the Mississippi, we are planning a dynamic new state-of-the-art building to house flexible science classrooms of the future as well as centralize student support services.

Curricular flexibility also is critical. In response to the tragic interstate bridge collapse in August, we are offering a novel, interdisciplinary course to undergraduate students, “The River, The Bridge, The Community: Beyond the headlines of the I-35W bridge collapse.” New majors, including the product design degree, a joint effort between the year-old College of Design, the Carlson School of Management, the Institute of Technology, and local corporations will be launched soon. The Carlson School of Management is expanding its undergraduate offerings with a nonprofit major. Many more exciting new academic initiatives are in store for the future.

The comprehensive nature of this university, combined with its urban location and land-grant mission make us a unique institution of higher learning. We are committed to securing a strong future for the University of Minnesota, our state, nation, and world. We are thinking big, moving forward in big ways, and are committed to achieving our goal.



GOAL:

Become One of the Top Three Public Research Universities in the World.

VISION:

Improve the Human Condition through the Advancement of Knowledge.

MISSION:

Extraordinary Education.

Breakthrough Research.

Dynamic Public Engagement.



FOR MORE INFORMATION:

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