

# ACHIEVING EXCELLENCE:

Academic Strategic  
Positioning 2005-10



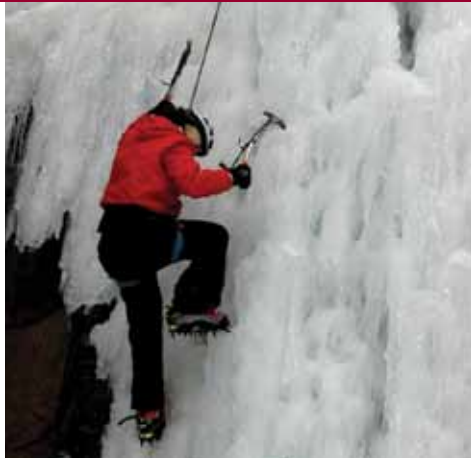
UNIVERSITY OF MINNESOTA  
Driven to Discover<sup>SM</sup>

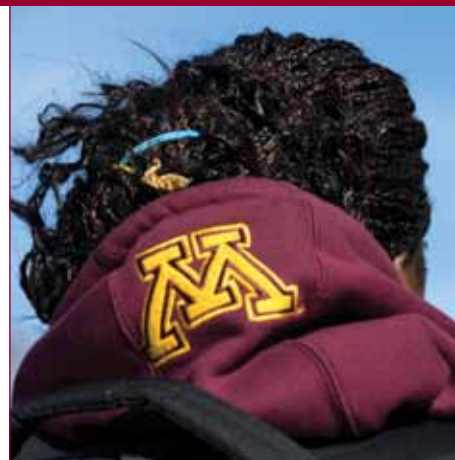


Produced by the  
Office of the Senior Vice President  
for Academic Affairs and Provost

# TABLE OF CONTENTS

Introduction .....	6
Undergraduate Education .....	8
Graduate & Professional Education .....	16
Faculty .....	26
Time Line .....	36
Investments .....	38
Progress Indicators .....	40





“As a University community we value: excellence; innovation; discovery and the search for truth; diversity of community; diversity of ideas; integrity; academic freedom; collaboration; stewardship and accountability of resources and relationships; sharing knowledge in a learning environment; and application of knowledge and discovery to advance the quality of life and the economy of the region and the world.”

*Advancing the Public Good*

January 2005

## INTRODUCTION

In late 2004 the University of Minnesota launched a comprehensive strategic positioning effort. On March 11, 2005, the Board of Regents unanimously approved the goal to be one of the top three public research universities within a decade.

Since the announcement of this ambitious goal, undergraduate applications have doubled and a new honors program attracts students who could have attended MIT, Stanford, and other prestigious institutions. Faculty have been awarded the Nobel Prize and nine Guggenheims, and eight faculty have been inducted into the American Academy of Arts and Sciences, six into the Institute of Medicine, and four into the National Academy of Sciences. In the 2010 National Research Council’s assessment of doctoral programs, the University of Minnesota had 13 programs rank within a range that extends into the top five, 19 programs within the top 10, and 45 programs within the top 25 in the country. Total research and development expenditures have grown 41%, the third largest growth rate among the top 20 universities in the country. The University now is ranked, in terms of research expenditures, among the top 10 of all universities, public and private. Research expenditures from these competitively awarded funds generate \$1.5 billion in economic impact and support over 16,000 jobs inside and outside the University. As a whole, the University generates \$13 for every \$1 invested by the state and creates \$8.6 billion annually in total economic impact in Minnesota.

The University of Minnesota is on the move, despite budgetary challenges. It is appropriate, five years into this landmark strategic positioning effort, to take stock of the University’s progress. The purpose of this report is to focus on academic elements of the strategic positioning effort on the Twin Cities campus: undergraduate education, graduate and professional education, research, and faculty. Additional outcomes and investment information are available at the end of the report. Information throughout this report shows that for students and faculty alike, the University is a better place today than at the start of this initiative. Classes are more innovative and challenging, with more creative and intense student interaction. The faculty are more focused on teaching and integrating cutting-edge interdisciplinary work into classrooms and their research. And the University is engaging faculty and students together toward resolving some of the most pressing scientific, cultural, and ethical issues of our times.

**The University of Minnesota is, as a community,  
“Driven to Discover.”**

## Strategic Positioning Task Forces

Thirty-five strategic positioning task forces, comprising over 350 faculty, students, staff, and members of the broader community, researched and debated their respective topics, and ultimately proposed actions to the campus community.

### Academic Affairs Task Forces

- College Design: College of Architecture and Landscape Architecture; College of Human Ecology
- College Design: College of Human Ecology; College of Education and Human Development
- College Design: College of Liberal Arts
- College Design: College of Natural Resources; College of Agriculture, Food, and Environmental Sciences; College of Human Ecology
- College Design: General College; College of Education and Human Development
- College Design: Science; Engineering
- College Design: Small Colleges
- Faculty Culture
- Graduate Reform: Discipline Evolution
- Graduate Reform: Student Support
- Undergraduate Reform: Honors
- Undergraduate Reform: Student Support
- Undergraduate Reform: Writing

### Academic Health Center Task Forces

- AHC Precinct Plan
- Knowledge Management Technology

- Health Professional Workforce
- Clinical Sciences Enterprise

### Research Task Forces

- Collaborative Research
- Research Infrastructure

### Administrative Task Forces

- Administrative Structure
- Best Practice Management Tools
- Culture
- Optimize Resources
- People
- Services
- Single Enterprise

### Metrics and Measurements Task Force

- Metrics and Measurement

### Systemwide Academic Task Forces

- Diversity
- International University
- PreK-12 Strategy

### Athletics

- Academic Support and Performance for Student-Athletes

### Coordinate Campuses

- University of Minnesota, Crookston
- University of Minnesota, Duluth
- University of Minnesota, Morris
- University of Minnesota, Rochester

From the very outset, the strategic positioning effort has been guided by values and principles, and has set the highest aspirations and the highest expectations. Five of the interrelating central principles are:

- Strategic positioning's focus on excellence is a continuous, multiphase, long-term effort.
- Minnesota's economy and quality of life are directly linked to the quality of its only research university. Research is the entire suite of intellectual and creative activities promoting and preserving discovery, learning, and innovation.
- The University must aim high and act with strategic resolve, setting new expectations for students, faculty, and staff to accomplish this goal.
- The University must make wise and sometimes difficult choices in the face of declining state support.
- The University must be a talent magnet, attracting new students and faculty from across the country and around the world.

“We cannot be an excellent research university unless we provide our students with a truly exceptional education. Achieving this goal requires that we further develop a culture at the University of Minnesota that focuses on student learning outcomes, high expectations, and effective mentoring.”

*Task Force on Undergraduate Reform: Student Support*  
February 2006

# UNDERGRADUATE EDUCATION

The undergraduate student experience is more vibrant, varied, and creative than ever. Applications to the Twin Cities campus have doubled over the past five years, the academic profile of the entering freshman class is the strongest in University history, and more students report positively about their campus experience. Following are some of the strategic positioning initiatives that have propelled this exciting progress.

## Improvements in the Curriculum

- The **First-Year Writing Program** began in 2007 to help students become successful writers. With a focus on learning outcomes that include research-based writing, writing and revising, digital technology, and library research, writing classes average 22 students and provide close contact with instructors.
- Now in its fourth year, the **Writing-Enriched Curriculum (WEC)** project continues the process of infusing writing instruction into the undergraduate curriculum. WEC currently is being implemented in more than 20 academic units. By spring semester 2010, over 6,000 students were enrolled in undergraduate degrees that were piloting WEC.
- The new **University Honors Program (UHP)** has helped the University recruit a diverse pool of the highest-achieving students from across the state, the country, and throughout the world. The profile of the 562 UHP freshmen entering fall semester 2010 is impressive: average high school rank and average ACT at the 97th percentile, and nearly 15% students of color.
- Applications for the **Undergraduate Research Opportunities Program (UROP)** continue to grow. UROP enables students to work one-on-one with a faculty member on a focused, independent research project. In 2004-05, 329 Twin Cities students received UROP awards; in 2009-10 467 UROP projects were funded by the University.
- Pioneering developments were launched to integrate **study abroad** into the curriculum. The University emphasizes semester and year-long experiences and continues to make excellent progress toward its 50% participation rate goal. Study abroad opportunities provide students with the academic content, language learning opportunities, and cultural exposure they and their future employers are demanding. The Learning Abroad Center is working with the Office of Undergraduate Education to develop a study abroad program designed specifically for freshmen.



- New **Liberal Education Curriculum** requirements took effect in 2010. These courses lay the foundation for students to investigate the world from new perspectives, learn additional ways of thinking, and thrive as well-rounded active citizens and lifelong learners. Core requirements guide students through the how and why of academic disciplines. Theme requirements have been developed around areas central to contemporary life. Nearly 600 new and revised courses have been certified to satisfy a liberal education core requirement or theme.
- Orientation and First-Year Programs completed its third successful **Welcome Week** and convocation in September 2010. Welcome Week builds a sense of community and camaraderie among freshmen and reinforces critical messages about campus resources, timely graduation, and financial literacy. More than 95% of entering freshmen participate in Welcome Week.
- The University continues to support the **Freshman Seminar Program**, which provides an intensive academic experience for approximately 40% of freshmen each year through a small-group format.
- **Student Learning Outcomes** have been developed and are being integrated into the curriculum. The outcomes help guide faculty across the University to create courses and syllabi, plan curricula and learning activities, and develop assessments to gather concrete evidence about what students know and can do. In addition, the outcomes provide a framework for students and advisers to discuss and plan their academic programs at the University. The outcomes state that at the time of receiving a bachelor's degree, students:
  - » Can identify, define, and solve problems
  - » Can locate and critically evaluate information
  - » Have mastered a body of knowledge and a mode of inquiry
  - » Understand diverse philosophies and cultures within and across societies
  - » Can communicate effectively
  - » Understand the role of creativity, innovation, discovery, and expression across disciplines
  - » Have acquired skills for effective citizenship and lifelong learning

## Honors Program Median ACT Composite

*(Fall 2010 Entering Freshmen)*

### Comparison with Top Ranked Liberal Arts Colleges

Minnesota Honors Program	32
Amherst	31.5
Carleton	31
Williams	31
Grinnell	30.5
Vassar	30.5

### Comparison with Top Ranked STEM Universities

Minnesota Honors Program (STEM Students)	34
Caltech	34
MIT	33.5
Cornell (Engineering)	33
Carnegie Mellon (CIT)	32.5
Georgia Tech	30

### Comparison with Top Ranked Universities

Minnesota Honors Program	32
Stanford	32
Northwestern	32
Duke	31.5
Carnegie Mellon	31
University of Chicago	30.5
Georgetown	30

“APlus is truly fantastic. It has allowed me to prepare, track, contact and communicate with my advisees in a more organized and efficient manner. I really appreciate being able to log into one site to obtain the most important and necessary information I need for my students.”

*Lindsay Gundecha,  
Associate Academic Adviser,  
Carlson School of Management  
Undergraduate Program*

## Improvements in Student Academic Support and Advising

- **University Honors Program** students benefit from specially tailored advising, programming, and events.
- The **Center for Academic Planning and Exploration**, opened in September 2010, provides specialized advising support for students who are having difficulty identifying a major or career, have transferred between colleges, or are planning to transfer.
- A **new automated advising tool, APlus**, now provides near real-time student data to academic advisers to facilitate early intervention and outreach. As an example, advisers know almost immediately when students drop a class. By sharing this information, the team of academic advisers can provide more seamless, consistent, and informed advising for students.
- The **SMART Learning Commons**, located on the East and West Banks of the Minneapolis campus and the St. Paul campus, provides ready access to tutoring and other services. In fall 2010, there were 3,192 visits by 839 students attending peer tutoring sessions. For peer-assisted learning, 1,982 students made 15,862 session visits (59 weekly sessions in fall, 34 in spring).
- The **Access to Success (ATS)** program, which began in 2008, provides intensive advising, peer mentoring, and networking opportunities to assist students whose experiences and high school records indicate potential for success but who may need additional support. The three colleges with ATS students (the College of Liberal Arts, College of Education and Human Development, and College of Food, Agricultural and Natural Resource Sciences) are working to create an integrated four-year ATS experience.

## Improvements in Student Engagement and the Campus Experience

Research shows that student engagement enhances academic success, retention, and graduation. Promoting student engagement and improving the student experience is a continuing focus of the strategic positioning effort.

- **Student Development Outcomes** have been created and are being integrated across student employment and other co-curricular opportunities on campus. The Student Development Outcomes provide a framework and vocabulary to help students translate their activities into meaningful experiences related to transferable skills critical to post-graduation success. The outcomes state that as they progress toward their degree, students will develop and demonstrate:

- » Responsibility and accountability
- » Independence and interdependence
- » Goal orientation
- » Self-awareness
- » Resilience
- » Appreciation of differences
- » Tolerance of ambiguity

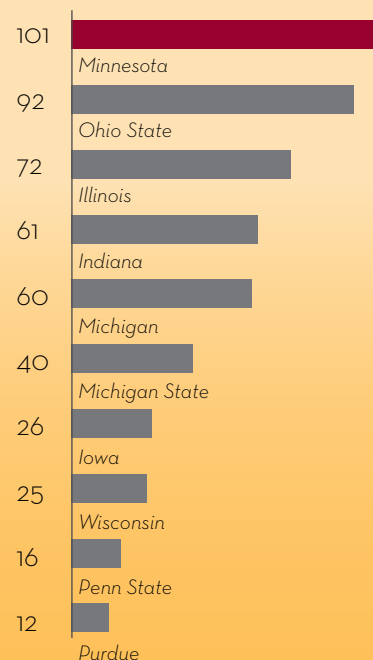
- Discussions are underway to develop a **new residence hall** to accommodate more freshman, transfer, and returning students. The hall may incorporate fraternity and sorority communities to complement existing living and learning communities focused on building relationships among students with common academic or personal interests. Students living in on-campus housing tend to have better retention and graduation rates than students living off campus.
- The **East Bank Recreation Center** is being expanded to approximately double its current capacity. In addition, the University has begun planning for a West Bank recreation facility as well as additional outdoor recreational space through the development of bubbled fields. The management of the University's golf course has been moved to the Office for Student Affairs, resulting in more student-friendly access policies and greater student usage. Recent research on the Twin Cities campus has shown a positive correlation between participation in recreational sports activities and academic success.
- The Office for Student Affairs has over **700 registered student organizations**, providing engagement and leadership opportunities for thousands of students on campus and in the community. Participation in the University's fraternity and sorority community has increased by 50% in the past five years. Since 2008, the University has participated in national surveys to assess student engagement in educationally meaningful opportunities. These data are being provided to colleges and student support units to help identify areas needing improvement and to assess the effectiveness of new initiatives and programs.

## Student Awards Since Fall 2004

These national and international scholarship achievements reflect undergraduate excellence across academic fields, research, civic engagement, and public life.

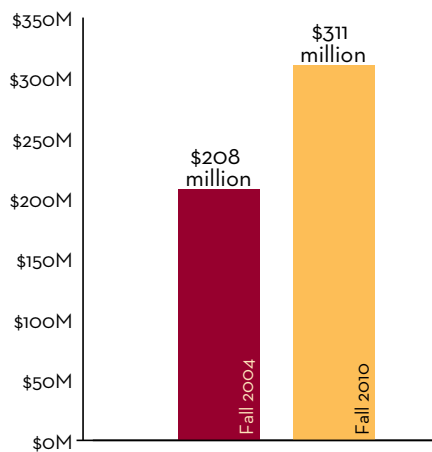
- 3 Rhodes Scholars
- 3 Truman Scholars
- 27 Fulbright Grants
- 4 Beineke Scholars
- 8 Astronaut Scholars
- 13 Critical Language Scholars (since 2009)
- 2 Gates Cambridge Scholars
- 39 Gilman Scholars (since 2006)
- 18 Goldwater Scholars

## New National Merit Scholars, Big Ten Public Universities, Fall 2010

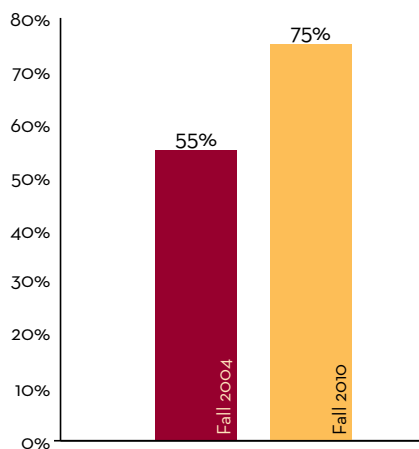


## Undergraduate Financial Aid

Twin Cities campus total financial aid to undergraduates



Twin Cities campus percentage of undergraduates with financial aid



- The new **Science Teaching and Student Services (STSS)** facility anchors a student service corridor in the center of campus. The corridor (consisting of STSS, Walter Library, and Appleby, Fraser, and Johnston Halls) provides students with convenient access to services such as financial aid, academic advising, career support, counseling, service learning programs, veterans' services, and multicultural programs.

## Improvements in Financial Support

- **Total financial aid** to Twin Cities undergraduate students (loans, federal and state grants, waivers, work study, University scholarships and private dollars) increased 50% between 2004-05 and 2009-10, to \$311 million, an average of \$10,702 per student per year. In 2009-10, 75% of all undergraduates received financial aid.
- University **scholarships** awarded increased from \$23.1 million to \$39.9 million between 2004-05 and 2009-10. Currently, 33% of Twin Cities undergraduates receive University scholarship or grant support, up substantially from 2005, when 20% of undergraduates received such support.
- The **U Promise Scholarship Program**, started in fall 2005 as the Founders Program, helps lower-income Minnesota students and was expanded last year to assist eligible middle-income Minnesota students. Since its inception, the U Promise Scholarship Program has provided over \$110 million in financial support through direct grants to students on all five University campuses.
- The University has put additional resources into National Merit Scholar and **high-achieving student recruitment**. The number of National Merit Scholars enrolling as new freshmen has increased from 50 in 2005 to a high of 112 in 2009. Today, the University ranks first among public universities in the Big Ten in the number of National Merit Scholars.
- Systemwide, **tuition rate structures** and financial aid are closely linked, maintaining financial access for qualified students from all income levels.

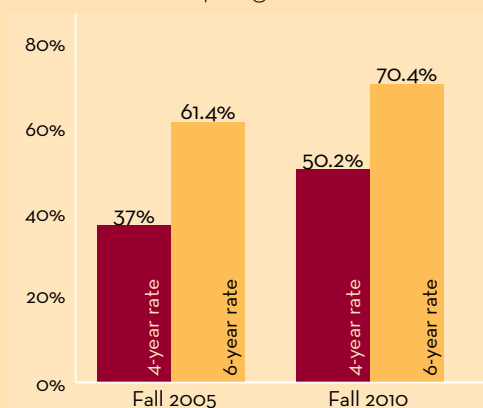
## Improvements in Retention and Graduation Rates

In 2006, the Board of Regents set aggressive graduation goals as part of the strategic positioning effort. Goals for cohorts graduating on the Twin Cities campus in 2012 were adjusted upward to 60% for the four-year rate; 75% for the five-year rate; and 80% for the six-year rate. In addition to the initiatives already mentioned, the following strategies contribute toward achieving these goals:

- Providing full-time enrollment incentives with the **13-credit registration** rule, in which degree-seeking undergraduates must enroll in 13 or more credits per term.
- Using **tuition banding**, where tuition above 13 credits is free.
- **Targeting financial aid** to those students most in need of financial support.
- Increasing educational programs in **financial literacy for students and parents**. These programs educate students and parents about actual and opportunity costs of taking longer than four years to graduate and the importance of “living like a student now so you don’t have to live like one later.”
- **Enhancing first-year programs**, including expanded freshman and transfer orientation programs and a freshman Welcome Week.
- Conducting **earlier counseling** and **interventions** with students who show signs of academic difficulty.
- Continuing development of the online **GradPlanner** to help students plan out their four-year degree programs, as well as other tools for academic advisers and students.
- **Monitoring curriculum requirements** and **adjusting course scheduling** to ensure that students have access to the courses they need to fulfill their degree requirements and graduate on time.
- Promoting the completion of **30 credits per year** as a normal expectation for undergraduate students.

## Undergraduate Graduation and Retention Rates

Twin Cities campus graduation rates



Twin Cities campus first-year retention reached **90%** for the first time in 2009.

The number of Twin Cities campus bachelor’s degrees awarded per year has increased by over 14% since the start of strategic positioning.

2010	6,942
2005	6,086

“[We] applaud the University for its foresight in preparing for what is emerging as the undergraduate pedagogy of the future. To our knowledge, Minnesota’s level of investment in ten new student-centered classrooms designed for in-class active learning is unique among large research universities.”

*College of Biological Sciences  
External Peer Review  
Committee report  
May 2010*



## *Science Teaching and Student Services Building*

The 115,000-square-foot Science Teaching and Student Services building (STSS) opened in fall 2010 on the banks of the Mississippi River. The building is home to state-of-the-art active learning classrooms as well as numerous student services offices, including One Stop Student Services, and advising, veterans’, and career services.

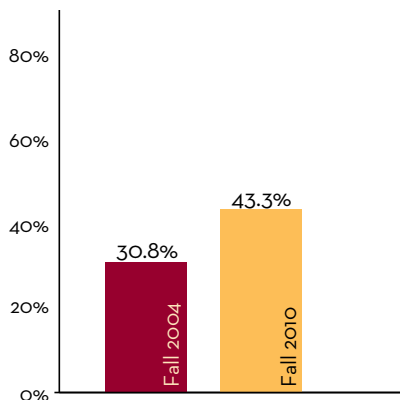
The building offers a wide view of the West Bank and downtown Minneapolis over the Mississippi River and has 10 active learning classrooms. The classrooms provide for technology-driven and collaborative interaction among students and faculty. Active learning classrooms have demonstrated significant results in improving educational achievement for students in the critical areas of science, technology, engineering, and mathematics.

STSS is designed to meet or exceed the requirements of Minnesota’s stringent B3 sustainable design code and is seeking LEED Gold certification. The building was designed by alumnus William Pedersen from the New York-based architecture firm Kohn Pedersen Fox Associates in association with Hammel, Green and Abrahamson, Inc. of Minneapolis.

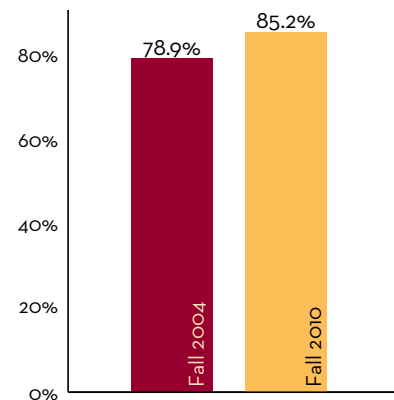


## Entering Class Profiles

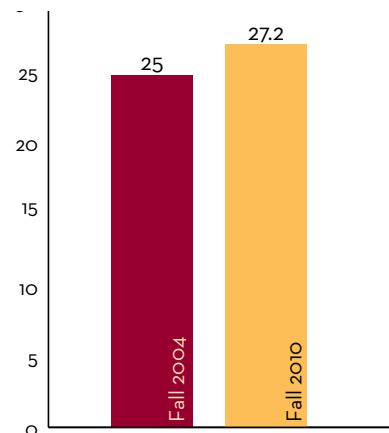
In top 10% of high school class



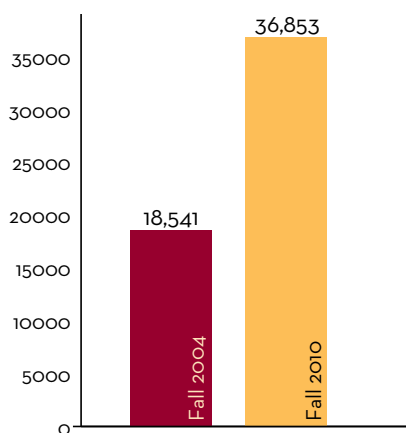
Average high school rank



Average ACT



New freshman applications



## Student Satisfaction

Percentage of students satisfied with their experiences at the University of Minnesota in the past semester:

1997–2001 Average: **83%** (includes 20% “very satisfied”)

2003–2009 Average: **90%** (includes 27% “very satisfied”)

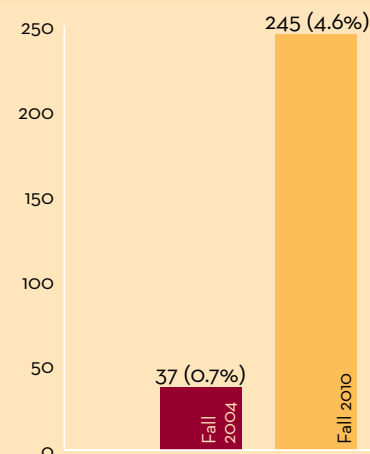
Percentage likely to enroll on campus if they were to do it over again:

1997–2001 Average: **83%** (includes 40% “definitely”)

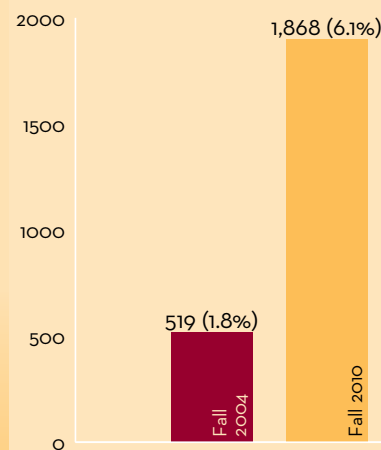
2003–2009 Average: **89%** (includes 49% “definitely”)

## International Students and Study Abroad

International students among the freshman class



International students among the undergraduate student body



Undergraduate study abroad participation has increased 13% from 2004 to 2010.

“Among academic institutions, the University of Minnesota is unique in its level of graduate student involvement during this time of reorganization. Graduate School staff and administrators include graduate student representatives on committees and task forces charged with shaping graduate education. Graduate students are making a lasting impression on the future of our education at the University. From my own experiences serving on these committees, I have a greater appreciation of the complexities involved in administering graduate education at all levels of the University and how little changes can have big impacts on students, faculty, and staff. This is a time of great change in graduate education, but also many great opportunities to help advance Minnesota as one of the leaders of graduate education.”

*Mandy Stahre,  
Ph.D. candidate in epidemiology,  
President of the Council of  
Graduate Students 2009-10*

# GRADUATE & PROFESSIONAL EDUCATION

The University is in the midst of a major transformation in its oversight and support of graduate education. This effort is enhancing the excellence of graduate education, improving efficiency, and conserving resources for the benefit of students and academic programs. With over 17,500 graduate and professional students, this is a substantial and critical undertaking, and follows extensive planning and recommendations by faculty, staff, and students. Specifically, the University is:

- Aligning authority, responsibility, and accountability for graduate education with collegiate deans as a means to increase efficiency and quality.
- Recognizing and involving graduate students as early-career researchers instead of late career students. Students will be engaged in research and scholarly activities earlier in their degree programs.
- Creating more flexible graduate degree requirements.
- Preparing graduate students for a broader range of career paths within and outside of academia.

This effort to transform graduate education complements a long-standing, strong tradition of graduate and professional education programs at the University, and includes the following initiatives.

## Increase Financial Support

As a means of attracting the most talented graduate students and reducing their time to degree, the University has increased graduate student financial support.

- The University has invested, cumulatively, an additional \$37 million to support **graduate student fellowships** since the start of strategic positioning. In addition to increasing the number of fellowships, the fellowship program now emphasizes multi-year awards. The retooling of the fellowship program is designed to help attract the best graduate students in the world, and then assist these students with timely degree completion.
- **Graduate assistant salaries** were increased by 10% in 2005–06, and an additional 3.25% in 2009–10. The University also raised the ceiling on graduate assistant salaries in 2006–07 as a recruiting tool to match salaries offered by competing universities. The Graduate School also supports students through training grant matches.



- The University's **Interdisciplinary Doctoral Fellowships** program awards \$22,500 stipends plus full tuition and health benefits to graduate students whose current or proposed dissertation topic is interdisciplinary and who seek to study in one of six University-wide, interdisciplinary research centers. Twelve fellowships were awarded in 2010-11.
- **Doctoral Dissertation Fellowships** of up to \$22,500 are awarded annually to 75 or more outstanding final-year Ph.D. candidates in an all-University competition. Tuition waivers for thesis credits and health and dental benefits are also provided. The fellowships allow students to devote full-time effort to the research and writing of the dissertation. The number of awards has increased by 50% since 2005.

## Increase Research and Practice Opportunities

Since the start of strategic positioning, the University has increased its investment in facilities and opportunities for graduate and professional students to gain research and practice opportunities as part of its effort to engage students early as researchers and creators of knowledge. Examples include:

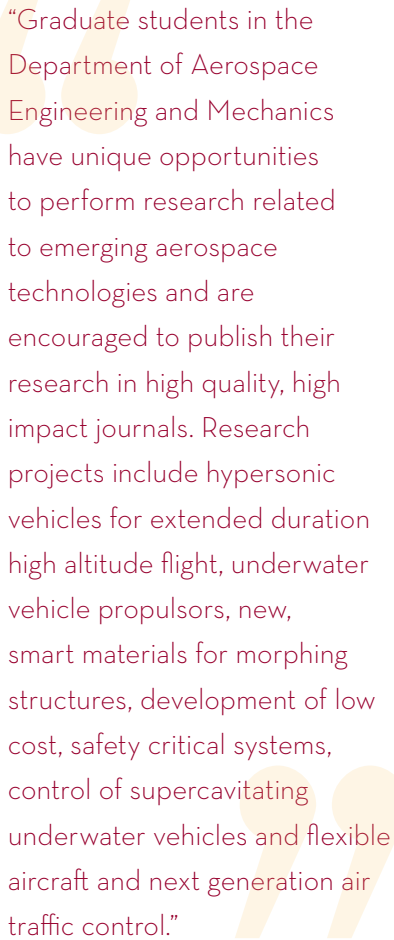
- Three new state-of-the-art **simulation centers** provide expertise in teaching and learning and assessment of professional competencies: the Dental Simulation Clinic, SimPortal (Medical School), and Academic Health Center Simulation Center, together serve over 15,000 learners through 60,000 contact hours in 2010. These centers represent not only teaching and learning, but research and development in linking teaching and practice through technology development.
- The University's health science schools have increased the number of students who rotate through **outreach clinical practices** in Minnesota's federally designated health professions shortage areas since 2006. Nearly 800 students are supported annually to rotate in Minnesota's areas of greatest need.
- The College of Design's new **graduate minor in Product Design** allows students to develop products in partnership with local companies and test them with end users, while architecture and landscape architecture graduate students use hands-on studios to design and build their work in the community. A new **digital fabrication lab** as well as a large-scale virtual reality environment will enable the college to engage users and community groups in discussions about prototypes and projects developed by graduate students. These initiatives resulted from strategic positioning recommendations.

"Offering multiyear awards has allowed us to be more competitive in attracting top students to our program and helped us reduce our students' time to degree."

*Professor Katherine Klink,  
Director of Graduate Studies,  
Geography*

## Graduate Fellowships at-a-glance: 2005-10

- Total annual University investment in graduate students increased from \$10.3 million to \$17.7 million per year.
- Nearly seven-fold increase in the number of multi-year graduate student fellowships awarded annually to incoming students.
- Over 50% increase in the number of Doctoral Dissertation Fellowships.
- Total number of fellowships increased from 490 to 737.
- The number of graduate students and postdoctoral fellows earning the National Institutes of Health National Research Service Award increased from 20 to 45.
- The number of graduate students receiving the National Science Foundation Pre-Doctoral Fellowship increased from 28 to 43.



“Graduate students in the Department of Aerospace Engineering and Mechanics have unique opportunities to perform research related to emerging aerospace technologies and are encouraged to publish their research in high quality, high impact journals. Research projects include hypersonic vehicles for extended duration high altitude flight, underwater vehicle propulsors, new, smart materials for morphing structures, development of low cost, safety critical systems, control of supercavitating underwater vehicles and flexible aircraft and next generation air traffic control.”

*Professor Gary Balas,  
Department Head, Aerospace  
Engineering and Mechanics*

- The Law School provides an example of innovative curricular change that has been occurring during the past three to five years in the University’s professional schools. New upper-level **capstone courses** (currently offered in Environmental Law, Labor and Employment Law, and Health Law Compliance) combine intensive instruction in legal doctrine and theory with skills exercises or policy work that allow students to apply their knowledge in real-world situations. New **concentrations** (currently offered in Health Law and Bioethics, Labor and Employment, Human Rights, and Business Law) allow students to focus on and build special expertise in a particular area of law. A concentration includes intensive course work plus mentoring from faculty and connections with legal practitioners and policymakers from the student’s chosen field. First-year law students have a new skills-based class called Practice and Professionalism that allows students to apply legal doctrine to real-life situations through **simulation exercises** that focus on legal ethics, communications skills, and client relationships.
- The College of Food, Agricultural and Natural Resource Sciences provides new opportunities for graduate students to research infectious cereal fungi and invasive insect species in the **Biological Safety Level II and III (BSL2/BLS3) laboratories**. Faculty in the college have been awarded competitive graduate student training grants from major national funding agencies in the areas of invasive species (National Science Foundation interdisciplinary award), obesity (National Institutes of Health), and plant genomics (United States Department of Agriculture National Institute of Food and Agriculture). New research in biomass utilization, biofuels generation, and building energy conservation also is focused on graduate student education. These opportunities are a result of strategic positioning investments and initiatives.
- The College of Education and Human Development is partnering with the College of Biological Sciences to provide a **wet lab setting** for graduate students **in the field of developmental psychopathology**. Combined with an observational lab setting, the new facilities and experiences provide graduate students in the college with facilities to explore the interrelationships among molecular, genetic, neurobiological, socio-emotional, cognitive, linguistic, and representational development in normal and pathological populations.
- The University invested \$64 million cumulatively in the **Center for Magnetic Resonance Research** since the start of strategic positioning. This world-class imaging facility provides cutting-edge research experiences for graduate students and faculty.

- The College of Liberal Arts has enhanced research opportunities for graduate students across a wide range of disciplines. The new **Social and Behavioral Sciences Laboratory** promotes brain imaging research and contains an eye-tracking lab that facilitates and collects subject responses in a wide-range of experiments. This facility complements the electroencephalography lab in psychology. Graduate and professional students use these facilities to complete their research projects for classes and to advance their dissertation research. The college has improved art, music, and theater and dance facilities to enhance research space and productivity of graduate and professional students.
- The **Flexible M.D. Program**, a new University initiative, provides opportunities for students to cultivate independent exploration, learning, and growth through experiences such as dual degree programs, research at federal agencies, and community-based service learning. These experiences improve students' abilities to serve the needs of patients and communities. Students who take extra time to complete their M.D. in order to take advantage of these opportunities may do so without additional tuition expense.

## Improve Curricular Responsiveness

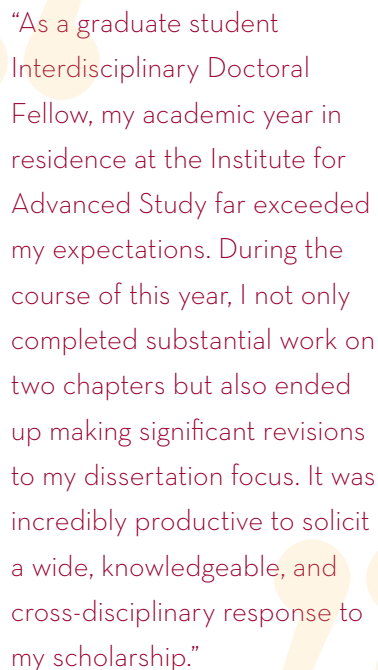
The University is capitalizing in a strategic and nimble way on the breadth and depth of its faculty expertise to create rich interdisciplinary programs and new programs in emerging fields of study. Graduate students have new opportunities to engage in collaborative theses and dissertations, crossing traditional disciplinary boundaries of inquiry. Academic units regularly adjust their academic program offerings to leverage the University's breadth, develop new knowledge, and respond to market changes.

Examples of new degree programs and new and emerging fields of study:

- One of a handful of American universities to partner with the John D. and Catherine T. MacArthur Foundation on International Development, the **Master of Development Practice in International Development** degree is administered by the Humphrey School of Public Affairs and the Interdisciplinary Center for the Study of Global Change and spans several academic units across the University.
- **Human Factors and Ergonomics** is an interdisciplinary master's and Ph.D. program offered jointly between the College of Science and Engineering and the College of Design. The University is the first in the country to offer a Ph.D. degree in Human Factors.

"The Characterization Facility and the University Imaging Center are crucial to graduate education and research. They not only support experiments that ensure world-class science, but also furnish an interdisciplinary environment to educate the world's next generation of scientific and engineering leaders. We are designing novel ways to educate graduate students in cutting-edge research facilities - particularly those that dynamically probe the chemical and physical properties of natural and synthetic materials across the nanometer and micrometer scales. This approach is transformative in that graduate students can undertake systematic, concentrated study and training in a wide range of advanced nanoimaging techniques and applications early in their careers. This experience better prepares students to make effective research choices and instills an integrative approach that enhances career-long contributions to science as techniques continue to evolve quickly."

*Professor Alon McCormick,  
Chemical Engineering and  
Materials Science*



“As a graduate student Interdisciplinary Doctoral Fellow, my academic year in residence at the Institute for Advanced Study far exceeded my expectations. During the course of this year, I not only completed substantial work on two chapters but also ended up making significant revisions to my dissertation focus. It was incredibly productive to solicit a wide, knowledgeable, and cross-disciplinary response to my scholarship.”

*Juliana Hu Pegues,  
Ph.D. student in American  
Studies and Interdisciplinary  
Doctoral Fellow in 2009-10*

- Newly launched **interdisciplinary graduate programs** designed to address emerging needs include Biomedical Informatics and Computational Biology, Prevention Science, Product Design, Land and Atmospheric Science, Environmental Restoration Engineering and Science, Health Care Design and Innovation, and Stream Restoration Science and Engineering.
- The University is one of only four institutions in the country to offer a joint Master of Public Policy and Master of Business Administration degree.
- The new **1Health** education program positions the University as a national leader in health education by bringing together students from all health professional schools at the University to learn and overcome the challenges of communications within the health care system.
- The University-wide **Interdisciplinary Informatics** program promotes the study of informatics theory and practice and supports research through better organization and planning, as well as the acquisition of informatics resources. Supported by graduate fellowships, students work and study collaboratively across multiple disciplines including informatics and health data management; molecular research, bioinformatics, statistics, and computation; and environment, food sustainability, and landscape management.
- Led by faculty interest and involvement and driven by students who are interested in **global health**, the Academic Health Center aggressively has pursued affiliations and programs throughout the world. These programs and projects bring international students to campus for study and also take University faculty and students to sites in countries like India, Kenya, Israel, Iceland, Peru, and Thailand, where leading research and education programs are located. The Medical School has programs in infectious diseases in India and Uganda, while the School of Public Health has education programs in India, Uruguay, and Thailand, monitoring emergent diseases and providing training. The School of Nursing has educational and exchange affiliations with schools in Korea, India, Iceland, and Peru. These programs provide opportunities for health professional students to work and learn where flexible care delivery is the norm.

- The University has responded to the growing need for primary care providers by expanding its **Doctorate in Nursing Practice (DNP)** program through an efficient and effective model that leverages online learning. This program provides practicing nurses an opportunity to expand their professional credentials through a rigorous curriculum taught, in part, through online courses available anywhere and any time. The DNP is the first of its kind in the region, and the creative online learning curriculum is pioneering nationally and internationally.

## Focus on Student Experience and Time to Degree

- The **Graduate Writing Initiative**, launched in 2007, assists students at the dissertation proposal and writing stage. The cross-disciplinary writing seminars help increase completion rates, reduce time to degree, and enrich the interdisciplinary research environment.
- Top Ph.D. students have the opportunity to present their research in the annual **Doctoral Dissertation Showcase**, started in 2008. This event highlights research and scholarly activity by the University's most outstanding doctoral students.
- The University is participating in the **Ph.D. Completion Project**, undertaken by the national Council of Graduate Schools to identify and implement best practices that improve the quality of the doctoral experience and contribute to shorter time to degree.
- Excellence in advising and mentoring is a cornerstone of the graduate education transformation. Working with colleges, faculty, and graduate student leaders, the Graduate School is focused on **improving faculty advising and mentoring** at the graduate level as a critical component of timely degree completion and professional development.

“The Flexible M.D. Program allowed me to take advantage of research opportunities in cardiology here at the University of Minnesota and practice opportunities through the National Institutes of Health in an underserved hospital in Lima, Peru. As a result, I will continue to be motivated by the challenge of working with underserved populations locally and globally and hope to be a leader in cardiovascular disease prevention in global health in the future.”

*Catherine Pastorius,  
4th-year medical student*

“In choosing an institution for my postdoctoral research in 2008, I sought out places that not only were conducting exceptional research, but also fostered continued academic development. As evidenced by being named as one of the top ten U.S. institutions for postdoctoral scholars in *The Scientist’s* 2009 analysis, I found the University of Minnesota to be an ideal place for postdoctoral research. Opportunities for postdoctoral scholars such as the University’s Preparing Future Faculty program and a wide-range of workshops available to postdoctoral scholars fostered my academic development, and provided valuable networking opportunities. These programs allow for a more satisfying postdoc experience and ultimately for the University of Minnesota postdocs to be more competitive in the job market.”

Mary Kroetz, Ph.D.,  
Postdoctoral researcher and  
President of the University  
of Minnesota Postdoctoral  
Association

- A national leader in process efficiencies, the University is one of the first universities in the country to adopt a **paperless graduate admissions** process. The new system eliminates redundancies and provides a more user-friendly experience for applicants, faculty, and staff. It has allowed the admissions office to cut staffing costs by 25%.
- The **Graduate and Professional School Admissions Initiative** has increased graduate admissions among students of color (1,055 admitted in 2009-10 compared to 929 in 2005-06). The initiative is designed to engage academic programs in developing strategies for admitting the most talented and diverse applicants.
- The Graduate School’s **professional development initiatives**, begun in 2006, help graduate and professional students prepare for a wide range of career options by networking with potential employers from multiple sectors and honing transferable skills. The Graduate School offers 30 workshops per year on a wide range of topics, including networking and job-search strategies. The culminating event of the academic year is a career breakfast for graduate students and postdoctoral scholars. Over 350 graduate students and postdoctoral scholars met with 70 potential employers representing industry, non-profit organizations and government sectors at the 2010 event. Given the high level of participation by students and potential employers, two networking events are scheduled in 2011—one for engineering, health fields, and sciences, and one for social sciences, arts, and humanities.

## Improve Access to Research Resources through Targeted Investments in University Libraries

- Strategic positioning investments in the collections of the University Libraries resulted in **significant acquisitions of digital content** with emphasis on research journals and primary source material, enabling ready access and types of research not heretofore possible. In addition, University Libraries is partnering with Google through the Committee on Institutional Cooperation to digitize over one million volumes from campus collections, which will allow global access to distinctive resources held at the University. Access to these collections will assist graduate and professional students in their research and education.
- **Discipline-specific web portals** developed by the Libraries and tailored to the needs of graduate and professional student communities provide customized access to collections, services, and tools.
- New **educational programs** at the University Libraries target the development of information discovery and management skills among graduate and professional students, including programs to support evidence-based inquiry in the health sciences, knowledge management systems, and data management practices in the sciences.
- New **workshops** at the Libraries introduce graduate students to grant opportunities and resources in their field and have drawn national attention.
- The University’s Digital Conservancy provides a permanent archive of and global access to **graduate student dissertations and theses**, bolstering the scholarly impact of graduate and professional student’s work.

The number of graduates per year has increased substantially since the start of strategic positioning.

<b>2009-10</b>	
Doctoral	807
Master’s	3,419
Professional	811
<b>Total</b>	<b>5,037</b>

<b>2004-05</b>	
Doctoral	678
Master’s	2,798
Professional	777
<b>Total</b>	<b>4,253</b>

Percentage of health professionals in the state trained at the University:

- 77% Dentists
- 50% Doctors
- 55% Nurses
- 66% Pharmacists
- 71% Public Health Professionals
- 80% Veterinarians

## 2010 National Research Council Assessment

### University of Minnesota Programs Assessed among the Top 10 Nationally<sup>1</sup>

- Aerospace Engineering and Mechanics
- American Studies
- Applied Economics
- Chemical Engineering
- Ecology, Evolution, and Behavior
- Entomology
- Epidemiology
- Food Science
- Geophysics
- Germanic Studies
- Hispanic and Luso-Brazilian Literatures and Linguistics
- Kinesiology
- Materials Science and Engineering
- Mechanical Engineering
- Microbiology, Immunology, and Cancer Biology
- Natural Resources Science and Management
- Nursing
- Nutrition
- Veterinary Medicine

<sup>1</sup>Ranges extend into the Top 10, in either one of two assessment scales.

## Focus on Interdisciplinary Research

“Cutting-edge research in the natural, social, and medical sciences is increasingly being done at the intersection of traditional academic disciplines. Today, physicists are working with physicians, urban planners are working with psychologists, and surgeons are working with sociologists. Consequently, novel and useful insights into both basic and applied questions are emerging. In my own discipline of epidemiology, we are not only drawing on research from faculty in sociology, law, biology, economics, computer science, brain science, and chemistry, we are actually working with them as full collaborators. The result is not only a better understanding of the root causes of diseases such as AIDS, childhood cancer, and depression, but the development of new approaches for their prevention and treatment.

“The University of Minnesota is a leader in interdisciplinary research and teaching. Not only are we one of the very few places that cultivates a vast array of world class departments, such as economics, chemical engineering, epidemiology, mathematics, and biostatistics, we also have leading schools of law, medicine, business, and public health on one campus. The handful of University-wide research centers, such as the Institute for Translational Neuroscience and the Minnesota Population Center, serve as incubators for interdisciplinary research and teaching. The result is a special place that provides not only junior and senior faculty with unlimited opportunities to address critical questions in novel ways, but permits both graduate and undergraduate students with real-time training in, and access to, the cutting edge theory, methods, and results of interdisciplinary research. The present state of affairs was no accident. The development and financial support of



the University's world-class programs and interdisciplinary centers was thoughtful and cultivated over many years. The Administration's strategic investments permit it to encourage and initially support the U's leading interdisciplinary faculty to do what they do best."

*Michael Oakes,  
Associate Professor,  
Division of Epidemiology,  
School of Public Health*

---

"The interdisciplinary Minnesota Population Center has given me the chance to meet professors and graduate students housed in different disciplines within the University and from leading academic centers across the country. In addition to offering a physical location to conduct my research, the Center has provided funding for me to attend four annual demography meetings. This investment in graduate student research and informal networking is remarkable, and extremely beneficial during a challenging job market season."

*Elaine Hernandez,  
Ph.D. candidate in sociology*

“[B]ecoming a top three public research University is a worthy goal. This goal benefits students who are exposed to exciting research and educated in the very best traditions of foundational and innovative knowledge. It will lead to an increasingly energized and engaged faculty dedicated to both the advancement of knowledge and the collegiality of academic exchange. Finally, it will advance the economy, culture, and pride of Minnesota.”

*Task Force on Faculty Culture*  
May 2006

## FACULTY

There is no more important single component in the effort to become one of the top three public research universities than the strength of the University’s faculty. Recognizing that, the University vigorously has pursued a variety of strategies to recruit, support, nurture, and reward profound, innovative, and leading-edge research and teaching. The following are select examples.

### More Rigorous and Transparent Academic Standards

- The 2007 revisions to the Board of Regents **policy on faculty tenure** substantially raised the expectations for excellence at all stages of a faculty member’s career, and included new family-friendly provisions for faculty. The promotion and tenure policy emphasizes that these higher University expectations must be transparent, provide clear guidelines at all levels of review, and be accompanied by strong faculty development efforts.
- The important protections guaranteed by the 1995 Board of Regents **policy on academic freedom and responsibility** were broadened in 2009 to provide one of the strongest frameworks in the country for autonomous and unrestrained research.
- Since 2007, 73 departments have reviewed and revised their **tenure and promotion standards** in order to set well-defined expectations of excellence within, and tailored to, each discipline. The departmental criteria for tenure and promotion are aligned clearly with the changes to the policy on faculty tenure, and raise dramatically the expectation for teaching and research excellence.

### Emphasis on Recruitment and Retention

- Since fall 2004, the University has focused on increasing **faculty compensation** and has allocated cumulatively over \$31 million in central strategic investments (in addition to base program budget) toward increased faculty compensation support.
- Beginning in 2005, the number of **Regents Professors** was increased from 20 to 30 and the total award was doubled from \$25,000 to \$50,000. The title of Regents Professor represents the most prestigious academic award at the University and is an important element in retaining and supporting the best and brightest faculty.

- The **Women’s Faculty Cabinet**, formed in 2005, provides leadership to improve and enrich the academic and professional environments for women faculty.
- The University has a new faculty recruiting website, *Wish You Were Here*. Narrated by Minnesota native and University alumnus Garrison Keillor, the website highlights Minnesota and the Twin Cities as a livable and culturally vibrant destination. It is frequently used by departments to help educate candidates for faculty positions about the quality of life in Minnesota.
- An innovative **postdoctoral fellowship program** focuses on interdisciplinary scholarship, community engagement, and diversity. The process of using postdoctoral positions to strategically promote diversity has already paid dividends in the form of several postdoctoral fellows who have subsequently found faculty positions at the University.

## Development of New Mentoring Opportunities for Faculty

- A **new faculty orientation program** provides the most comprehensive orientation in the country to newly hired faculty. New Faculty Orientation is just one of the many ways that the University invests in the success of its faculty at all stages of their careers. The three-day orientation introduces new faculty to critical information, resources, and support for research, teaching, and outreach efforts.
- A **new year-long department heads and chairs training program** provides a vehicle for communicating the best practices around faculty development, mentoring, and recruitment. The on-campus version of a program offered by the Committee on Institutional Cooperation (Big Ten universities plus University of Chicago) has been enhanced to address leadership styles and needs at the University and to develop a cadre of faculty who can be ready to step into leadership roles.
- The University now offers **mentoring sessions on tenure and promotion** for assistant and associate professors each semester to help guide faculty through the tenure and promotion process.

## Regent Professors

The number of Regents Professors has increased 50% since the start of strategic positioning.

2004-05	20
2009-10	30

## Grant Productivity

Since 2004 the University has increased R&D expenditures by 41 %, more than double the average increase posted by the nation's top 20 universities.

## Research Impact

The University ranked among the top 10 in citation index in 15 of 19 fields, top five in three fields, and improved rank in four of seven fields reported in 2007.

## Research Expenditures

University research expenditures have increased from \$549 million in 2005 to \$741 million in 2009. The University ranks 8th among all public universities in research expenditures.

## New Interdisciplinary and International Research Opportunities

- Established in 2007, the **Institute on the Environment** is a driving force behind the University's growing reputation as a global leader in environmental thought and practice. This interdisciplinary initiative brings together faculty and students from disciplines across the University with private and public sector partners to develop and apply solutions to today's most pressing environmental challenges.
- Established in 2008, the \$1.3 million annual **Imagine Fund** provides competitive financial grants to hundreds of arts, humanities, and design faculty. At a time when many universities are scaling back such support, the Imagine Fund strategically recognizes the importance of rewarding the most promising creative faculty.
- The **Global Spotlight Initiative**, launched in 2009, is a biennial focus on a region of the world and a pressing global issue. Global Spotlight highlights existing strengths of the University, inspires research, builds new collaborations, and enhances the University's visibility and stature around the world. The areas of focus for the 2009–10 biennium were the continent of Africa and the issue of Water in the World. For the 2010–11 biennium, the spotlight is Latin America and the Caribbean and the Impact of Urbanization in the World.
- Other **notable interdisciplinary institutes** created since 2005 include: Institute for Advanced Study, Center for Translational Medicine, Clinical and Translational Research Science Institute, Institute for Health Informatics, Institute for Translational Neuroscience, and the Institute for Therapeutics Discovery and Development.

## Increased Infrastructure Investment

### University Libraries

- Targeted investments in the University Libraries since the start of strategic positioning have moved its national rank in the Association of Research Libraries ranking for total material expenditures from 24th to 14th. University cumulative investments of over \$26 million between 2004–05 and 2010–11 especially enhanced the University’s collections.
- Access to digital collections was increased through newly created customized web portals to library resources and the Digital Conservancy, a repository for University and faculty publications, with opportunities for use as an open access resource.
- Support has been increased for interdisciplinary and translational research by expanding the expertise and infrastructure within the University Libraries to support research collaboration, data management, and impact assessment.

### Physical Infrastructure

- Working closely with faculty and staff researchers, the Office of the Vice President for Research developed a comprehensive, rolling master plan to identify and support research infrastructure needs critical to the University’s continued competitiveness and progress towards its strategic objectives. The research infrastructure includes major research services, capacities, or equipment as well as the technical support staff to meet the needs of research and scholarly efforts valuable to the University as a whole, and that cannot be provided solely by local, regional, or collegiate efforts. This plan will guide the investments made under the \$20 million Infrastructure Investment Initiative (I<sup>3</sup>) announced in 2010.

## Infrastructure Investment Initiative (I<sup>3</sup>)

Funded through royalties earned from the commercialization of University technology, the I<sup>3</sup> program will provide more than \$20 million for significant investments in shared resources that support high-end research needs, including major equipment purchases and support for highly trained technical personnel needed to support major research equipment or to provide critical expertise to support complex research areas. This initiative also will provide funding for infrastructure needed to support scholarship in the arts and humanities (e.g., community art production, performance areas, and technical equipment).

In the last three fiscal years, the Institute on the Environment has invested \$6.6 million of University funds, another \$13.2 million of pass-through funds from the State of Minnesota's Renewal Development Fund, and leveraged it to bring \$134.5 million in additional funding to the University.

## ***The Institute on the Environment***

---

### **Activities and Accomplishments**

- The Initiative for Renewable Energy and the Environment (IREE), a signature program of the Institute on the Environment, funds innovative research aimed at leading society toward a more energy-secure future. Since 2004, IREE has invested nearly \$31 million in more than 200 renewable energy research projects and helped leverage an additional \$63 million in research funding from external sources. In the last three fiscal years, the Institute has invested \$6.6 million of University funds, another \$13.2 million pass-through funds from the State of Minnesota's Renewal Development Fund, and leveraged it to bring \$134.5 million in additional funding to the University.
- The interdisciplinary Resident Fellows program brings together faculty from across the University to address environmental challenges. The current cohort of 31 fellows represents 21 academic disciplines, including computer science and engineering, entomology, law, journalism and mass communication, civil engineering, veterinary population medicine, urban and regional planning, plant biology, and public affairs.
- The Global Landscapes Initiative (GLI) conducts applied research at the nexus of global land use, agriculture, food security, and the environment. Guided by industry and nongovernmental organization stakeholders including Cargill, General Mills, and Monsanto, GLI is analyzing land use worldwide in search of winning strategies for boosting food production while protecting the planet's infrastructure. GLI research played a key role in a widely cited paper published in *Nature* last year identifying nine planetary boundaries that define a "safe operating space" for human activity.
- The NorthStar Initiative for Sustainable Enterprise works with some of the country's most influential corporate, nonprofit, and government leaders to develop and apply innovative practices that are good for the environment, economy, and society. Current NorthStar Consortium participants include representatives of 3M, Procter and Gamble, Worldwatch Institute, U.S. Environmental Protection Agency, The Nature Conservancy, Medtronic, Ford Motor Co., and the United Nations Foundation.

- Discovery Grants provide resources for faculty from around the University. Current Discovery Grants support 11 solution-oriented interdisciplinary research programs in areas such as managing the world's great lakes, sustainable development in Tanzania, building resilience at the interface of humans and boreal forests in transition, online adventure learning, urban heat islands, and global plant data synthesis.
- The Institute-sponsored Sustainability Studies Minor, one of the first and largest in the U.S., educates hundreds of students annually from a wide variety of majors across the University. An affiliated website serves as a forum for all things sustainable throughout the University system.
- The Acara Program catalyzes social entrepreneurship and creates a new generation of global leaders by helping University students launch businesses that promote sustainable development in India and other countries. In the past year, more than 300 students in the U.S., India, and Uganda have learned how to develop businesses aimed at solving specific environmental problems. Several have launched the venture they planned.
- Leadership Development Programs provide faculty and graduate students across the University with specialized skills in communications, media and government relations, and entrepreneurship to help them move beyond academia to real-world impact.
- The Institute's *Momentum* print, web, and multimedia forum, provides award-winning communications with international reach about environmental issues of regional and global significance. The print magazine informs nearly 10,000 thought leaders and policymakers from higher education, business, industry, nonprofits, government, and the media in 45 states and 14 countries. *Momentum* website and multimedia productions have garnered national attention. The *Momentum* 2011 event series is expected to attract a broad and vibrant live audience plus gain thousands of additional viewers through encore online access.



The first Imagine Fund Visiting Scholars were world-renowned Finnish architect Juhani Pallasmaa and American playwright Leigh Fondakowski. They came to campus for a series of six thought-provoking public discussions that were eagerly attended by hundreds of faculty, students, and members of the broader community. Fondakowski and Pallasmaa were interviewed by College of Design Dean and Professor Tom Fisher in the Twin Cities Public Television presentation "Making Sense of Making Art," and currently are at work together on a University of Minnesota Press book tentatively titled: "The Craft of Making."

## *The Imagine Fund*

---

Creation of the Imagine Fund in 2008 was driven by the strategic question: Could the University of Minnesota have even greater impact and visibility in the arts, humanities, and design?

The Imagine Fund features five programs, the keystone program of which provides up to 150 annual awards of \$5,000 to arts, humanities, and design faculty, distributed through a competitive, peer-reviewed process. Recipients may use the award to enhance their research or teaching.

In only three years, the Imagine Fund already has achieved the following results:

- Assisted in the recruitment, development, and retention of faculty by providing a reliable long-term source of funds for research and creative endeavors. At a time when many universities are reducing arts, humanities, and design support, the University of Minnesota is growing support. Over 500 faculty projects have received support from the Imagine Fund.
- Rewarded innovation and exciting lines of research or teaching that but for the Imagine Fund would not have been created. Funding agencies can be reluctant to support leading-edge, innovative work such as integrating technology into the arts, humanities, and design.
- Improved the visibility and engagement of the arts, humanities, and design through visiting and in-house chair programs. The first in-house chair, Professor Susan Noakes, built interdisciplinary teams across the country to share medieval texts using supercomputer technology. The second chair, Professor Michal Kobialka, is pursuing a multifaceted research project comprising a book project, a graduate intensive seminar on the Enlightenment, and a conference, "Performing the Enlightenment in the Twenty-First Century."
- Enhanced the educational experience for students through new teaching materials and the development of new courses, such as new digital materials and new interdisciplinary courses.



## The Scholars Walk

Recognition of faculty accomplishments is an important part of any academic community. One of the most notable and public forms of recognition at the University is the Scholars Walk, completed in 2006. This campus-spanning monument celebrates the local, national, and international accomplishments of University faculty, students, alumni, and staff. From institutional teaching awards to Nobel Prizes, the Scholars Walk provides a scenic and stately tour through these triumphs.

As laudatory and celebratory as these monuments are, there is yet another feature of the Scholars Walk that heightens appreciation of the work of the University community: The Wall of Discovery. Stretching some 260 feet and designed to look like a giant chalkboard, the Wall is a collection of images and etchings presenting the most notable and creative contributions of the University community. If a person were to ask “What has the University of Minnesota contributed to the world?” the Wall of Discovery would provide an impressive, pictorial response.

The process that went into obtaining items for the Wall was extensive. Project leaders contacted current and former faculty and alumni of the University, in hopes of obtaining tangible manifestations of the discoveries and creations that are products of this great public research university. Other times, the committee worked with the family members of these faculty and alumni.

According to Drew Sternal, the artist commissioned to create the Wall of Discovery, the goal was to capture the actual “Aha!” moments of these creative minds. Faculty and alumni were asked to share something in their own hand that represented the process of their genius so that viewers could feel the integrity and authenticity of the work. “There are examples on the Wall of Discovery where these individuals can point to the actual moment where the breakthrough happened,” says Sternal.



The Scholars Walk and Wall of Discovery, completed in 2006, celebrate the research and classroom accomplishments of the University’s award-winning faculty, students, alumni, and staff, and provide a prominent memorial to those honored.

## Faculty Awards, 2005-10

### **Nobel Prize**

2007 Leonid Hurwicz, Economics

### **MacArthur Foundation Fellowship**

2010 Marla Spivak, Entomology

### **International Prize for Biology**

2008 G. David Tilman, Ecology, Evolution, and Behavior

### **Wolf Prize**

2007 Ronald Phillips, Agronomy and Plant Genetics (jointly with Michel A. J. Georges of University of Liège in Liège, Belgium)

### **BBVA Foundation Frontiers of Knowledge Award in Ecology and Conservation Biology**

2010 Peter Reich, Forest Resources

### **Guggenheim Fellowship**

2005 Fernando Arenas, Spanish and Portuguese Studies

2007 Daphne Berdahl, Anthropology; Hisham M. Bizri, Cultural Studies and Comparative Literature; Peter H. McMurry, Mechanical Engineering; David Treuer, English

2008 Douglas N. Arnold, Mathematics; Kathryn Sikkink, Political Science; Robin Stryker, Sociology

2009 R. Lawrence Edwards, Geology and Geophysics

### **American Academy of Arts & Sciences**

2005 Anne Pusey, Ecology, Evolution, and Behavior; Kamil Ugurbil, Radiology

2006 Subir K. Banerjee, Geology and Geophysics

2007 Patricia Hampl, English; Geoffrey Hellman, Philosophy; John Sullivan, Political Science

2009 John R. Freeman, Political Science; A. Stephen Polasky, Ecology, Evolution, and Behavior/Applied Economics

2010 Frank Bates, Chemical Engineering and Materials Science

**National Academy of Sciences**

- 2007 Allen Goldman, Physics and Astronomy  
2009 David Kohlstedt, Geology and Geophysics; Donald Truhlar, Chemistry  
2010 A. Stephen Polasky, Ecology, Evolution, and Behavior/Applied Economics

**Institute of Medicine**

- 2007 Kamil Ugurbil, Radiology  
2009 Karen Hsiao Ashe, Neurology/Neuroscience; Michelle Biros, Emergency Medicine; Selwyn M. Vickers, Surgery; Susan M. Wolf, Law/Medicine/Bioethics  
2010 Mary Story, Epidemiology and Community Health

**National Academy of Engineering**

- 2005 Bruce Wollenberg, Electrical and Computer Engineering



# TIME LINE

## 2004

President Bruininks initiates formal strategic positioning effort.

Town hall meetings on strategic positioning held with 150 University faculty, staff, students, alumni, and stakeholders participating.

Undergraduate Research Opportunities Program (UROP) expansion begins.

Increasing investment in faculty compensation begins.

Center for Magnetic Resonance Research expanded, part of the Biomedical Discovery District.

## 2005

Goal of becoming a top three public research university endorsed unanimously by the Board of Regents.

35 strategic positioning task forces with over 350 University faculty, staff, students, alumni, and stakeholders begin work, raising the total participants to over 500.

Founders Free Tuition Program launched, providing full tuition for all Pell-eligible Minnesota students.

Additional emphasis placed on recruiting National Merit Scholars and other high-ability undergraduate students.

University expands investments in graduate and professional student support.

University begins investments in new interdisciplinary graduate programs.

Institute for Advanced Study created.

McGuire Translational Research Facility built, part of the Biomedical Discovery District.

Number of Regents Professors increased from 20 to 30 and the total award doubled.

Women's Faculty Cabinet created.

Investments in University Libraries increased.

Provost's Research Council created.

Provost's Interdisciplinary Team created.

## 2006

Aggressive four-, five-, and six-year graduation goals approved for all campuses by the Board of Regents.

34 task forces complete their work and recommendations. Report from 35th task force received in January 2007.

Six colleges closed. three new colleges open their doors: College of Design, College of Education and Human Development, and College of Food, Agricultural and Natural Resource Sciences.

Scholars Walk unveiled.

New Faculty Orientation program begins.

## 2007

Student learning outcomes and student development outcomes endorsed by the Board of Regents.

Consortium on Fostering Interdisciplinary Inquiry formed.

Tenure code and promotion standards revised, increasing the rigor of criteria for promotion and tenure and enhancing work-life balance for faculty.

New Department of Writing Studies begins integrated first-year writing program.

First-in-the-nation online Graduation Planner unveiled.

Revision of departmental criteria for tenure and promotion begins.

Writing-Enriched Curriculum for undergraduates begins.

Institute on Environment created.

“Defining the St. Paul Campus” planning initiative begins.

University becomes a member of the Google Book Search Project, joining a handful of prestigious universities that have library content digitized.

Education Sciences Building opens.

“Wish You Were Here” faculty recruiting website launched.

13-credit tuition banding expanded system-wide.

## 2008

New liberal education requirements approved.

New University Honors Program implemented on Twin Cities campus.

Welcome Week program begins.

Imagine Fund for arts and humanities begins.

University begins participating in national student engagement surveys.

Access to Success program for undergraduates begins.

Annual Doctoral Dissertation Research Showcase launched.

## 2009

Blue Ribbon collegiate and campus committees launched to identify priorities and strategies for enhancing excellence during a new budgetary reality.

Graduate and professional education restructuring begins.

Global Spotlight initiative launched.

Board of Regents policy on academic freedom broadened.

Medical Biosciences Building built, part of the Biomedical Discovery District.

## 2010

Science Teaching and Student Services building opens.

Infrastructure Investment Initiative begins.

Center for Academic Planning and Exploration opens.

APlus automated advising tool for undergraduates launched.

Plan underway to expand the East Bank Recreation Center.

Founders Program rebranded as U Promise and expanded to provide scholarship assistance to eligible middle-income Minnesota students.

# INVESTMENTS

## FY2005-10 Central Strategic Investments

### Select Funds Allocated in Addition to Base Program Budget

Undergraduate Education	Million
Curriculum	\$8.2
Student Academic Support and Advising	\$3.9
Financial Support	\$39.8
Recruiting, Retaining, and Timely Graduation of Students	\$14.1
Graduate and Professional Education	
Graduate Student Support	\$39.0
Informatics Initiative	\$0.5
Other Graduate Program Support	\$4.0
Faculty	
Research Centers and Institutes	\$32.9
Faculty Support and Compensation Increases	\$74.5
Library Support	\$34.2
Research Infrastructure Investments	\$35.6

Selected Investments in Academic Facilities	
Bell Museum	\$2.5
Burton Hall (College of Education and Human Development)	\$1.2
Center for Magnetic Resonance Research	\$64.0
Educational Sciences	\$21.0
Equine Center (College of Veterinary Medicine)	\$14.2
Folwell Hall (College of Liberal Arts)	\$34.8
Hanson Hall (Carlson School of Management)	\$47.0
Heller Hall (College of Liberal Arts)	\$2.7
Jackson Hall (Medical School)	\$3.5
Johnston Hall	\$2.1
Kolthoff Hall	\$21.2
Mayo Building	\$36.6
Mechanical Engineering (College of Science and Engineering)	\$1.1
Moos Health Science Tower	\$15.6
Northrop Memorial Auditorium	\$9.5
NOvA Experiment	\$35.4
Physics and Nanotechnology	\$6.5
Science Teaching and Student Services Building	\$69.7
Smith Hall (College of Science and Engineering)	\$1.3
Social Sciences	\$2.8
St. Anthony Falls Laboratory	\$16.0
Veterinary Buildings	\$9.0
Vocational/Technical Education (Institute on the Environment)	\$1.3
Wallin Medical Biosciences Building	\$78.1
Walter Library	\$1.5
Weisman Art Museum	\$14.2

# PROGRESS INDICATORS

## Strategic Positioning Progress (as of March 2011)

### University of Minnesota Twin Cities

Select Indicators	Strategic Positioning Period	
<b>Undergraduate Admission</b>	<b>2004-05</b>	<b>2010-11</b>
New student undergraduate applications	18,541	36,853
<b>First-year Undergraduate Students</b>	<b>Fall 2004</b>	<b>Fall 2010</b>
In top 10% of high school class	31%	43%
In top 25% of high school class	68%	83%
Average high school rank	79%	85%
Average ACT	25.0	27.2
Percent students of color	18%	18%
National Merit Scholars	51	101
Entering students	5,588	5,323
Retention to second year (Classes matriculating in fall 2003 and 2009)	86%	90%
<b>Undergraduate Aid</b>	<b>2004-05</b>	<b>2009-10</b>
Students receiving University grants (percentage of enrollment)	20%	33%
Total grant dollars awarded	\$78M	\$143M
Students receiving aid (percentage of enrollment)	55%	75%
Total aid dollars awarded	\$208M	\$311M
<b>Undergraduate Graduation</b>	<b>2004-05</b>	<b>2010-11</b>
4-year rate (Classes matriculating in fall 2000 and 2006)	33%	50%
5-year rate (Classes matriculating in fall 1999 and 2005)	56%	67%
6-year rate (Classes matriculating in fall 1998 and 2004)	57%	70%
Baccalaureate degrees awarded	6,086	6,942
<b>Global Education</b>	<b>Fall 2004</b>	<b>Fall 2010</b>
International students among first-year class	37 (1%)	245 (5%)
Undergraduate students studying abroad	1,491	1,688
<b>Undergraduate Research</b>	<b>2004-05</b>	<b>2009-10</b>
Students participating in undergraduate research program	329	467



Select Indicators	Strategic Positioning Period	
<b>Graduate and Professional Education</b>	<b>2004-05</b>	<b>2009-10</b>
Master's degrees awarded	2,798	3,419
Doctoral degrees awarded	678	807
Professional degrees awarded	777	811
Number of fellowships to graduate students	490	737
<b>Student Enrollment</b>	<b>Fall 2004</b>	<b>Fall 2010</b>
Non-degree students	5,541	3,618
Undergraduate students	28,740	30,519
Graduate students	13,841	13,946
Professional students	2,832	3,638
Total students	50,954	51,721
<b>Full-time Faculty</b>	<b>Fall 2004</b>	<b>Fall 2010</b>
Tenured and tenure-track women faculty	637 (28%)	736 (32%)
Tenured and tenure-track faculty of color	297 (13%)	378 (17%)
Tenured and tenure-track faculty total	2,250	2,281
<b>Research</b>	<b>2005</b>	<b>2009</b>
Total research expenditures	\$549M	\$741M
Library rank (Association of Research Libraries) among all universities	24th	14th
<b>Student Satisfaction</b>	<b>2003</b>	<b>2009</b>
Undergraduate students (on 6-point scale)	4.7	5.0
Graduate students (on 6-point scale)	4.9	5.1
<b>Overall Satisfaction with Employment at the University</b>	<b>2006</b>	<b>2008</b>
Faculty answering "Strongly Agree" or "Agree" to satisfaction question	71%	78%
Staff answering "Strongly Agree" or "Agree" to satisfaction question	78%	79%
<b>Citizen Support of Strategic Planning</b>	<b>2006</b>	<b>2009</b>
Opinion leaders in favor of the University's strategic planning initiative	80%	84%
General public in favor of the University's strategic planning initiative	82%	85%

The University of Minnesota has much to celebrate. The strategic plan has guided the University into a new era of excellence, as evidenced by the initiatives and investments highlighted in this report. Despite financial challenges, the effort to become one of the top three public research universities continues. Expectations of academic rigor from faculty, staff, and students will not waver. The second half of the 10-year strategic positioning effort should produce results as exciting and noteworthy as the first.







UNIVERSITY OF MINNESOTA

**Driven to Discover<sup>SM</sup>**

© 2011 Regents of the University of Minnesota. All rights reserved.

The University of Minnesota is an equal opportunity educator and employer. The University's mission, carried out on multiple campuses and throughout the state, is threefold: research and discovery, teaching and learning, and outreach and public service.

Inquiries regarding compliance may be directed to the Director, Office of Equal Opportunity and Affirmative Action, University of Minnesota, 274 McNamara Alumni Center, 200 Oak Street S.E., Minneapolis, MN 55455, (612) 624-9547, [eoaa@umn.edu](mailto:eoaa@umn.edu). Website at [www.eoaa.umn.edu](http://www.eoaa.umn.edu). This publication/material is available in alternative formats upon request.