2016 University Plan, Performance, and Accountability Report

UNIVERSITY OF MINNESOTA
Driven to Discover℠

2016 University Plan, Performance, and Accountability Report

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Introduction

"To benefit the people of the state, the nation, and the world"

University Mission

The University of Minnesota, founded in the belief that all people are enriched by understanding, is dedicated to the advancement of learning and the search for truth; the sharing of this knowledge through education for a diverse community; and to the application of this knowledge to benefit the people of the state, the nation, and the world.

—University mission

This mission, carried out on multiple campuses and throughout the state, is threefold:

Providing an extraordinary education that generates knowledge, understanding, and creativity. We seek to develop students who become leading scientists and teachers, engineers and artists, health and business professionals and who contribute to their communities at every level.

Conducting breakthrough research that moves us forward. Our researchers improve our understanding of the world and how we work and live.

Partnering with communities to advance research, share knowledge, and provide students with powerful academic experiences that address the challenges of a diverse and changing world.

To support this mission effectively, the University is committed to:

Employing world-class faculty and staff who are innovative, energetic, and dedicated to the highest standards of excellence.

Stewarding an outstanding organization that is responsible with resources, dedicated to measuring and improving performance, and aligned to support the University's core functions of teaching, research, and outreach.

University Overview

The University of Minnesota, founded in 1851, seven years before the territory of Minnesota became a state, is Minnesota's flagship and land-grant university and one of its most important assets, as well as a powerful resource for the region, the nation, and the world.

The University is composed of five campuses with distinct roles, each campus contributing to the University's mission: the Twin Cities campus, where the University originated; the Duluth campus, which joined the University in 1947; the Morris campus, which became a system campus in 1960; the Crookston campus, added in 1966; and the Rochester campus, which was designated a system campus in 2006. The University is the state's only research university, and the Twin Cities campus is among the nation's most comprehensive institutions—one of only four campuses that have agricultural programs as well as an academic health center with a major medical school.

The University is the state's economic and intellectual engine. As a top research institution and one of only 62 members of the prestigious Association of American Universities, it serves as a magnet and a means of growth for talented people, a place where ideas and innovations flourish, and where discoveries and services advance Minnesota's economy and quality of life. As Minnesota's land-grant institution, the University is strongly connected to Minnesota's communities, large and small, partnering with the public to apply its research for the benefit of the state and its citizens.

Governance and Leadership

The University is governed by a Board of Regents elected by the Minnesota Legislature (See discussion on page 3 and list of current Regents in Appendix B). The president and vice presidents serve as the senior leaders of the University and the Twin Cities campus, which avoids the added administrative cost of a separate "system" office. Direct leadership for the remaining campuses is provided by four campus chancellors (see list of senior leaders in Appendix C).

Accreditation

All campuses of the University of Minnesota operate with the accreditation of the Higher Learning Commission. The Twin Cities campus has been accredited continuously since 1913. The Duluth campus has been accredited since 1968, while the Morris and Crookston campuses were first accredited in 1970 and 1971. The Rochester and Twin Cities campuses are accredited jointly. Each campus is accredited to offer the bachelor's degree; the Duluth campus is accredited to offer the master's degree and the Doctor of Education (Ed.D.) degree; and the Twin Cities campus is accredited to grant master's, doctoral, and professional degrees (see accreditation discussion on page 5).

Enrollment

Total enrollment at the University's campuses for fall 2016 was 67,480. Sixty-five percent of registered students were undergraduates. Non-degree-seeking students represented nine percent of total enrollment. In 2015–16, the University granted 10,446 bachelor degrees, 3,361 master's degrees, 984 doctoral degrees, and 862 traditional professional degrees (M.D., D.V.M., D.D.S., Pharm.D., J.D., L.L.M.).

An Accountable University

"...[The regents shall] make a report annually, to the Legislature... exhibiting the state and progress of the University... and such other information as they may deem proper, or may from time to time be required of them."

—*University charter, 1851 Territorial Laws, Chapter 3, Section 16*

Since the University's inception over 165 years ago, public and University leaders have established and continuously reaffirmed a principle of accountability. Accountability for an institution as important and complex as the University of Minnesota, however, has myriad forms and interpretations. For some, accountability requires a discussion about the University's ability to address its mission. For others, accountability may necessitate a precise accounting of revenue and expenditures, an assurance of efficient and competent management of institutional resources, or records and institutional data about students and performance. Yet others may argue that accountability is best met by examining leadership and its ability to employ strategies that advance a vision. Still others understand accountability in terms of return on investment and so look for evidence of direct impact on the State of Minnesota and its citizens.

The University's leaders take seriously this responsibility to be accountable, in all of the ways mentioned above. Among the participants engaged in the University's accountability relationships are its Board of Regents, senior leaders and internal units, faculty, state and federal authorities, citizen and nonprofit organizations, accreditation associations, and multiple media organizations.

University of Minnesota Board of Regents

Chapter 3 of Minnesota's 1851 Territorial Laws established the University of Minnesota and specified that "[t]he government of this University shall be vested in a board of twelve regents, who shall be elected by the Legislature." Later sections delineate

specific powers to "enact laws for the government of the University"; "regulate the course of Instruction" and confer degrees and diplomas; regulate and prescribe tuition and fees; and select, manage, and control all University lands.

These twelve regents—eight who are elected to represent Minnesota's eight congressional districts and four who are elected at large—represent the interests and needs of the state and the citizens of Minnesota and, on their behalf, hold the University's senior leadership accountable. The Board's fundamental accountability documents are the University Plan, Performance, and Accountability Report (www.academic.umn.edu/accountability); the University Operating Budget (finance.umn.edu/budget.html); and the University Capital Budget (finance.umn.edu/budget_capital.html).

Other accountability activities at this level include the president's report to the Regents at each of their regular board meetings, as well as monthly, quarterly, and annually mandated reports to the Board on topics such as student admissions and progress, faculty promotion and tenure, tuition rates, the independent auditors' report, real estate transactions, gifts, asset management, purchases of goods and services over $1 million, new and changed academic programs, academic unit strategic plans, NCAA reports on student-athletes, and presidential performance reviews. Such reports and presentations are archived on the Board of Regents website.

University Progress Card

In October 2015, the Board of Regents, in consultation with the administration, approved a Progress Card

framework (www.oir.umn.edu/planning_metrics/ progress_card) to drive performance and support oversight. The development effort focused on identifying in which areas the Board of Regents should set specific aspirational goals. The Board's intent was to focus oversight on a limited number of measurable goals and trends that indicate or drive excellence, understanding that the University measures progress and accountability broadly throughout the institution in many ways, including the University's Plan, Performance, and Accountability Report.

The Board has adopted a set of "gold" and "maroon" measures for this purpose. The gold measures represent data sources that are well understood and agreed upon, where there is the ability to set a quantifiable goal over a reasonable time period, and where the University can take actions to influence the results. The maroon measures are important trends and indicators, but the goals may be directional in nature or the measure may only need to be monitored, and University action alone is not likely to significantly influence the measure. The Board's intent is to monitor these measures on a regular basis to assess University progress in these important areas.

All of these Progress Card measures are connected to and more deeply informed by the broader discussion of performance and accountability found in the rest of this report. See page 6 for the current Progress Card and Appendix E for data definitions.

Major, University-level Accountability Activities

Senior leaders engage in reporting, communications, and other activities that address the University's accountability responsibility. Select examples include:

- The president's annual State of the University address;
- Government & Community Relations reports on the University's economic impact by county and legislative district (govrelations.umn.edu/ footprint/);
- Annual report of University research activity (www.research.umn.edu/news/reports.html);
- Annual accounting of student services fee allocations (www.studentservicesfees.umn.edu);

- Public Engagement reports (www.engagement. umn.edu/our-impact/reports);
- Institutional success and demographic data managed by the Office of Institutional Research (www.oir.umn.edu);
- Annual reports on real estate, sustainability, capital planning, and project management;
- Annual updates on energy management and utilities and facilities condition and utilization;
- Survey findings, including citizen, alumni, student, and employer satisfaction;
- University participation in higher education consortia, such as the Association of American Universities, Association of Public and Land-grant Universities, American Council on Education, and Big Ten Academic Alliance.

Office and Program Reports

In addition to the major reports prepared by senior leaders for the Board of Regents and other audiences, other offices and programs across the University produce reports or other accountability communications for an array of stakeholders. These include reports by University research centers; key administrative or student services areas; and annual reports to donors.

Government and Other External Organization Requirements

The University provides a number of annual or biannual reports to the Minnesota legislature and other organizations, including:

- Biennial Report to the Minnesota State Legislature, which showed that the University had exceeded all performance measures set forth by the Minnesota Legislature for fiscal year 2015;
- Postsecondary Planning: A joint report to the Minnesota Legislature by Minnesota State and University of Minnesota;
- Compliance reports to such agencies as the U.S. Department of Education, National Science Foundation, National Institutes of Health, U.S. Department of Agriculture, National Collegiate Athletic Association, University Institutional

Review Board, City of Minneapolis, Hennepin County, and Minnesota Office of Higher Education;

• Testimony to local, state, and federal governments;

• Assessment and evaluation reports to philanthropic foundations.

Institutional and Program Accreditation

One tool that holds the University accountable for academic quality is accreditation. Accreditation is the process of assuring and advancing the quality of higher education institutions' campuses, departments, and programs through reviews by outside agencies. Two types of accreditation, with varied breadth, apply to the University.

The first type of accreditation reviews an entire higher education institution and its programs for quality. Each University of Minnesota campus operates with full accreditation at the institutional level by the Higher Learning Commission.

The Crookston, Rochester, and Twin Cities campuses were reviewed by the Higher Learning Commission in 2015, and were granted continued accreditation status. Among their reports, the reviewers stated that the University is "well supported by the Board of Regents," that faculty are "deeply engaged in scholarship, teaching, and service," and that "all sectors of the University are firmly committed to continuous improvement based on the results of internal and external evaluation processes."

The second type of accreditation involves evaluations by a specialized accrediting body associated with a national professional organization or with a specific discipline. At the University, over 200 academic programs are accredited by bodies such as the American Bar Association, Accreditation Board for Engineering and Technology, National Association of Schools of Music, National Council for Accreditation of Teacher Education, and Accreditation Council for Graduate Medical Education.

To learn more about both types of accreditation at the University, see www.academic.umn.edu/provost/reviews/accreditation.html.

Media and the General Public

Media organizations, such as the *Minnesota Daily*, *Pioneer Press*, *Star Tribune*, and Minnesota Public Radio, play an important role in holding the University accountable. The Minnesota Data Practices Act is a set of laws designed to ensure that the media and members of the general public have access to public records of government bodies at all levels in Minnesota. This access positions other parties to engage the University, to raise questions, and to verify information.

The University Plan, Performance, and Accountability Report

As noted earlier, Board of Regents operations policy identifies this report as one of three fundamental accountability and planning documents. It reports on the University's effectiveness in fulfilling its mission, while the operating and capital budgets report on the University's fiscal management.

Specifically, the University Plan, Performance, and Accountability Report:

• articulates the mission and vision of the University;

• identifies critical issues and challenges confronting the University;

• illustrates and analyzes longitudinal trends in key areas;

• provides a means for comparisons with peer institutions; and

• identifies areas for continued work.

The pages that follow align with and connect to the mission of the University. Chapter 3 describes some of the planning underway at each campus to ensure future success and excellence. Chapters 4, 5, and 6 discuss the University's effectiveness in fulfilling the fundamental land-grant mission of teaching, research, and outreach. Chapters 7 and 8 address the University's effectiveness in supporting that mission by employing world-class faculty and staff and stewarding an outstanding organization.

University Progress Card

Gold Measures

Entering Year	Campus	2009	2010	2011	2012	Goal/Year	See page
4-year graduation rate	Crookston	34.7%	42.5%	44.5%	46.5%	45%/2017 cohort	62
	Duluth	37.5%	38.2%	39%	38.9%	45%/2017 cohort	49
	Morris	53.2%	53.4%	52.6%	54.3%	60%/2017 cohort	55
	Rochester	50%	50%	63.1%	56.4%	60%/2017 cohort	65
	Twin Cities	59.1%	60.9%	63.3%	65.2%	65%/2017 cohort	42
Entering Year		**2007**	**2008**	**2009**	**2010**	**Goal/Year**	
6-year graduation rate	Crookston	46.6%	51.7%	48.4%	56.7%	60%/2015 cohort	62
	Duluth	66.7%	65.5%	66.5%	64.7%	68%/2015 cohort	49
	Morris	68.2%	73.5%	68.1%	69.1%	80%/2015 cohort	55
	Rochester	NA	NA	60%	62%	60%/2015 cohort	65
	Twin Cities	75.7%	78.7%	77.6%	78.9%	82%/2015 cohort	42
Entering Year		**2009**	**2010**	**2011**	**2012**	**Goal/Year**	
4-year graduation rates of Pell-eligible students	System	41.7%	43.9%	45.4%	47.4%	54%/2017 cohort	34
		2013–14	**2014–15**	**2015–16**	**2016–17**	**Goal**	
Freshman average ACT	Twin Cities	27.9	27.9	28.2	28.3	>28.0	39
		2011–12	**2012–13**	**2013–14**	**2014–15**	**Goal/Year**	
Institutional gift aid	System	$210M	$216M	$223M	$233M	$275M/2021	34–35
		FY2012	**FY2013**	**FY2014**	**FY2015**	**Goal/Year**	
R&D expenditures	Twin Cities	$826M	$858M	$877M	$881M	$900M/2021	89
		FY2012	**FY2013**	**FY2014**	**FY2015**	**Goal/Year**	
Medical School ranking	Twin Cities/ Duluth	28	27	30	32	Top 20/2021	86
		2009–10	**2010–11**	**2011–12**	**2012–13**	**Goal/Year**	
Faculty awards N and (Rank: Public Universities)	Twin Cities	34 (7th)	25 (10th)	33 (5th)	32 (6th)	35+ (Top 10)/2021	108–109
			2013	**2014**	**2015**	**Goal/Year**	
% Participation in Employee Engagement Survey	System		57%	64%	67%	72%/2021	107
			FY2014	**FY2015**	**FY2016**	**Goal/Year**	
Op-Ex—continued progress on $90M	System		$18.8M	$40.4M	$57.8M	$90M/FY19	118

See pages 3–4 for background on this Progress Card, and Appendix E for definitions of the measures.

Maroon Measures

Strategic Focus	Campus	Performance Drivers/Outcomes	2010	2011	2012	2013	Goal	See page
Undergraduate Education	Twin Cities	Transfer student 3-year graduation rate	58.6%	62.5%	61.4%	62.4%	>65%	38–39
			2011–12	**2012–13**	**2013–14**	**2014–15**	**Goal**	
Graduate Education	Twin Cities/ Duluth	Graduate and professional degrees awarded	5,291	5,242	5,294	5,305	>5,250	2
			2011–12	**2012–13**	**2013–14**	**2014–15**	**Goal**	
Financial Accessibility	System	Median undergraduate debt at graduation	$25,186	$24,880	$24,854	$24,776	Grow no faster than CPI; Correct for federal/state policy changes	35
			2012	**2013**	**2014**	**2015**	**Goal**	
Inclusive Success	Twin Cities	Students of color with a favorable sense of belonging on campus (SERU survey)	58.7%	59.2%	57.5%	57.3%	Match non-SOC response (currently 71.5%)	36
			2012	**2013**	**2014**	**2015**	**Goal**	
Serving Minnesota Students	System	Percent of incoming new (and all currently enrolled undergraduate) students who are Minnesota high school graduates	70.3% (72.5%)	72.3% (71.9%)	71.0% (71.4%)	70.0% (71.0%)	Maintain historical access	35
	System	Percent of Minnesota high school graduates that elect to attend college in Minnesota and enroll at the University as freshmen	13.9%	16.2%	16.7%	16.6%	Maintain historical access	35
			2012–13	**2013–14**	**2014–15**	**2015–16**	**Goal**	
Health Sciences	Twin Cities/ Duluth/ Rochester	Enrollment in in-demand health science specialities (Nursing, Pharmacy, Dentistry)	1,988	2,000	2,051	2,085	>2,100	82
	Twin Cities/ Duluth/ Rochester	Total combined fall enrollment in Academic Health Center schools and AHC Center for Allied Health	6,268	6,292	6,194	6,198	>6,350	82
			2012–13	**2013–14**	**2014–15**	**2015–16**	**Goal**	
Research	Twin Cities	National public research ranking	9	9	8	8	Maintain top 10	89
	System	MN-IP agreements	41	51	69	81	10% annual growth	93
			2011–12	**2012–13**	**2013–14**	**2014–15**	**Goal**	
Land Grant Mission	System	Public service expenditures	$245M	$249M	$253M	$248M	>$245M	98
			2011–12	**2012–13**	**2013–14**	**2014–15**	**Goal**	
Academic Excellence	Twin Cities	Citations per faculty member	127	126	124	133	>125	88
				2000–05	**2005–10**	**2010–15**	**Goal**	
	System	National scholarships awarded to students		31	52	75	>80 from 2015–2020	35
			FY2012	**FY2013**	**FY2014**	**FY2015**	**Goal/Year**	
Operational Excellence	System	Spending on leadership & oversight vs. mission and mission support (%)	7.9%	7.7%	7.4%	7.4%	Decrease over time	118
	System	GSF in poor or critical condition (facility condition assessment)	7.33M	7.61M	7.73M	8.32M	Decrease over time	115
	System	Sustainability—Metric tons of greenhouse gasses (2008 base level: 703,311)	566,057	626,599	603,504	592,269	50% reduction from 2008 levels by 2021 (351,656)	116
	System	Credit rating	Aa1	Aa1	Aa1	Aa1	Maintain per Board policy	117
			2002–05	**2003–06**	**2004–07**	**2005–08**	**Goal**	
Athletics	Twin Cities	Graduation Success Rate (GSR)	83.2%	83.6%	86.2%	88.2%	Maintain recent gains	37

Planning for Success

Each of the University's campuses has a distinctive history and strategy for contributing to the University's mission and vision in the way that best serves its students, the region, and the state. Together, the Crookston, Duluth, Morris, Rochester, and Twin Cities campuses contain a rich variety of academic departments and degree programs, all of them essential components of the University system.

In fall 2016, President Kaler charged a University of Minnesota System-Wide Strategic Planning Committee to develop a plan that articulates the common values, processes, and expectations across the system campuses. It will also highlight the unique strengths of each part of the system, including Extension and the Research and Outreach Centers, and build on what the University of Minnesota offers to the State of Minnesota, to the region, and the world.

The strengths of each campus complement one another and contribute to meeting the educational and workforce needs of the state. The following sections summarize how each campus is planning for success in achieving the University's mission summarized on page 1. Links to comprehensive campus strategic planning documents are listed in Appendix A.
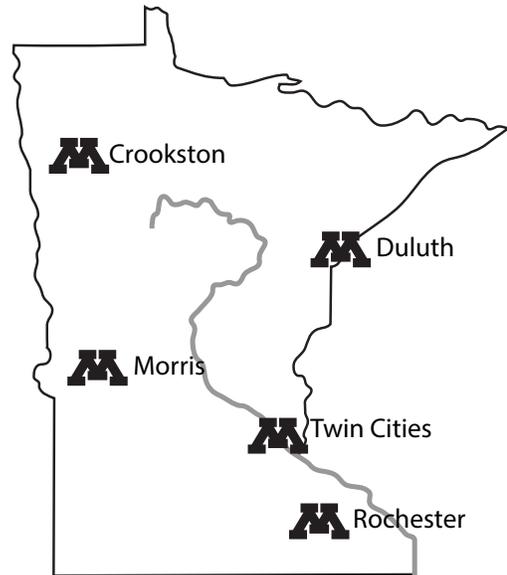
Twin Cities Campus

Founded

1851

Leadership

Eric W. Kaler, President
Karen Hanson, Executive Vice President and Provost

Colleges and Schools

Carlson School of Management
Center for Allied Health Programs
College of Biological Sciences
College of Continuing Education
College of Design
College of Education and Human Development
College of Food, Agricultural and Natural Resource Sciences
College of Liberal Arts
College of Pharmacy
College of Science and Engineering
College of Veterinary Medicine
Humphrey School of Public Affairs
Law School
Medical School
School of Dentistry
School of Nursing
School of Public Health

Degrees/Majors Offered

150 undergraduate degree programs; 181 master's degree programs; 107 doctoral degree programs

Student Enrollment (Fall 2016)

Undergraduate	30,975	(60%)
Graduate & Professional	16,315	(32%)
Non-degree	4,216	(8%)
Total	**51,506**	

Employees (Fall 2016)

Direct Academic Providers	6,741	(28%)
Fellows, Trainees, and Students in Academic Jobs	6,130	(26%)
Higher Education Mission Support	3,704	(16%)
Intercollegiate Athletics	133	(1%)
Facilities-Related Jobs	1,322	(6%)
Organizational Support	4,645	(20%)
Leadership	1,016	(4%)
Total Employees	**23,691**	

Degrees Awarded (2015–16)

Bachelor's	7,687	(61%)
Master's	3,170	(25%)
Doctoral and Professional	1,819	(14%)
Total	**12,676**	

Campus Physical Size (2016)

Minneapolis

Number of Buildings	164
Assignable Square Feet	11,221,963

St. Paul

Number of Buildings	98
Assignable Square Feet	2,496,301

Budget Expenditures (FY2016)

$3.4 billion

Planning at the University of Minnesota Twin Cities

The Twin Cities campus is in year three of implementing "Driving Tomorrow," its ten-year strategic plan to accelerate advancement of excellence and impact in research, teaching, and outreach.

Approved by the Board of Regents in fall 2014, the plan builds on the strengths of the campus as Minnesota's globally engaged research university and one of few major land-grant research institutions situated in a major metropolitan area. The plan recognizes the special opportunities and responsibilities the campus has to innovate and lead through transformative research and teaching engaged with the most pressing and complex challenges of the state of Minnesota and the world.

The plan frames many actions the campus will take over the next decade to fulfill its distinctive responsibilities as Minnesota's land-grant university, dedicated to serving the public good; and as the state's designated research institution, charged with positioning Minnesota at the forefront of emerging knowledge and educating highly skilled workers, professionals, leaders, and global citizens to thrive in a diverse and changing world.

Strategic Priorities

The strategic plan was developed with broad input by a campus-wide workgroup and extended teams of faculty, staff, and students. Initiatives and collaborations are underway to implement the plan across four broad goal areas:

- **Create an exceptional university that leverages research and curricular strengths for powerful impact on "Grand Challenges"**—develop and support more ambitious and innovative collaborations across disciplines as well as through new learning and career pathways that prepare students to be outstanding leaders, innovators, and global citizens.

- **Reject complacency to foster an invigorated campus culture of ambition, challenge, exploration, and innovation**—create a more nimble and integrative university to better

serve our students and state; support highest expectations in all aspects of our mission.

- **Recruit and retain field-shaping researchers and teachers from diverse disciplines and backgrounds**—make Minnesota a magnet for diverse high achievers and innovators who will advance excellence in research, outreach, and engagement and provide world-class educational experiences for graduate, professional, and undergraduate students.

- **Capitalize on the campus's unique location and its global reach to build a culture of reciprocal engagement**—expand partnerships and shared purposes to benefit the state and our students and to deepen Minnesota's connections around the globe.

Implementation Steps and Progress

To implement the plan as a broad-based framework for institutional reinvigoration, the campus has made its goals central to the compact planning and budget planning processes that shape academic directions and strategic investment decisions. Colleges and departments across the campus are working in a variety of ways to align and integrate the plan with core research and teaching activities. The plan's strategic priorities also have been incorporated into work plans in the central administrative areas of undergraduate education, graduate and professional education, faculty and academic affairs, student affairs, equity and diversity, human resources, and others.

Collaborations during the first two years of implementation have yielded specific campus accomplishments across the four goal areas, and progress has been made on larger institutional transformations.

Curricular and Research Transformations

The campus has placed special emphasis on jumpstarting curricular and research goals as key components of the larger vision for institutional reinvigoration and excellence. A slate of priority grand challenges has been established through a faculty-driven process to identify areas of exceptional research strength spanning multiple disciplines;

criteria included global impact and local relevance, extent of existing faculty strength and leadership, disciplinary diversity, interconnection with education and external partners, and other criteria outlined in the strategic plan. The slate highlights five areas where the University is positioned for great impact: assuring clean water and sustainable ecosystems; fostering just and equitable communities; enhancing individual and community capacity for a changing world; feeding the world sustainably; and advancing health through tailored solutions.

In fall 2016, the University announced an initial investment of $3.6 million to fund innovative research collaborations in these areas. These Driving Tomorrow research initiatives bring together nearly 200 researchers and scholars across 17 colleges and schools, along with external partners, for expanded collaborations to strengthen food sustainability, close health disparities, mitigate water pollution, promote healthy child development, and address other critical issues. The collaborations will provide learning and research opportunities for undergraduate and graduate students and lead to new strategies to support and sustain innovative and ambitious research.

The Driving Tomorrow investments are synergistic with the system-wide strategic research goals of the Office of the Vice President for Research and complement publicly engaged work already underway at the University, such as MnDRIVE initiatives on food and the environment, Academic Health Center initiatives, and interdisciplinary collaborations to foster vibrant communities. These expanded collaborations also dovetail with ongoing efforts by colleges and departments to build productive collaborations across structural and disciplinary boundaries.

A Grand Challenges Curriculum also has been launched, with courses focusing on foundational competencies students can apply across a range of topics. The solution-driven courses, team taught by cross-disciplinary instructors, immerse students in the process of discovery that is central to the University's mission. The innovative courses address issues with both local and global relevance and integrate diverse expertise, methods, and perspectives. Topics have ranged from fracking to global hunger to reconciliation and justice.

The undergraduate-level Grand Challenge courses are constructed to fulfill one of the current liberal education theme requirements (civic life and ethics, diversity and social justice, environment, global perspectives, technology and society). These curricular innovations, along with the development of related minors and theme courses, will open up exciting learning and career opportunities for students and will pave the way for faculty consideration of new approaches to liberal education requirements.

Ongoing and Emerging Initiatives

In addition to making progress on curriculum and research goals, the campus is moving forward to achieve the other components of the plan. Priority initiatives focus on strongly supporting faculty excellence across the career span, building a broad-based public engagement agenda, advancing diversity and community building, and strengthening opportunities and practices that harness the full collaborative potential of a comprehensive research campus.

The strategic plan for the Twin Cities campus will be connected with the plans of the Crookston, Duluth, Morris, and Rochester campuses as part of an overarching framework for the excellence of the University of Minnesota system. University leaders will continue to engage both campus and external stakeholders in discussing progress toward goals and in refining the framework as a dynamic roadmap for the future.

Comparison Group Institutions

To assist with campus planning and assessing success, the Twin Cities campus has identified ten public research universities for primary comparison. While these institutions are among the most similar in size and complexity to the Twin Cities campus and the best available for comparison, the institutions have significant differences that should be noted.

Table 3-1 shows the variance among the eleven schools across type, scope, size, and students. It is important to note that this comparison group includes the very best public research universities in the United States. By choosing this peer group, the University intentionally measures itself against the highest standards in the nation.

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Table 3-1. Comparison group institutions, Twin Cities campus

Institution	TYPE			SCOPE				SIZE				STUDENTS	
				Institution Includes:				Enrollment (9)					
	Land Grant	City Size (2)	State Pop. (3)	Agricult. College	Law School	Med. School	Hospital	Under-grad. / Grad. & Prof.		Faculty (10)	R&D (11)	ACT 25th-75th Percentiles (12)	Percent in-state (13)
Ohio State U.–Columbus	●	Large	11.5	●	●	●	●	58,663 / 41,131 13,374		3,722	$818	26.5-31.1	69%
Penn. State U.–University Park	●	Small	12.7	●	O(4)	O(5)	O(5)	47,307 / 40,179 6,565		2,740	$791	23.8-28.8	54%
U. of California–Berkeley	●(1)	Mid-size	37.3		●			38,189 / 27,496 10,693		1,623	$789	28.0-34.0	67%
U. of California–Los Angeles	●(1)	Large	37.3		●	●	●	41,908 / 29,575 12,323		2,007	$1,021	26.4-33.0	74%
U. of Florida–Gainesville	●	Mid-size	18.8	●	●	●	O(6)	50,645 / 33,972 17,243		3,543	$740	25.7-30.7	91%
U. of Illinois–Urbana-Champaign	●	Small	12.8	●	●	●	O(7)	45,842 / 32,170 12,474		1,970	$640	26.7-32.4	73%
U. of Michigan–Ann Arbor		Mid-size	9.9		●	●	●	43,651 / 28,120 15,339		2,735	$1,369	28.9-33.1	57%
U. of Minnesota–Twin Cities	**●**	**Large**	**5.3**	**●**	**●**	**●**	**O(6)**	**50,678 / 30,511 16,607**		**2,589**	**$881**	**26.0-30.3**	**63%**
U. of Texas–Austin		Large	25.1		●	O(8)	O(8)	50,950 / 39,057 11,331		2,729	$651	25.7-31.9	87%
U. of Washington–Seattle		Large	6.7		●	●	●	45,408 / 30,022 14,345		1,643	$1,181	24.3-30.5	63%
U. of Wisconsin–Madison	●	Mid-size	5.7	●	●	●	●	42,716 / 29,580 11,725		2,443	$1,069	26.0-31.1	58%

1 The U.C. System is the land-grant university of California.
2 City size estimates, U.S. Census Bureau, 2010.
3 State population in millions, U.S. Census Bureau, 2010.
4 The Penn State U. Law School is located on the Dickinson campus.
5 The Penn State U. Medical School is located on the Hershey campus.
6 Hospital affiliated with but not owned by campus.
7 The U. of I. Medical Center is located on the Chicago campus.
8 The U. of T. medical programs are located on several other campuses.
9 Fall 2015 enrollment. Total Enrollment includes non-degree seeking student, but undergraduate enrollment is based on degree seeking students. Integrated Postsecondary Data System and Institutional Common Data Sets.

10 Fall 2015 full-time instructional faculty regardless of tenure status. Integrated Postsecondary Education Data System.
11 Fiscal year 2015 higher education research and design expenditures in millions. National Science Foundation Higher Education Research Survey (HERD).
12 Fall 2014 25th and 75th ACT composite scores of new entering freshman. Percentile scores are the weighted average of ACT scores and converted SAT scores. Integrated Postsecondary Education Data System.
13 Fall 2014 percentage of first-time students who are state residents. Integrated Postsecondary Education Data System.

Duluth Campus

Founded

1895—Normal School at Duluth
1921—Duluth State Teachers College
1947—University of Minnesota Duluth

Campus Leadership

Lendley (Lynn) Black, Chancellor

Colleges and Schools

College of Education and Human Service Professions
College of Liberal Arts
Continuing Education
Labovitz School of Business and Economics
School of Fine Arts
Swenson College of Science and Engineering

Academic Partnerships

College of Pharmacy
Medical School

Degrees/Majors Offered

14 bachelor's degrees in 92 majors; two-year program at the School of Medicine and College of Pharmacy; 25 graduate programs; participates in six cooperative programs with the Twin Cities campus

Student Enrollment (Fall 2016)

Undergraduate	9,051	(82%)
Graduate & Professional*	1,021	(9%)
Non-degree	946	(9%)
Total	**11,018**	

*Professional degrees granted by Twin Cities campus, delivered at Duluth campus.

Employees (Fall 2016)

Direct Academic Providers	693	(36%)
Fellows, Trainees, and Students in Academic Jobs	242	(13%)
Higher Education Mission Support	270	(14%)
Intercollegiate Athletics	47	(2%)
Facilities-Related Jobs	172	(9%)
Organizational Support	410	(21%)
University Leadership	77	(4%)
Total Employees	**1,911**	

Degrees Awarded (2015–16)

Bachelor's	1,875	(91%)
Master's	183	(9%)
Doctoral	1	(<1%)
Total	**2,059**	

Campus Physical Size (2016)

Number of Buildings	81
Assignable Square Feet	1,890,433

Budget Expenditures (FY2016)

$249 million

Planning at the University of Minnesota Duluth

Strategic Planning

The University of Minnesota Duluth (UMD) Strategic Plan, approved in 2011, is the product of an inclusive, collaborative process involving faculty, staff, and students as well as Duluth community leaders. Through this process the campus developed a revised mission, vision, core values, and six major goals. UMD's strategic plan has served as a roadmap to focus campus efforts on key priorities, including an increase in active learning.

Active Learning

Beginning in 2014, UMD's Swenson College of Science & Engineering developed a new strategic plan that included a goal to move its entire curriculum to active learning within a decade. Motivation for this cultural and pedagogical change came from personal experiences and published studies demonstrating that active learning significantly improves student performance, retention, and integration of knowledge; increases retention of students in science, technology, engineering, and mathematics (STEM) fields and improves graduation rates; and improves recruitment and retention of underrepresented minorities and women in STEM disciplines. Active learning also better imbues "soft skills" such as team skills, problem solving skills, working effectively in diverse teams, and verbal and written communications skills, which are all necessary for career success and an increasing focus of graduate programs and employers.

To begin this process, a cohort model was implemented, initially consisting of six faculty from various disciplines within the college, as well as the dean and a facilitator from the University's Center for Educational Innovation (CEI), which provided pilot funding for this project. The faculty met biweekly over the course of a year. The spring semester focused on reading the literature and discussing best practices in active learning in the classroom, and discussing strategies to increase student success in STEM coursework. Faculty members then worked in the summer months to redesign a course for the following academic year incorporating active learning strategies.

These strategies were then implemented in the fall and spring of the following academic year. The cohort also continued to meet to talk about experiences in their courses and to plan workshops and dissemination of outcomes and uses of active learning to all faculty in the college. The next year, another invitation was extended to faculty to participate in a second cohort focused on active learning, and the first cohort served as facilitators of the second cohort's bi-weekly meetings. There were 38 faculty in six cohorts in the second year. In addition, many other faculty participated in active learning workshops held during the fall and spring semesters.

CEI was unable to offer funding in the second year, so the dean provided a competitive mechanism to award in-house funding to any faculty participating in the first or second cohort. These funds were used for curricular development by individual faculty as well as support for the cohort and workshop model. A third round of active learning cohorts is planned to begin in spring 2017. The success and efforts of the initial group of early adopters of active learning resulted in a significant increase in the number of faculty in the college interested in an intentional focus on active learning strategies and implementation in their classrooms.

Presently, approximately 20 percent of the more than 180 faculty of the college are engaged in some form of active learning in their classrooms, and more than half the faculty have engaged in the cohorts and/or workshops and plan to incorporate active learning into their classes. The college's formal goal is to include active learning methods in all classes by 2025, but may achieve this benchmark by 2021. The dean is also funding renovation of classrooms to better support active learning.

The college also created an Active Learning Committee. Working with CEI, the committee and the nascent community of practice that was created through the cohorts have begun to develop and implement an assessment framework to document the effects of active learning. Various assessment strategies are being utilized, including tracking student retention, D/fail/withdraw (DFW) rates, standardized tests, and student and faculty surveys. Preliminary data on the effect of active learning

strategies in cohort classrooms is available, and shows results consistent with research literature. In a junior-level civil engineering class, the DFW rate dropped from eight percent in three semesters taught using passive learning methods to three percent in two semesters taught using active learning methods. Evaluations in the same course increased in all 14 of the University's student evaluation questions.

A survey of students who had taken a junior-level Fluid Mechanics course in Mechanical Engineering that adopted a "flipped" active learning format, in relation to three other mechanical engineering courses taught in a primarily passive mode, showed statistically significant improvements in all aspects. Likewise, an introductory Chemistry class in which two concurrent sections were taught—one by traditional lecture and the other by active learning— showed a statistically significant difference in DFW rates of 32 percent versus 16 percent respectively for fall 2015. Similar numbers were generated for the same experiment taught in spring 2016 (see below for a discussion of these data).

Several strategies are underway to continue transforming the culture and increasing the adoption of active learning strategies across disciplines, including holding workshops led by national leaders in innovative teaching pedagogies, holding faculty-led symposia on case studies and examples of innovative teaching, and dedicating time in departmental faculty meetings to personalize the vision of active learning for each department, and sharing teaching pedagogies and techniques for implementing change.

In addition, a mentored teaching program is planned that will provide professional development support for incoming new faculty as well as middle- to late-adopters of active learning. The faculty mentors will be those who have participated in an "Innovative Teaching Cohort" and who have learned best practices in teaching pedagogy. These faculty mentors will also be trained for peer observations to provide effective feedback to mentees. The experience will be focused around observing the mentor teach and interact with the students, learning the structure of the class, and getting the opportunity to lead an activity or class discussion.

Case Study – General Chemistry II

UMD Chemistry professor Brian Gute noted that 20 to 25 percent of students enrolled in General Chemistry II end the semester with D's or F's. With an annual enrollment of approximately 450 students, that resulted in 90–115 students showing unsatisfactory progress (this does not include students who withdraw from the course).

The guiding principle in making the shift to active learning is that taking notes on course content is the easy part of class and that students are capable of doing that on their own. The hard part is applying the concepts to solve problems, and it would be better for students to practice those skills in class where the instructor and teaching assistant are available to answer questions. This way, students can struggle with more complex and challenging material in small groups where they can support each other and have "expert" resources available to help them move past sticking points, allowing the instructor to reinforce correct approaches and intervene to fix inappropriate approaches before they become ingrained habits.

As part of the Experiments in Learning Innovation project, Dr. Gute taught one section of General Chemistry II each semester as a traditional lecture course and a second section as a flipped active learning course. Identical curricula, readings, and exams were used in both classes to see if there were differences in student success as a result of the changed format, and attitude surveys were used to determine if student attitudes toward the course were significantly different between the two sections.

The data from this study were encouraging and statistically significant, with the DFW rate in the flipped section at 16 percent versus 32 percent in the lecture section. Furthermore, attitude surveys show that students in the flipped class have a much higher comfort level asking questions in class (66 percent in flipped sections versus 15 percent in lecture sections) and that their experience with the course is much more positive.

Transforming Classrooms to Active Learning Spaces

The past several years have seen a marked increase in the conversion of space on campus to active learning classrooms, and this trend is accelerating. Eight

lecture-style classrooms have been converted to active learning classrooms in recent years, with another four spaces to be converted in fiscal year 2017.

Another active learning project, with the support of a major gift from the Securian Corporation, is the conversion and expansion of the Math Learning Lab in the Library from a 72-seat, physical computer lab into two adjoining rooms in a SCALE-UP format (Student-Centered Active Learning Environment with Upside-down Pedagogies) accommodating 126 students. The space will be available for general purpose classroom use and student group work when not scheduled for Math Learning Lab activities.

UMD's Information Technology Systems & Services (ITSS) has been involved in the design and installation of numerous SCALE-UP rooms as well as collaborating with departments on modified SCALE-UP designs. ITSS's sandbox space for active learning allows staff to test different designs and equipment before deploying to space on campus. This space is also used for ITSS to work with faculty on active learning course design, as well as for various training sessions (offered active learning style) for the campus.

Comparison Group Institutions

For purposes of planning and assessment, the Duluth campus revised its peer list in recent years to include eleven higher education institutions as the primary group for comparison. These institutions are listed in Table 3-2 and were identified based on their similar academic programs, enrollment, degrees awarded, research activities, and their Carnegie Classification as Master's Medium Programs.

Table 3-2. Comparison group institutions, Duluth campus

	TYPE			SIZE	STUDENTS		
	Institutional Control	City Size	Highest Degree Offered	Total Enrollment	Percent Degree-seeking Undergrads	Percent Full-time	Percent In-state
CA Poly. State U.–San Luis Obispo	Public	Small	Master's	20,186	95%	97%	83%
Col. of Charleston	Public	Mid-size	Post-Master's Certificate	11,456	88%	95%	55%
Minnesota State U.–Mankato	Public	Small	Doctorate	15,387	80%	89%	85%
South Dakota State U.	Public	Small	Doctorate	12,543	80%	86%	56%
Southern Illinois U.–Edwardsville	Public	Mid-size	Doctorate	13,972	81%	85%	89%
U. of Mass.–Dartmouth	Public	Mid-size	Doctorate	9,111	79%	88%	94%
U. of Michigan–Dearborn	Public	Large	Doctorate	8,923	77%	69%	94%
U. of Minnesota–Duluth	**Public**	**Large**	**Doctorate**	**11,093**	**82%**	**96%**	**83%**
U. of North Carolina–Charlotte	Public	Large	Doctorate	27,238	81%	86%	91%
U. of Northern Iowa	Public	Mid-size	Doctorate	11,928	83%	92%	91%
Western Michigan U.	Public	Mid-size	Doctorate	23,914	77%	84%	87%
Western Washington U.	Public	Mid-size	Post-Master's Certificate	15,060	93%	93%	88%

Source: Integrated Postsecondary Education Data System.
Student data reflect Fall 2014 enrollment

Morris Campus

Founded

1910—University of Minnesota, West Central School of
    Agriculture
1960—University of Minnesota Morris

Campus Leadership

Jacqueline Johnson, Chancellor
Michelle Behr, Chancellor (effective February 6, 2017)

Divisions

Education Division
Humanities Division
Science and Mathematics Division
Social Sciences Division

Degrees/Majors Offered

34 undergraduate degree programs; 9 pre-professional
programs

Student Enrollment (Fall 2016)

Undergraduate	1,680	(95%)
Non-degree	91	(5%)
Total	**1,771**	

Employees (Fall 2016)

Direct Academic Providers	168	(39%)
Higher Education Mission Support	70	(16%)
Intercollegiate Athletics	25	(6%)
Facilities-Related Jobs	50	(12%)
Organizational Support	103	(24%)
University Leadership	18	(4%)
Total Employees	**434**	

Degrees Awarded (2015–16)

Bachelor's	353

Campus Physical Size (2016)

Number of Buildings	36
Assignable Square Feet	599,467

Budget Expenditures (FY2016)

$56 million

Planning at the University of Minnesota Morris

The Morris campus's strategic plan was approved through its governance system in 2007, and has served as a guiding framework for campus initiatives since then. Recent reviews completed independently by the campus planning committee and senior leaders show that the campus has made progress toward or completed nearly two thirds of the 84 specific items included in the original plan. Select accomplishments are described in the following sections.

Enrollment Goals

The Morris campus operates in a highly competitive market for undergraduate students, competing with private liberal arts colleges and other Minnesota public universities for undergraduate students. Morris has been able to sustain its enrollment numbers through intense marketing and because of its distinctive mission. Annually, the campus recruits around 400 talented first-year students and more than 100 transfer students. New programs funded by the federal government and by the University allow the campus to focus on retention, a major and ongoing challenge. During the coming academic year, the campus will begin to monitor and report the success of these new programs and will explore several other strategies intended to enroll new students and retain them through graduation.

These strategies include "pathway" programs like the one created for a Nursing master's degree, a new partnership being developed with the Twin Cities School of Public Health, and system-wide undergraduate initiatives that maximize the benefits of being a member of a university system—e.g., a system-wide minor program and the study away program currently under construction. In addition, the campus will consider ways in which online learning might strengthen and expand current offerings; set specific goals for online enrollment in a niche environment; and explore the addition of certificate and continuing education programs that use campus facilities in the summer.

In line with previously identified strategic goals, the Morris campus has continued to increase and support its numbers of international students (now eleven percent of the degree-seeking student population) as another way of increasing enrollment, and it has increased the number of students of color and American Indian students on campus (now 28 percent of degree seekers).

National Profile

The Morris campus has elevated its national profile as a public liberal arts college as evidenced by national rankings and by its receipt of several prestigious foundation grants—a Howard Hughes Medical Institute Grant to promote the success of students in biology; a Margaret A. Cargill Foundation grant to develop a leadership program with an emphasis on sustainability; a federal Student Support Services TRIO grant awarded in July 2015; and a Native American Serving Non-tribal Institutions federal grant awarded in August 2015. Two summer bridge programs support the success of incoming students: one, STELLAR, is designed to improve the working language skills of international students whose first language is not English. The other, Morris's twenty-three-year-old Gateway summer program, supports the success of entering students from underresourced groups.

In addition, the Morris campus has become a national leader in sustainability, a model community for renewable energy and sustainable living. The campus is striving to achieve the goal of carbon neutrality by 2020, primarily through the on-site generation of heat and power. In 2015, the Morris campus was named by the U.S. Environmental Protection Agency as a top-thirty national organization for the on-site generation of power. On average, 70 percent of campus electricity comes from wind; the combined heating and cooling system uses local biomass to heat and cool the campus and puts money back into the local economy.

Solar panels warm the recreational swimming pool and provide about half the energy required for the new residence hall; and the campus is exploring the "next frontier" of renewables by pursuing battery storage, with a small grant to support these efforts recently awarded.

Community Engagement

The campus engages its local communities in a variety of ways through the leadership of a very active

Office of Community Engagement; the Office of Sustainability; the Center for Small Towns; and as a longtime member of Minnesota's Campus Compact. The campus has taken its knowledge and vision for renewable energy to the community and has worked to facilitate a sister city relationship between the city of Saerbeck in North Rhine Westphalia, Germany and the city of Morris. This partnership is facilitated with the support of the Institute on the Environment and Minnesota State Department of Trade.

Plan for Future Success

The Morris campus plan includes facilities renovation; enhanced efforts to retain and graduate a diverse student population; "translation" of the liberal arts into meaningful work experiences; continued attention to the support of faculty; creative uses of eLearning and technology to enhance and expand the liberal arts, face-to-face mission; expansion of the living and learning laboratory in the region; and realization of the campus's role in contributing to a resilient community in the town of Morris.

The absence of adequate state support for Higher Education Asset Preservation and Replacement (HEAPR) funds continues to present major challenges for the campus's historically significant buildings, many of which are designated as in "critical" condition by the University's analysis. The Morris campus has made modest progress in improving faculty salaries but there's more work to be done. Recruitment and retention of faculty of color remains a struggle, a function of a number of factors, including the relatively remote campus location and relatively low salaries. Nevertheless, Morris faculty members have taken great advantage of system-wide resources that support faculty research and travel and this has been a true asset in recruiting and retaining faculty. Recent gifts from area landholders have also presented an opportunity for the campus to expand its regional significance.

Facilities Renovation

Historic buildings: The Morris campus has crafted a plan that combines campus resources, HEAPR funds, and repair and renovation funds to begin incremental modifications of some of these buildings.

21st Century library: The library on the Morris campus, constructed in 1967, has not been significantly renovated since that time and is in need of dramatic improvement for access, to recognize the shift from print to digital sources, and the unique needs of 21st century learners. The campus plan includes a renovation of the library to provide a learning commons—a center that provides research, technological, and academic support for students in an environment that supports collaboration and the use of personal mobile devices. The campus has been able to commit some funds to modest renovation in the library over the past year.

Wellness center: The Morris physical education center was built in 1970 prior to the adoption of Title IX, at a time when only men's sports were emphasized. The facility is not able to house the many female and male athletes who now participate in the Morris campus's 19 NCAA Division III sports programs. As part of its case statement for philanthropic giving in the University's campaign, the campus is in the preliminary stages of completing a predesign plan that will renovate and expand the existing facility to meet Title IX requirements and to refocus on wellness and student success.

Retention

The Morris campus's value proposition is strong, supported by its place in the market alongside much more expensive private liberal arts colleges and by the advantages found in being part of the University of Minnesota system. Recruiting and retaining new students and moving them toward graduation are among the campus's highest priorities. Strategies related to this have been discussed in previous sections.

Translating the Liberal Arts

The Morris campus piloted an initiative in fall 2015 intended to connect liberal arts and career goals beginning with registration and continuing through commencement. The aim of this program is to assist students in "translating" the liberal arts into meaningful workforce goals and further study in graduate and professional schools. Securing funding for the continuation of this program is a campus-wide priority and provides an additional strategy for retention.

Faculty Recruitment

Morris campus faculty salaries have remained below their peer group averages for a number of years. Although funds have been reallocated in the past three years to address this issue, achieving competitive faculty salaries remains a campus priority. The Morris campus has reached a level of programmatic maturity that would permit the establishment of endowed professorships or chairs, particularly in signature areas and/or in areas where there are large numbers of student majors (e.g., American Indian Studies, STEM fields, economics). The campus's case statement for philanthropic support is expected to identify some of these opportunities.

eLearning

The Morris campus is piloting a number of initiatives that use technology and eLearning to expand and enhance the campus's face-to-face liberal arts mission. For example, in cooperation with the McPhail Institute in the Twin Cities, individual instrumental music instructors are conducting some of their lessons from the McPhail studios. This allows the Morris campus to retain highly qualified faculty for music lesson instruction without requiring dangerous winter travel.

Using interactive technology, the education program is enlisting the support of Minnesota teachers of the year as mentors in a seminar setting for its prospective teachers. The Morris campus is also part of a faculty collaboration supported by the TEAGLE Foundation whose purpose is the creation of online courses in American Indian studies for campuses with a significant number of American Indian students. The grant supports both the creation of these courses and also the presence of on-campus faculty mentors to enhance the online experience.

Expanding the Living/Learning Laboratory

Outdoor classroom: West central Minnesota provides a rich laboratory for finding solutions to a number of "grand challenges" that face the region and the nation. From invasive species to the impact of climate change to sustainable agriculture, the size and location of the Morris campus positions it as a resource to address these issues. With support from the Margaret A. Cargill Foundation, the Morris campus has completed preliminary work for the creation of an outdoor classroom. And, a recent gift of 140 acres north of the Morris campus provides another opportunity for research, reflection, and discovery dedicated to environmental stewardship.

Resilient communities: Campus leaders are in conversation with community leaders and private investors to explore ways in which the Morris community might develop as a demonstration platform and model of sustainability in much the same way that the campus has. Under consideration currently is a partnership with the Morris Area schools to expand the campus composting initiative and a community-based, investor-owned project that would create a community solar garden. And as referenced earlier, the partnership between the city of Saerbeck, Germany and the city of Morris, Minnesota facilitated by the Morris campus provides opportunities for trade and intellectual exchange that will further contribute to the resilience of both campus and community.

Comparison Group Institutions

For planning purposes, the Morris campus has identified 15 higher education institutions as its comparison group (Table 3-3). These comparable and aspirational peer institutions come closest to aligning with the Morris campus's distinctive identity as a public liberal arts college.

Table 3-3. Comparison group institutions, Morris campus

	TYPE			SIZE	STUDENTS		
	Institutional Control	City Size	Highest Degree Offered	Total Enrollment	Percent Degree-seeking Undergrads	Percent Full-time	Percent In-state
Albion Col.	Private	Small	Bachelor's	1,268	99%	99%	89%
Coe Col.	Private	Small	Bachelor's	1,436	95%	98%	38%
Concordia Col.–Moorhead	Private	Mid-Size	Master's	2,398	96%	99%	69%
DePauw U.*	Private	Small	Bachelor's	2,215	99%	100%	39%
Gustavus Adolphus Col.*	Private	Small	Bachelor's	2,457	100%	99%	79%
Kalamazoo Col.*	Private	Mid-Size	Bachelor's	1,461	98%	99%	58%
Lycoming Col.	Private	Mid-Size	Bachelor's	1,353	99%	99%	57%
Macalester Col.*	Private	Large	Bachelor's	2,073	99%	99%	13%
Mass. Col. of Liberal Arts	Public	Small	Master's	1,765	86%	90%	72%
St. Mary's Col. of Maryland	Public	Small	Master's	4,225	93%	94%	78%
St. Olaf Col.*	Private	Small	Bachelor's	1,721	97%	97%	94%
SUNY at Purchase Col.	Public	Small	Master's	3,034	99%	100%	44%
U. of Virginia's Col. at Wise	Public	Small	Bachelor's	2,183	68%	94%	92%
U. of Maine–Farmington	Public	Small	Master's	1,960	89%	95%	80%
U. of Minnesota–Morris	**Public**	**Small**	**Bachelor's**	**1,899**	**95%**	**97%**	**81%**
U. of N.C.–Asheville	Public	Large	Master's	3,845	89%	90%	84%

Source: Integrated Postsecondary Education Data System
Student data reflect Fall 2014 enrollment
*Aspirational peer institutions

Crookston Campus

Founded

1905—Northwest School of Agriculture
1966—University of Minnesota Crookston

Campus Leadership

Fred E. Wood, Chancellor
Barbara Keinath, Interim Chancellor
   (effective January 1, 2017)

Departments

Agriculture and Natural Resources
Business
Liberal Arts and Education
Math, Science and Technology

Degrees/Majors Offered

34 undergraduate degree programs; 14 online majors;
2 academic programs offered in China

Student Enrollment (Fall 2016)

Undergraduate	1,821	(68%)
Non-degree	855	(32%)
Total	**2,676**	

Employees (Fall 2016)

Direct Academic Providers	121	(40%)
Higher Education Mission Support	48	(16%)
Intercollegiate Athletics	29	(10%)
Facilities-Related Jobs	28	(9%)
Organizational Support	62	(20%)
University Leadership	17	(6%)
Total Employees	**305**	

Degrees Awarded (2015–16)

Bachelor's	426

Campus Physical Size (2016)

Number of Buildings	40
Assignable Square Feet	683,533

Budget Expenditures (FY2016)

$38 million

Planning at the University of Minnesota Crookston

The University of Minnesota Crookston is integral to the University's statewide land-grant mission. The college provides its unique contribution through applied, career-oriented learning programs that combine theory, practice, and experimentation in a technologically rich environment. UMC connects its teaching, research, and outreach to serve the public good. (campus mission adopted by the Board of Regents, May 2007)

The Crookston campus serves as the face of the University in northwest Minnesota and is an important regional asset and hub of activity. The campus leverages its own resources with those of the Northwest Research and Outreach Center, Extension, the State Economic Development Administration Center, local business and industry, and the community to serve the region as well as the entire state. It also serves as a regional economic driver with a significant economic impact of over $50 million.

Crookston is distinctive within the University system for hands-on experiential learning, a focus on teaching and technology, online learning, direct career preparation including required internships, and exceptional niche programs. It delivers the University's excellence in a small campus environment and online.

Over the past five years, a major and continuing goal of strategic planning has been to achieve a critical mass of students on campus while strategically growing online enrollment. The top-notch, robust experience both residential and commuter students experience on campus affords students personalized attention and "face time" with faculty and staff; multiple options for student leadership and engagement through undergraduate research, clubs, activities, and NCAA Division II athletics; and a supportive student-centered learning environment where all students—including first-generation, lower-income, less prepared, and at-risk students—can realize their potential and thrive via access to the University of Minnesota.

Simultaneously, online learning continues to be a strategic part of the academic programming, and the

Crookston campus is the eLearning leader within the University system. An extension of the University's modern land-grant mission, online learning provides access to educational programs in a way that appeals to students that differ demographically from the traditional college-aged student. Currently, 14 of Crookston's 34 baccalaureate programs are offered entirely online as well as on campus. Online-only students comprise slightly more than 50 percent of the total student population as of fall semester 2016.

Crookston is also an oasis of diversity in the region, enrolling students who come to campus from more than 20 countries and 40 states. For fall 2016, enrollment of domestic degree-seeking students of color is 14 percent of on-campus enrollment, and international students account for ten percent of on-campus degree-seeking enrollment. This affords the campus and community opportunities for multicultural interaction and exchange.

The Crookston campus's two major sources of revenue are tuition and state support. Given current levels of state support and a desire to limit tuition increases, the only options for increasing revenue are enrollment growth, additional grant funding, and greater philanthropic support. While the campus exhibits extraordinarily lean operations, campus units continue to explore ways to gain efficiencies. Recruiting, retention, and graduation efforts have become a campus-wide focus and need to be increasingly effective, highly targeted, and sustained from matriculation to graduation. This is a heightened challenge because in northwest Minnesota the number of high school graduates is projected to remain relatively low for the next several years. Additionally, recruitment strategies for online students will need to be targeted and effective in an increasingly competitive market.

Campus Strategic Planning

Beginning in late 2013 and continuing into 2016, the Crookston campus initiated a new strategic planning process that aligns well with its commitment to continuous improvement. The Strategic Planning Leadership Team drafted three key documents (Future Business Model, Institutional Identity Statement, Strategy Screen) and recruited faculty and staff to three strategic work group initiatives: the Strategic

Enrollment Management Committee, the Strategic Philanthropic Engagement and Regional Support Team, and the Strategic Institutional Excellence Team (which has since evolved into a focus on rural economic development). A fourth initiative was added in 2015 with a focus on diversity, inclusion, and engagement, and in late summer 2016 an additional initiative began that seeks to more fully elicit and support employee engagement. With three years of campus-wide conversation based on the University's Employee Engagement survey data, strategic focus on the engagement and well-being of faculty and staff is a high priority. The campus has also broadened the strategic discussion and participation across campus through the Faculty Assembly, Campus Assembly, the Crookston Student Association, and other venues such as open forums. Ultimately, the initiatives from these groups will be incorporated into the work of existing campus units.

Enrollment Management

The Strategic Enrollment Management Committee addresses the major challenge of how to achieve and maintain a critical mass of students on campus while also growing online enrollment. Major priorities include the development of a five-year strategic enrollment management plan for on-campus and online students. Previously separate units that focused on on-campus and online recruitment were unified in 2015–2016 to increase recruiting efficiency and effectiveness. New recruitment materials have been developed, and new student orientation programs were enhanced to help transfer students better transition to campus. New targets for student retention and graduation rates have been established as part of the University Progress Card, and all Crookston departments are implementing programs and services to achieve those targets. A mentoring program for new student athletes has been established based on a successful pilot in 2015–2016. Student Affairs units are developing more effective and efficient ways to ensure that online students have access to similar service and support as on-campus students.

Philanthropic Engagement and Regional Support

The major goal of the Strategic Philanthropic Engagement and Regional Support team is to enhance and leverage support for the Crookston campus by engaging various internal and external constituencies, including current students and their families, alumni, faculty, staff, business and industry, community members, and donors to nurture a culture of philanthropy and pride. A major resulting accomplishment has been the development and implementation of the Crookston Campus-Community Connection or C4. This initiative is led by a planning board consisting of the Crookston chancellor and the mayor of the city of Crookston as well as business and community leaders, students, faculty, and staff. With its inaugural meeting in April 2015 and continued subsequent monthly meetings, this group builds on and enhances an already strong campus-community relationship. Topics of interest include strategies to generate greater community support for the campus as well as ways to inform and encourage the utilization of local businesses and services by students, faculty, and staff. An emergent issue and project has been to develop greater connectivity and communication between local businesses and academic departments on campus to increase awareness on both sides of internship and employment opportunities for current students and graduates.

Rural Economic Development

A priority goal of the Crookston campus is to establish itself as a premier resource for rural economic development. With the Center for Rural Entrepreneurial Studies as well as the Economic Development Administration Center for the state of Minnesota located on campus, the Crookston campus has significant resources upon which to build. Both of these organizations utilize University faculty, staff, and students as well as Extension professionals, and the educational experience of Crookston students is enhanced by engaging them in projects and research studies related to economic development and entrepreneurship.

Working with the current host (UMD) of the Northwest Region's Small Business Development Center (SBDC), the Crookston campus is developing plans to host a regional satellite SBDC office in 2017 and, eventually, assume responsibility as host. After two years of analysis and consultation, the leadership and organizational structure for the Crookston

campus's planned Center for Rural Economic Development has been developed, and searches will soon begin to fill three new positions, including the Frank W. Veden Endowed Chair in Rural Economic Development.

Diversity, Equity, and Inclusion

Recognizing the importance of preparing students for the highly diverse world into which they will be graduating, the Crookston campus is, with increased intentionality, integrating diversity, equity, and inclusion into campus conversations and programming, with a goal to include higher retention and graduation rates for all students. Enrolling students from more than 40 states and 20 countries and from both very urban and very rural areas, the Crookston campus reflects the diversity of the greater world and, as such, is a "laboratory" in which students can safely and openly explore difficult topics with people who are different from them. With full awareness that this work will be ongoing for many years, Crookston's highest priority goals for the 2015–16 academic year were to develop and implement plans and strategies to integrate more diversity, equity, and inclusion on campus and in the community. Training and development programs and activities were planned, implemented, and evaluated. More programs are planned for 2016–2017.

Employee Engagement

Work is just beginning on an additional strategic initiative that seeks to more fully elicit employees' ideas and involvement with focus on the engagement and well-being of faculty and staff. The initiative stemmed from general open-forum discussions of Employee Engagement survey data results over the past three years and a growing campus culture of continuous improvement. A summer planning retreat in July 2016 set a basic framework for the initiative consisting of two topic areas for working groups: Staff Development and Leadership Development. The two working groups will develop opportunities for both faculty and staff members.

Aligning and Coordinating with the Twin Cities Campus Strategic Plan

The strategic planning efforts for each campus have been distinctly related to mission, location, and timing. However, due to mission congruence there are numerous examples of alignment between the plans. Crookston campus strategic initiatives align well with strategic planning efforts on the Twin Cities campus since they focus on engaging various communities in the region and leveraging support for the Crookston campus and the University system. Additional opportunities for aligning and coordinating with the Twin Cities campus strategic plan reside in the grand challenges and the other focus areas. Crookston example initiatives that align with the Twin Cities goals are listed below.

Address the Grand Challenges

- Infrastructure and support for external grants (e.g., AASCU's Grants Resource Center)
- Infrastructure and support for faculty and undergraduate research
- Small World Initiative search for new antibiotics
- Applied research to address regional issues

Support Excellence and Reject Complacency

- AQIP continuous improvement accreditation pathway
- Higher Learning Commission Persistence and Completion Academy
- Rigorous program review process
- Data Metrics project

Aggressively Recruit, Retain, and Promote Field-Shaping Researchers and Teachers

- Diversity, inclusion and equity initiative
- Cultural competency minimum requirement for new faculty and staff
- Partial Tuition Reimbursement Program
- Employee Engagement strategic initiative

Build a Culture of Reciprocal Engagement that Capitalizes on Our Location

- Philanthropic Engagement and Regional Support initiative
- Crookston Campus-Community Connection (C4)
- Rural Economic Development strategic initiative
- Impact 20/20 and IDEA competition sponsor

Comparison Group Institutions

The Crookston campus has identified nine higher education institutions as the primary comparison group for planning and assessment. The comparison institutions were identified based on their similarities in academic programs, enrollment, rural setting, and other key characteristics. These institutions are listed in Table 3-4, with the variance among them shown.

Table 3-4. Comparison group institutions, Crookston campus

	TYPE			SIZE	STUDENTS		
	Institutional Control	City Size	Highest Degree Offered	Total Enrollment	Percent Degree-seeking Undergrads	Percent Full-time	Percent In-state
Bemidji State U.	Public	Small	Master's	4,986	88%	79%	91%
Dakota State U.	Public	Small	Doctoral	3,047	58%	65%	66%
Delaware Valley Col.	Private	Small	Master's	2,137	85%	92%	48%
Northern State U.	Public	Small	Master's	3,531	48%	81%	63%
U. of Maine–Farmington	Public	Small	Master's	1,960	89%	95%	80%
U. of Minnesota–Crookston	**Public**	**Small**	**Bachelor's**	**2,850**	**66%**	**67%**	**71%**
U. of Minnesota–Morris	Public	Small	Bachelor's	1,899	95%	97%	81%
U. of Pittsburgh–Johnstown	Public	Small	Bachelor's	2,869	100%	97%	96%
U. of Wisconsin–River Falls	Public	Small	Master's	6,198	87%	92%	47%
U. of Wisconsin–Stout	Public	Small	Master's	9,394	86%	84%	63%

Source: Integrated Postsecondary Education Data System (IPEDS)
Student data reflect Fall 2014 enrollment.

Rochester Campus

Founded

2006

Campus Leadership

Stephen Lehmkuhle, Chancellor

Campus Academic Programs

Health Professions
Health Sciences
Biomedical Informatics and Computational Biology[1]

Degrees/Majors Offered

One baccalaureate degree offered in two academic programs
One master's degree offered in one academic program
One doctoral degree available in one academic program

Academic Partnerships

Labovitz School of Business and Economics, UMD
Clinical Laboratory Sciences, UMTC
School of Nursing, UMTC
Occupational Therapy, UMTC

Educational Collaborations

College of Science and Engineering, UMTC
Mayo School of Health Sciences

Biomedical Informatics and Computational Biology Partnerships

UMTC, Hormel Institute, Mayo Clinic, IBM,
National Marrow Donor Program, Brain Sciences Center

Student Enrollment (Fall 2016)

Undergraduate	424	(83%)
Graduate & Professional[1]	74	(15%)
Non-degree	11	(2%)
Total	**509**	

Employees (Fall 2016)

Direct Academic Providers	36	(38%)
Fellows, Trainees, and Students in Academic Jobs	5	(5%)
Higher Education Mission Support	24	(25%)
Facilities-Related Jobs	1	(1%)
Organizational Support	21	(22%)
University Leadership	8	(8%)
Total Employees	**95**	

Degrees Granted (2015–2016)

B.S. (Health Science)	68
B.S. (Health Professions)	37
M.S. and Ph.D. (Biomedical Informatics and Computational Biology)[1]	11

Campus Physical Size (2016)[2]

Number of Buildings	3
Assignable Square Feet	154,593
Land for Future Campus	2.7 acres

Budget Expenditures (FY2016)

$17 million

[1]All-University graduate degrees granted by the Twin Cities campus with the administrative home on the Rochester campus.
[2]All buildings are leased.

Planning at the University of Minnesota Rochester

As the Rochester campus enters a new stage of growth and development, planning efforts are also transitioning. As can be seen in Figure 3-A, the availability of student success data and delineation of processes and organizational structure has allowed the campus to quickly stabilize efforts and enhance growth planning. As evidenced in the campus Strategic Framework, the planning process is being shaped by established anchors: system and institutional missions and visions; grounding values; established arenas of distinctiveness; and student outcomes. Rochester's grounding values and optimization of distinctiveness provided the foundation for newly constructed centering aspirations, a critical next step in the strategic planning process.

Grounding Values

- Respect: We value habits of interaction that demonstrate the worth and dignity of each person.

- Human Potential: We value every person's capacity to learn, develop, imagine, create, and contribute.

- Community: We value collective work and a culture of trust that promotes collaboration, problem-solving, and partnerships while creating belonging, accountability, and courageous action.

- Diversity and Inclusiveness: We value the range of human differences and the active pursuit and involvement of varied perspectives.

- Evidence-Based Decision Making: We value strategic collection and careful assessment of data to inform our choices in all matters, including student learning and development.

Established Arenas of Distinctiveness

These arenas influence the Rochester campus's direction, activities, and actions. During the start-up stage, a focus on undergraduate education has generated innovations that are significantly enhancing student learning and development. The campus is committed to sustaining and optimizing these arenas of distinctiveness:

- Customized undergraduate health education

- Individualized care, attention, and guidance

- Connected curricular experiences

- Collaborative culture

- Learner-centered core shaped by ongoing learning research

- Community immersion and engagement

Figure 3-A. Rochester campus strategic planning timeline

Source: University of Minnesota Rochester

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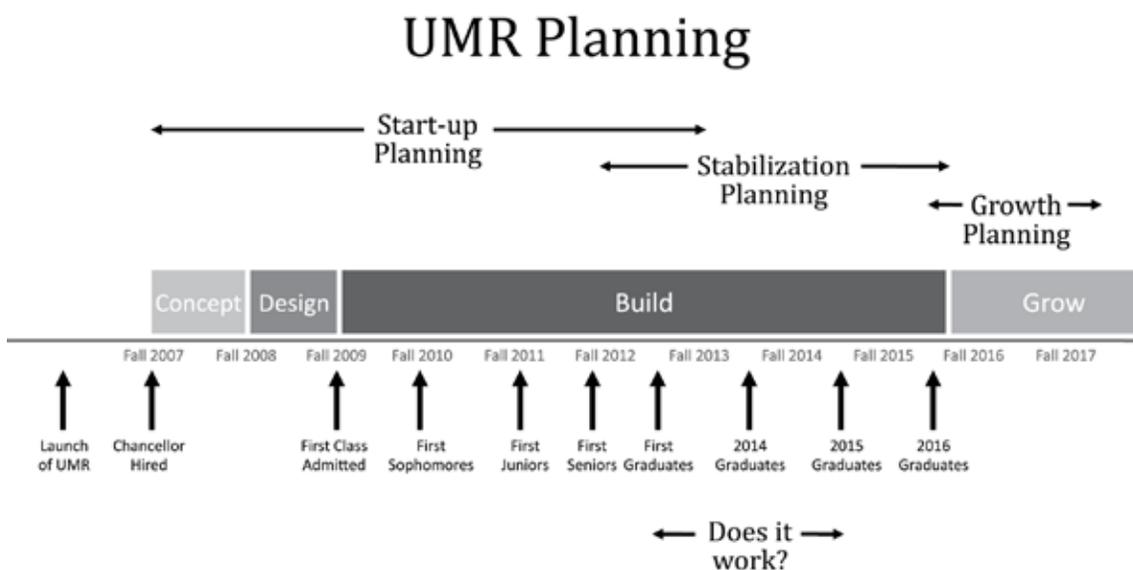
Centering Aspirations for Strategic Planning

- Devote our expertise and energy to student learning and development, choosing habits that enable us to thrive as a healthy, high-integrity community characterized by our values.

- Generate transformative contributions to the renewal of higher education, providing a collaborative environment of inquiry that allows innovative thought-leadership in teaching and learning; educational research; public engagement; organizational efficiency; and community integration.

- Enhance the diversity of the healthcare workforce, through intentional inclusivity emanating from our core commitment to respectful human relationships and permeating our habits of interaction in recruitment, teaching and learning, and the ongoing life of our UMR community.

- Optimize the arenas of distinctiveness established during our start-up and stabilization, including customized undergraduate healthcare education; individualized care, attention, and guidance; connected curricular experiences; collaborative culture; learner-centered core shaped by ongoing learning research; and community immersion and engagement.

- Sustain UMR as an innovative, educational enterprise, through increased enrollment of passionate, resilient students commiserate with the goals established in our Enrollment Management plan as well as increased strategic generation of mission-driven resources.

- Contribute significantly to the continued development of the Rochester community, through intentional partnerships and initiatives.

As the Rochester campus prepared for this period of growth in influence and enrollment, the Chancellor charged a campus committee to formulate the first detailed component of the strategic plan. This five-year Enrollment Management Plan will inform other planning efforts. The core components of the plan follow.

1. Plan for sustained undergraduate enrollment growth over the next five-year period. Total undergraduate enrollment in Rochester's two undergraduate health sciences degree programs (BSHP and BSHS) should increase to approximately 700 by the fall of 2021 (from the current 400 students in fall 2015). This increase will be the result of an anticipated annual increase of 50 incoming students each year for the next five years and will be achieved with a) targeted recruitment of high school students in health sciences curricular or co-curricular programs; b) relational recruitment philosophy and related strategies; c) launch and stabilization of living-learning communities; d) launch and stabilization of new student development endeavors (e.g. Health and Wellness); e) continued use of faculty research on student learning to inform and enhance student success; f) continued optimization of existing structures and services (e.g. Just Ask, Student Success Coaching, etc.); g) enhancement of established curricular and co-curricular community engagement; and h) branding campaign launch and stabilization.

2. Admit for success. Given the strong relationships among academic performance, select student development variables (e.g. resilience), civic engagement, health science focus emanating from childhood or adolescent experiences with the health care system (e.g. trauma or disease of self or family member), and student success at Rochester, the campus should continue to admit to its two undergraduate health sciences degree programs those students who will benefit from the distinctive model and have a high probability of graduating in four years or fewer. To do so, Admissions should continue to conduct a holistic review of prospective students' records, considering multiple factors (civic engagement, college prep coursework, STEM coursework and STEM GPA, response to admissions prompt regarding "passion for the health sciences," ACT scores, and demonstrated perseverance or resilience discerned through response to "special circumstances" prompt). The Rochester campus will continue to document variables associated with student success, adding those variables to the holistic admissions review as possible.

3. Maintain affordability and access for Minnesota students. Rochester's undergraduate degree programs must remain affordable and accessible to undergraduate health sciences students from Minnesota. As a land-grant university, all of the

system campuses, including Rochester, are committed to enrolling and graduating a broad, diverse spectrum of students, especially from Minnesota. Rochester will continue to enroll at least 75 percent Minnesota residents in the first-year class (BSHS) and the transfer class (BSHP). Maintaining "flat tuition" (the same rate for in-state and out-of-state students) will continue to enhance the campus's ability to attract students to meet Minnesota's health care workforce demands.

4. Provide a high-quality education and student experience. Rochester's enrollment goals will require attention to the capacities of its financial, intellectual, and physical resources (curriculum, advising, housing, classrooms), with the goal of continuing to provide an exceptionally high quality, undergraduate, health sciences educational experience with the campus's established distinctive teaching and learning model. Curricular planning and scheduling, as well as student support services, and the resources of the community-integrated physical spaces, must be closely coordinated with enrollment management. Some of the plans over the next five years include:

- Housing: Accommodating 90 percent of first-year students; 50 percent of sophomores; and 10 percent of juniors (through living-learning communities). Pursuing additional and affordable housing options will become a necessary component of the Campus Master Plan by 2021.

- Advising: Based on Rochester's unique Student Success Coaching model, maintaining an eighty-five or fewer students-per-coach ratio. Note that Student Success Coaches provide academic advising, life coaching, teaching of student development courses, and career exploration, with students assigned to one coach for the duration of their undergraduate career.

- Active learning classrooms. Planning any additional learning spaces in keeping with current active learning facilities.

- Maintaining availability and appropriate workload of courses for timely completion. Avoiding scheduling or curricular bottlenecks, increasing class offering times if necessary to maintain curricular support of the campus's strong four-year graduation rate, and assessing and potentially adjusting student workload.

- High-impact practices. Expanding the capacity and optimizing the effectiveness of established, faculty-led, high-impact curricular endeavors as well as co-curricular opportunities, including learning communities in the first two years of the curriculum; integrated coursework; writing-enriched curriculum; active and collaborative learning; undergraduate research; internships; study abroad; capstone pathways; work study with relevant community partners; living-learning communities; and community-based learning.

5. Value ethnic, social, economic, cultural, and geographic diversity. The educational experiences of all students are significantly enhanced by interactions with students from different backgrounds, from other states, and other countries. Diversity and inclusion enhance innovation, necessary to meet the grand challenges in health care. As the diversity of the state of Minnesota increases, the Rochester campus must continue to attract and graduate students from multicultural and underrepresented backgrounds. Rochester should be attentive to the diversity in Minnesota high schools in its admissions process. The enrollment plan should continue to build pipelines from other states where students focused on health care will be attracted to Rochester and continue to diversify the student body. The campus will be especially attentive to recruitment of underrepresented students (students of color, low socio-economic status, and first-generation), given the campus's established high-impact practices demonstrated to support the retention of all students, including those who are underrepresented.

6. Support timely graduation. Rochester should allocate resources to help ensure that the students admitted to its degree programs are adequately supported for retention and graduation in four years or less. Strategies for financial aid must be closely linked to strategies for enrollment management. The four-year graduation rate for all New High School (NHS) students entering Rochester should exceed 65 percent by 2021. Note that a five- or six-year undergraduate experience is not a goal for Rochester students in the campus's focused, structured curriculum. Underrepresented Rochester student graduation rates should be the same as their peers (more than 65 percent), given the campus's high-impact practices.

The two-year transfer graduation rate of BSHP students should exceed 80 percent.

Financial aid strategies to support timely graduation include:

- Adjust enrollment levels and set tuition rates to ensure adequate tuition revenues.
- Continue to enhance need-based and merit-based financial aid programs.
- Increasing institutional aid as possible. Some of the additional goals for financial aid policy and practice include:
  - Rochester will continue to support access for qualified students, and its review of applicants for undergraduate admissions will continue to be need-blind. A student's ability to pay is not a factor in determining admissibility.
  - In support of retention and timely graduation, renewable institutional aid will be increased.
  - Financial aid packages will be tailored to each student's circumstances and may include a variety of forms of need-based and/or merit-based aid from numerous funding sources including, but not limited to, University of Minnesota System funds, campus institutional funds for merit-based scholarships, federal and state aid programs, external scholarships, and donor-directed funds.
  - A financial aid package for an individual student will not exceed the federal cost of attendance for any given year.
  - The campus should strive to grow renewable institutional scholarship dollars and donor aid by 50 percent, including a focus on developing a strong alumni association.
- Be attentive to state, national, and global workforce needs.

The next stage of Rochester's formal strategic planning process launched in fall 2016, with the Chancellor charging a Growth Planning Steering (GPS) committee. The committee was charged to establish work groups, appoint membership, and manage the planning work centered on the Rochester campus's growth in size and influence. The GPS will engage the campus community to inform and solicit feedback during the planning process. The committee will evaluate the feedback provided by the campus community, integrate the plans generated by the work groups, align the plans with the UMR Planning Framework, and make recommendations to the Chancellor about future campus growth.

Education

Providing an extraordinary education that generates knowledge, understanding, and creativity. We seek to develop students who become leading scientists and teachers, engineers and artists, health and business professionals, and who contribute to their communities at every level.

Undergraduate, Graduate, and Professional Education

The University is committed to being accessible to a wide range of populations, attracting outstanding students, offering an exceptional education, and graduating students prepared for success.

The University has been able to show increasing success with each of these priorities over the years. What may be just as important, however, is explaining why University leaders identify these areas as priorities. Why, for example, does the University provide financial aid support to students from low-income and middle-income families? Why is it important that more and more high-ability Minnesota students are choosing to enroll at the University instead of leaving the state? Why is it important that the four-, five-, and six-year undergraduate graduation rates are significantly higher on every campus than they were ten years ago?

The answer is that success on each of these fronts is evidence of success toward achieving the University's mission.

An eduation at the University of Minnesota prepares students to be leaders, innovators, and global citizens. It is therefore crucial that students who have the ability to benefit from the University's opportunities have access to the University.

The better the student learning experience, the better chance these students will have to succeed. Higher graduation rates are important because they demonstrate that more students have been empowered to make the contributions to society that the University's mission envisions.

The discussions of undergraduate, graduate, and professional programs on the following pages demonstrate the importance the University and its campuses place on providing an extraordinary education. While much of this discussion, particularly that at the undergraduate level, is best considered

campus by campus, there are several priorities and measures that the University monitors at a holistic or system level. Among these are the four-year graduation rates of Pell-awarded students, the amount of institutional gift aid available to students, the median undergraduate debt at graduation, the percent of Minnesota students enrolled, and the number of national scholarship awards earned by University undergraduates.

The percentage of first-time, full-time new entering freshmen who received need-based federal Pell grants their first year and graduated within four years is an important consideration because these students, who are often also first-generation students, may have challenges that impede their success at the University. Ideally these students would graduate at the same rate as the whole student body, but that is not the case at the University nor at most other institutions across the country. As a result of support efforts targeting these and other students, this rate has risen from 41.7 percent for the cohort entering in 2009 to 47.4 percent for the cohort entering in 2012. The University's goal is for 54 percent of the 2017 cohort of Pell-awarded students to graduate within four years, which would increase their graduation rate at twice the rate of the growth anticipated for the student body overall.

The University has an historical commitment to making education affordable to students and thus monitors the amount of institutional gift aid awarded to students across all of the campuses. This amount includes Promise scholarships, admissions scholarships, collegiate and department scholarships, athletic scholarships, Regents scholarships, and graduate assistant tuition benefits, but excludes state or federal grants, student employment, or loans. To maintain its commitment to affordable education, the University seeks to increase its available gift aid through fundraising and institutional resources. Total institutional gift aid has grown from $210 million in

2011–12 to $233 million in 2014–15. The University's goal of awarding $275 million of gift aid in 2021 represents a three-percent annual increase.

Also related to the commitment to affordable education, the University monitors the median amount of student debt accumulated by undergraduates with student debt (not including students who have no debt) at the time of their graduation. The median amount for graduating students in 2014–15 was $24,776, down from $25,186 in 2011–12. While many factors—such as federal and state financial aid policies, program choice, time to degree, and student and parent behaviors and choices—shape this measure, the University's goal is to limit the increase in the median amount of cumulative debt for undergraduates with debt to no greater than the consumer price index, with adjustments according to state and federal policy changes. The percentage of University undergraduates with no debt at their time of graduation has increased from 34 percent in 2011–12 to 36 percent in 2014–15.

As the state's flagship, land-, and sea-grant institution, it is important that the University serve the students of Minnesota. Over the years, the percent of Minnesota high school graduates among both new entering and all undergraduate students throughout the University system has remained consistently high. In 2015, 70 percent of the new entering class and 71 percent of the whole undergraduate student body came from Minnesota high schools. The goal is to maintain this rate of access for Minnesota high school graduates to the University. Similarly, the University measures its share of the portion of Minnesota public high school graduates who enroll at a Minnesota postsecondary institution. In 2015, the portion was 16.6 percent compared to 13.9 percent in 2012. The University's goal is to maintain this level of access and be an option of excellence and affordability for Minnesota high school graduates who choose to pursue their postsecondary education in state.

Finally, the University tracks at a system level the number of prestigious national awards annually earned by University undergraduate students. This measure gives some indication of the University's engagement and excellence on a national scale in a wide variety of fields and expertise. The measures includes seven leading student awards: the Beinecke, Churchill, Truman, Rhodes, Fulbright, Goldwater, and Astronaut awards. From 2010–15, University students earned 75 of these awards, which is up from 52 from 2005–10, and 31 in 2000–05. The University's goal is to have 80 students earn these awards from 2015–2020.

Undergraduate Education

TWIN CITIES CAMPUS

The University's commitment to the success of undergraduate students begins with outreach to prospective students and extends through recruitment, enrollment, orientation, academic advising, career services, graduation, and beyond. The University attracts outstanding undergraduate students, is accessible to diverse students with a range of backgrounds, and provides a world-class educational experience. Graduates are equipped with the intellectual tools to be productive employees, thoughtful citizens, and creative leaders engaged with the collective challenges we face as a society, a nation, and a world.

The foundational principles for developing enrollment targets for new first-year and new transfer students on the Twin Cities campus over the past two decades have included admitting students who will benefit from the curriculum and who have a strong probability of graduating in a timely manner; providing a high-quality education and student experience; remaining affordable to a broad cross-section of students; incorporating ethnic, social, economic, and geographic diversity; enrolling new high school and transfer students; and providing students with the opportunities and benefits of attending a world-class research institution.

In spring 2016, the Board of Regents approved the 2016–2021 undergraduate enrollment plan for the Twin Cities campus, which outlined ten enrollment management strategies, in support of institutional priorities, including meeting the goals identified in the University Progress Card:

1. Plan for modest undergraduate growth over the next five-year period. Increase total undergraduate enrollment from 30,500 (fall 2015) to approximately 32,000 to 33,000.

2. Admit for success. Continue to admit those students who will benefit from the University's rigorous curriculum, and who have a strong probability of graduating in a timely manner. Continue holistic review of prospective students' records and maintain appropriate levels of selectivity. Maintain an average ACT of 28 or higher for the entering freshman class (Progress Card measure).

3. Maintain affordability and access for Minnesota students. One measure of affordability is average student indebtedness at graduation (Progress Card measure). Access can be measured by the percent of all Minnesota high school graduates who enroll at the Twin Cities campus as freshmen, and by the percentage of Minnesota high school graduates who choose to attend college in Minnesota and enroll at the Twin Cities campus (Progress Card measure). Attract a broad cross-section of students from all parts of Minnesota.

4. Provide a high-quality education and student experience. Adjust enrollment levels within the capacities of financial, intellectual, and physical resources, with the goal of providing a very high-quality experience. Such resources include housing, advising, classrooms, capacity for chemistry courses, student support services, and co-curricular activities. Measure student satisfaction and learning for all students. Measure progress toward "inclusive success" for students of color (Progress Card measure) via annual surveys. One measure of academic excellence in comparison to peers is the number of competitive national scholarships awarded to University of Minnesota students (Progress Card measure).

5. Maintain commitment to transfer students. Enroll a balance of new high school students and transfer students. Facilitate transfer among the University of Minnesota campuses, as well as from institutions in the Minnesota State system. Continue to enroll at least 33 percent of new Twin Cities students

as transfer students. Achieve a 65 percent three-year graduation rate for transfer students (Progress Card measure).

6. Value ethnic, social, economic, and geographic diversity. Enhance the educational experiences of all students through interactions with students from different backgrounds, other states, and other countries. Attract a broad range of undergraduate students and serve as a talent magnet for the state. Attract, retain, and graduate students from multicultural backgrounds.

7. Support timely graduation. Ensure that students admitted to the Twin Cities campus are adequately supported to graduate in a timely way. Link financial aid strategies and enrollment management strategies. The Twin Cities four-year graduation rate for New High School (NHS) students should reach/exceed 65 percent, the six-year rate should reach/exceed 82 percent, the three-year transfer graduation rate should reach/exceed 65 percent, and the four-year graduation rate for Pell-recipient students should reach/exceed 54 percent (Progress Card measures). Maintain recent gains in the Graduation Success Rates (GSR) for student athletes (Progress Card measure). Increasing graduation rates for all students, and specifically the rates for students of color, are legislative performance measures as well.

8. Adjust enrollment levels and set tuition rates to provide revenues. Adjust enrollment levels and set tuition rates to provide adequate revenue to support high-quality educational programs within the overall mission of the campus.

9. Continue to enhance need-based and merit-based financial aid programs. Continue to provide need-based (including middle-income) and merit-based financial aid. The general allocation of financial aid resources should be biased toward need-based financial aid, but strong merit-based scholarships are also needed to attract the best and brightest students. Grow institutional gift aid to $275 million (Progress Card measure).

10. Be attentive to state, national, and global workforce needs. Be attentive to the workforce needs of the future for the state, the nation, and the world. Increase the number of STEM graduates (a legislative performance measure).

Maintaining Access to the Twin Cities Campus

The University maintains a strong commitment to access to its degree programs—for Minnesota resident students, for students from a range of economic backgrounds, for students of color, and for first-generation students. Strategies to ensure access include targeted recruitment; holistic, need-blind review for admissions; and linking tuition strategies with financial aid strategies and enrollment management strategies.

Financially Accessible

As a public institution, the University supports access for qualified students. Review of applicants for undergraduate admissions is need-blind, meaning that a student's ability to pay is not a factor in determining admissibility. The University funds and administers a comprehensive financial aid program targeted to degree-seeking students and tailored to each student's circumstances, including merit-based aid to attract and support high-achieving students and need-based aid to maintain access for many talented students who otherwise would not be able to attend the University.

Total financial support to Twin Cities undergraduate degree-seeking students over the past two years is summarized in Table 4-1. The decrease in the total amount of loans over that period is notable, as is the shift of the proportion of total aid to include more gift aid and less loan aid. As shown in Table 4-2, trends over the past five years are moving in the right direction; the proportion of graduates with no debt is increasing, and the average amount of loan debt for those who have debt is stable.

One measure of financial accessibility is the percentage of students who are low-income, defined as federal Pell Grant recipients. In 2015–16, 22 percent of all degree-seeking students enrolled on the Twin Cities campus were Pell recipients. Looking at specific groups of students: Minnesota resident students, 27 percent; freshmen, 19 percent; new transfer students, 28 percent. Those percentages have been relatively stable over the past five years. Another measure is the percentage of first-generation college students, defined as neither parent having completed a college degree. In 2015–16, 27 percent of all degree-seeking students on

Table 4-1. Total financial support to Twin Cities campus undergraduate degree-seeking students, 2014–15 and 2015–16

Aid Category	Aid Year 2014–15	% of total	Aid Year 2015–16	% of total
Gift Aid (scholarships, waivers)	$138,273,034	40%	$155,500,584	45%
Student Employment (including Work Study)	$26,522,725	8%	$27,122,891	8%
Loans (student and parent loans)	$165,524,062	48%	$164,379,580	47%
Total	$341,547,835	100%	$347,003,055	100%

Source: Office of Institutional Research, University of Minnesota

the Twin Cities campus were first-generation. Looking at specific groups of students: Minnesota resident students, 31 percent; new freshmen, 23 percent; new transfer students, 38 percent.

Recognizing the pressures faced by middle-income families, the University has expanded the numbers of students covered by the U Promise program, which provides aid to over 13,000 Minnesota undergraduates system-wide. Starting with fall 2016, the upper income limit for eligibility was expanded from $100,000 to $120,000. That change will provide funding for just over 1,400 additional students system-wide.

To assist Twin Cities campus students and their parents with managing the costs of college, the University has increased financial literacy efforts, including the "Live Like a Student Now So You Don't Have to Later" campaign. This program was recognized by the President and First Lady at the January 2014 College Opportunity Summit in Washington, D.C.

Welcome Week for new students includes a workshop on money management, and One Stop Student Services now has counselors certified in financial wellness who conduct workshops for students and meet with students one-on-one. The One Stop website includes money management resources. A key point of

the financial literacy messaging is that graduating in a timely manner is one of the best ways for students to manage the costs of their education.

Accessible to Transfer Students

Educating transfer students is an important part of the University's service to the state, particularly for the Twin Cities campus, as the flagship campus, because it offers many undergraduate majors not available elsewhere in the state. Of the 8,778 new students enrolling on the Twin Cities campus in 2015–16, 5,782 were freshmen and 2,996 (34 percent) were transfer students from outside the University. Over 41 percent of these new transfer students come from Minnesota State institutions.

Transfer students add to the diversity of the Twin Cities campus. When compared to those who enter as freshmen, transfer students show higher proportions of first-generation students, African-American students, international students, and older-than-traditional-college-age students. The University focuses on admitting transfer students who can be successful in completing a degree program, and considers students for transfer admission after they have a record of success in one or more years of college courses that are transferable to the campus. Over the past decade, the three-year graduation rates for transfer students

Table 4-2. Student loan debt trends for Twin Cities campus undergraduate degree recipients, fiscal years 2012–2016

Bachelor's Degree Recipients	2011–12	2012–13	2013–14	2014–15	2015–16
% of Bachelor's Degree Recipients with no student debt	36%	38%	39%	40%	43%
Average loan debt for those with debt	$27,578	$27,158	$26,406	$26,091	$26,068
Median loan debt for those with debt	$24,646	$24,594	$24,433	$24,000	$23,318

Source: Office of Institutional Research, University of Minnesota
Federal, state, institutional, and/or private student loans are included in these calculations for undergraduate studies within the University of Minnesota system, but include only private loans certified by or reported to the financial aid office and exclude Parent PLUS loans.

(Progress Card measure) have improved from 48.7 percent (students entering in 2002) to 61.4 percent (entering in 2012). Of the 7,687 undergraduate degrees awarded on the Twin Cities campus in 2015–16, 33 percent were awarded to students who had transferred to the campus.

Accessible to Diverse Students

The University is committed to achieving excellence with a diverse student body and to maintaining a respectful, welcoming environment for all students. This commitment encompasses diversity in many forms, including geographic origin, gender, racial-ethnic background, sexual identity, culture, disability, veteran status, and socio-economic background. The University's commitment to improving the campus environment for all students is highlighted on the new Campus Climate website, which lists a wide range of initiatives and improvements, including the Student Climate Advisory Committee, the Commuter Connection, and the Multicultural Student Engagement unit within Student Affairs.

Over 700 veterans are now enrolled on the Twin Cities campus as degree-seeking undergraduates. The University Veterans Services Office assists them with admissions processes; transitioning from military life to the role of a student; certifying, applying, and qualifying for veterans benefits; processing military leaves for those called to active duty; and connecting with campus opportunities and resources.

From fall 2015 to fall 2016, the number of undergraduates of color on the Twin Cities campus increased from 6,209 to 6,586 (from 20.4 percent to 21.3 percent), and the number of international students decreased from 2,834 to 2,779 (from 9.3 percent to 9.0 percent). For fall 2016, the percentage of undergraduate students from Minnesota was 66.5 percent. Students from 48 states, plus Washington D.C., Guam, Puerto Rico, the American Virgin Islands, and from 95 countries were among the 30,975 undergraduates.

While the percentage of Minnesota students has been relatively consistent, there have been some shifts in the geographic origin of other U.S. students. The percentage of students from reciprocity states (Wisconsin, North Dakota, and South Dakota) has decreased, while the percentage from other states and outside the U.S. has increased. The increase in the numbers of students from other regions of the United States and from other countries reflects the University's commitment to enhancing the campus community through the inclusion of young people from differing countries, backgrounds, religions, and experiences.

Attracting Outstanding Students to the Twin Cities Campus

High-ability students increasingly seek to attend the University of Minnesota Twin Cities, as evidenced by the growing numbers of applications and the student preparation metrics of the incoming freshman class. Applications for admission have nearly doubled over the past decade, from 24,654 prospective students seeking admission for fall 2006 to 49,128 for fall 2016. During that same time period, the average ACT for the new freshman class has improved significantly, from 25.9 to 28.3.

The increased number of applicants can be attributed to a growing awareness by prospective students and their families of the many improvements in undergraduate education on the Twin Cities campus. The academic preparedness of first-year students and the diversity among those students enrich the classroom experience and the campus social environment. Enhanced national recruitment efforts have helped to offset the declining numbers of Minnesota high school graduates, increase the geographic diversity of the student body, and bring workforce talent into the state. The fall 2016 freshman class includes students from 44 states and 51 countries.

The campus-wide University Honors Program attracts high-achieving students who have chosen to attend the Twin Cities campus over some of the nation's most selective institutions. The 2,300 students in the Honors Program benefit from a challenging, interdisciplinary approach, with rigorous honors courses and co-curricular experiences that draw on the expertise of faculty and staff across the comprehensive range of disciplines on campus. The profile of the 598 new fall 2016 Honors students showed an average ACT of 32.7 and average high school rank of 97.1 percent.

Offering a Great Student Experience on the Twin Cities Campus

The Twin Cities campus undergraduate educational experience is special because of its unique position in the world of public higher education:

- As the state's only research university and one of the very best research universities in the nation.

- As the state's public land-grant university.

- Located in the state capital, which provides many opportunities for internships with state agencies.

- Situated in a vibrant metropolitan area, with remarkably beautiful parks, lakes, and rivers; a lively social and cultural environment; and many Fortune 500 companies.

The University leverages these attributes to provide undergraduates with a world-class learning environment and student experience. The University is one of the most comprehensive in the world, offering 150 baccalaureate degree programs in a wide range of areas: astrophysics, product design, child psychology, American Indian studies, entrepreneurial management, biomedical engineering, and music performance, to name just a few. Many students take even greater advantage of this breadth of opportunity by double-majoring or by completing a minor. The 135 minors offered include traditional disciplinary areas such as art history, biology, and mathematics, as well as emerging and interdisciplinary areas such as water science, family violence prevention, business law, social justice, and sustainable agriculture.

As part of achieving the vision of the Twin Cities Campus Strategic Plan—to be preeminent in solving the grand challenges of a diverse and changing world—exciting new Grand Challenge Curriculum (GCC) courses are now offered to undergraduates. The first GCC courses were developed and offered in 2015–16. These courses bring a solution-driven, interdisciplinary approach to learning about important global issues. GCC courses are taught by two or more cross-disciplinary faculty who bring unique perspectives to the challenge being explored. Courses include "The Fracking Boom: Promises and

Challenges of the Hydrocarbon Renaissance," "Toward Conquest of Disease," and "Can We Feed the World Without Destroying It?"

Undergraduates value such opportunities to have an impact on the world. Data from the 2015 Student Experience in the Research University (SERU) survey indicate that 86 percent of students surveyed considered opportunities to connect their academic work with community-based experiences important. Public engagement activities support student learning and development outcomes and help recruit students to the University who are looking for these engagement opportunities.

The Community Engagement Scholars Program is another option for students to immerse themselves in a rigorous community-based learning program. Through a cohort model, students complete eight credits of service-learning coursework, participate in structured reflection sessions, volunteer for a minimum of 400 hours with a community organization, and submit a final capstone project produced in partnership with a community organization. Upon completion of the program, students receive official recognition at graduation and on their academic transcript. The program currently enrolls 268 students, 22 of whom graduated in spring 2016.

The University has agreed upon campus-wide undergraduate student learning outcomes, which 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.

Articulated learning outcomes are important as faculty develop curricula, plan courses, construct

learning activities, and assess the learning that occurs in every aspect of the student experience: classes, service-learning, research opportunities, internships, and learning abroad.

Twin Cities undergraduate teaching facilities have been improved with state-of-the-art classrooms, including Bruininks Hall, which has more than a dozen high-tech, active-learning classrooms. When completed in fall 2017, the renovation of the Tate Science and Teaching building will transform obsolete labs and antiquated classrooms into vibrant, flexible spaces that will bolster instruction, research, and support services. The theme of "science on display" is a guiding force for the project. Residence hall facilities and programming have been recently enhanced as well. The new 17th Avenue Residence Hall increased the on-campus housing capacity by 600 beds. A new Residential Curriculum Model was launched in all residence halls and apartment communities, based on five elements of well-being: career, social, financial, physical, and community, and reflecting the University's ongoing commitment to student engagement, retention, graduation, and success.

Preparing Twin Cities Campus Graduates for Success

The University is committed to providing students with a distinctive, world-class liberal education and rigorous coursework in a field of study. Initiatives concerned with the student experience are focused on enriching students' knowledge, skills, and abilities and equipping them for the challenges of the future in a diverse, changing, global society. Undergraduate student retention rates, graduation rates, and the number of degrees conferred are among the measures that the University uses to assess the extent to which the University is challenging, educating, and graduating students. The University Progress Card includes the following goals for undergraduate education on the Twin Cities campus:

- 4-year graduation rate of 65% for the 2017 cohort

- 6-year graduation rate of 82% for the 2015 cohort

- Average freshman ACT score > 28

- 3-year graduation rate > 65% for transfer students

Retention and Graduation Rates

The Twin Cities campus has made significant progress over the last decade in improving undergraduate graduation rates. Retaining students after their first year is the first step toward timely graduation. Figure 4-A and Figure 4-B show the most recent results, with rates at their highest levels ever, including first-year retention now at 93.2 percent. As a result of this progress, the Twin Cities campus rates are competitive with comparable institutions. Table 4-3 ranks the graduation rates of the Twin Cities campus's comparision group instititions (which includes the most selective public research universities in the country), as well as the other public Big Ten Conference universities. While the table lists graduation rates for classes matriculating in 2009 (the most recent data available for comparison), the most recent Twin Cities campus rates (displayed in parentheses) suggest that the campus will rank even better when data for those classes become available for comparision.

First-year retention rates for students of color have improved significantly, and for the fall 2015 entering class, exceeded those for other students. Retention rates for low-income students (Figure 4-C) have also improved significantly, and are now above 91.2 percent. Retention rates for first-generation students have also improved, as have rates for Pell-eligible students (Figure 4-D).

Degrees Conferred

The Twin Cities campus has increased by more than 20 percent the number of undergraduate degrees awarded over the past decade, from 6,317 in 2005–06 to 7,687 in 2015–16 (Figure 4-E).

In response to changes in student interest and state and national employment needs, the Twin Cities campus is now awarding substantially more degrees in science, technology, engineering, and math (STEM) fields. From 2005–05 to 2015–16, the number of STEM degrees increased by 58 percent, from 2,096 to 3,320. STEM degrees awarded include all baccalaureate degrees in several broad categories as defined by the Department of Education. These STEM fields include agriculture, natural resources, engineering, computer sciences, biological sciences, physical sciences, mathematics, and health professions.

Figure 4-A. Four-, five-, and six-year graduation rates of first-time, full-time undergraduate students, Twin Cities campus, classes matriculating in 2002–2012

□ 4-year rates   ▨ 5-year graduation rate   ■ 6-year graduation rate

Year	6-year	5-year	4-year
2002	66.6%	61.3%	41.3%
2003	69.0%	65.3%	45.6%
2004	70.8%	66.7%	46.1%
2005	70.8%	67.1%	47.3%
2006	73.4%	69.8%	50.7%
2007	75.9%	72.7%	54.6%
2008	78.8%	76.0%	58.7%
2009	77.8%	75.1%	59.6%
2010	**78.9%**	76.0%	61.5%
2011	**77.5%**		63.7%
2012			**65.2%**

Year of Matriculation
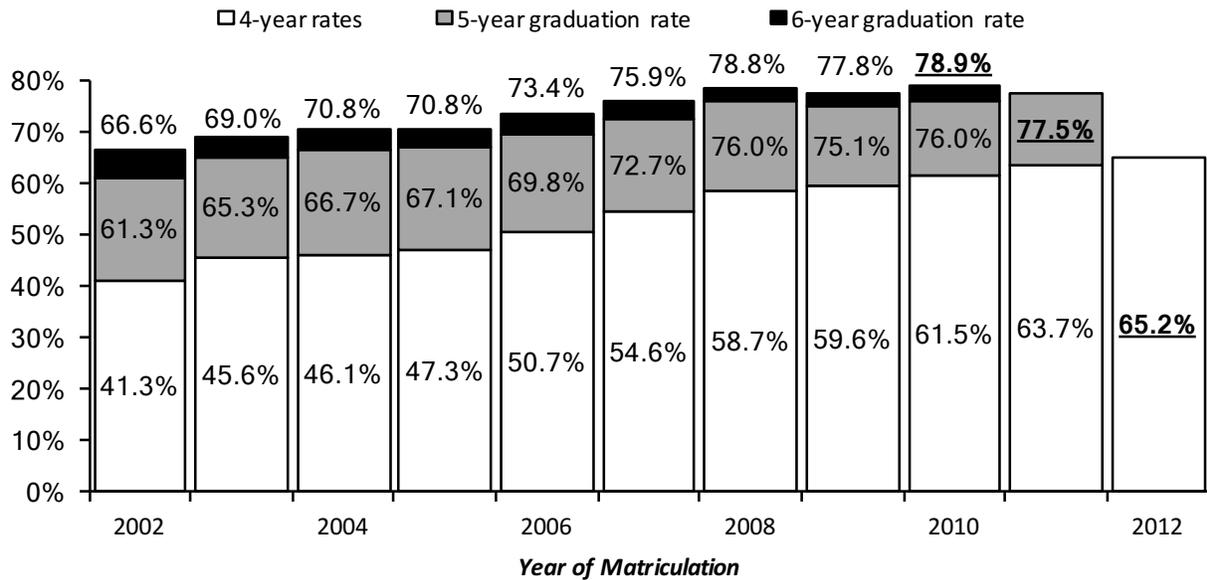
*Rates include graduates who transferred to another University of Minnesota campus. Graduation rates displayed in Table 4-3 are those reported to the national database (IPEDS), which counts only students who matriculated at and graduated from the same campus. As a result, the rates presented in the figure above differ slightly than those displayed in Table 4-3.

Source: Office of Institutional Research, University of Minnesota

Figure 4-B. First-year retention rates of first-time, full-time undergraduate students, Twin Cities campus, classes matriculating in 2005–2015

86.3% ... 90.4% ... 93.2%

Source: Office of Undergraduate Education, University of Minnesota
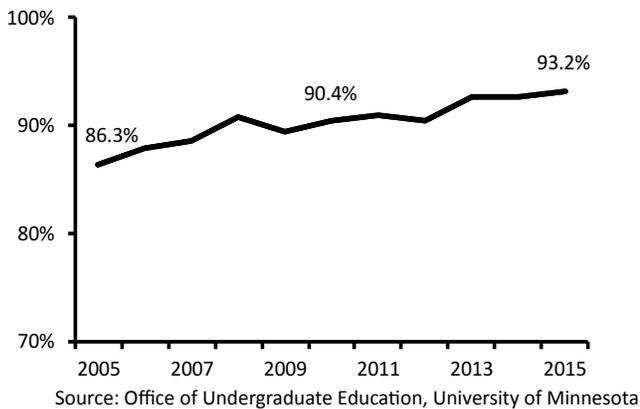
Figure 4-C. New freshman retention, students of color and all other domestic students, Twin Cities campus, classes matriculating in 2005–2015

Other Students   93.1%
87.4% ... 90.4% ... 93.6%
Students of Color
81.3% ... 89.0%

Source: Office of Undergraduate Education, University of Minnesota
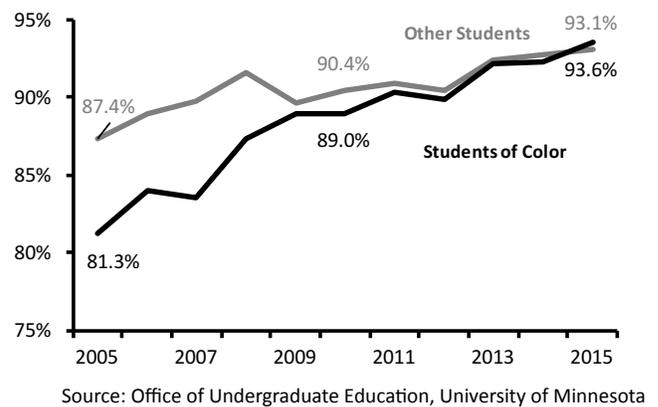
Figure 4-D. New freshman retention by Pell status, Twin Cities campus, 2005–2015

Non-PELL Students   93.7%
87.3% ... 91.1%
81.2% ... 87.3%   91.2%
PELL Students

Source: Office of Undergraduate Education, University of Minnesota
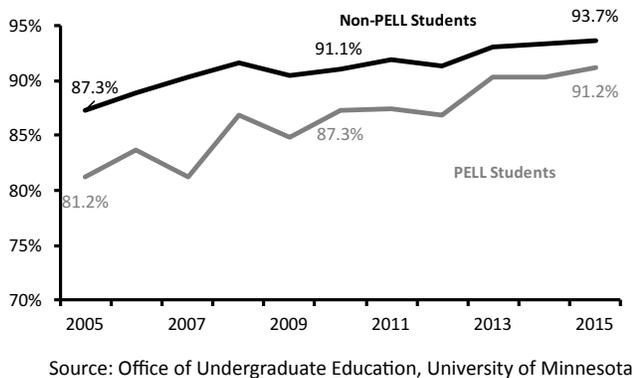
Figure 4-E. Undergraduate degrees awarded, Twin Cities campus, 2005–2006, 2015–2016

6,317 ... 7,031 ... 7,687

Source: Office of Undergraduate Education, University of Minnesota
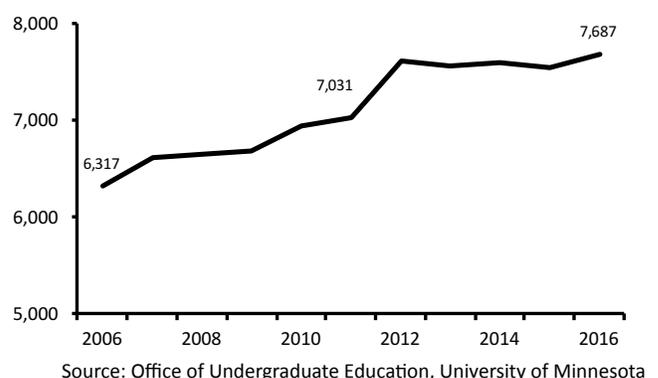
Table 4-3. Retention (class matriculating in 2014) and graduation (class matriculating in 2009) rates sorted by four-year graduation rate, Twin Cities campus comparison group and Big Ten Conference institutions

	1st-year Retention Rate	4-year Graduation Rate
*U. of Michigan – Ann Arbor	97%	75%
*U. of California – Los Angeles	96%	74%
*U. of California – Berkeley	97%	73%
*U. of Illinois – Urbana-Champaign	93%	71%
U. of Maryland – College Park	95%	69%
*U. of Florida – Gainesville	96%	66%
*Penn. State U. – Univ. Park	93%	64%
*U. of Washington – Seattle	94%	63%
Indiana U. – Bloomington	89%	60%
U. of Minnesota – Twin Cities	**93%**	**59% (65%)[1]**
*Ohio State U. – Columbus	94%	59%
Rutgers, State U. of New Jersey – New Brunswick	93%	58%
*U. of Wisconsin – Madison	96%	57%
*U. of Texas – Austin	96%	52%
Michigan State U. – East Lansing	93%	51%
U. of Iowa – Iowa City	85%	51%
Purdue U. – West Lafayette	92%	47%
U. of Nebraska – Lincoln	83%	33%

Source: Common Data Set
*Comparison Group Institutions
[1] Most recent UM–TC four-year graduation rate (class matriculating in 2012)

DULUTH CAMPUS

Maintaining Access to the Duluth Campus

Affordable Access

With a unique combination of both land-grant and sea-grant missions, the University of Minnesota Duluth (UMD) occupies a distinctive place in the University system and is committed to being accessible to Minnesota students. UMD serves the citizens of the state; 88 percent of UMD's undergraduate students are from Minnesota, with about half coming from the Twin Cities metro and half from greater Minnesota. In 2015, 30 percent of UMD's entering class were first-generation college students.

UMD ensures affordable access for students of all backgrounds and has expanded merit and need-based scholarships to attract top-level students. In 2015, 36 percent of UMD students qualified for the University of Minnesota Promise Scholarship, a multi-year scholarship for Minnesota resident undergraduates with a family income of up to $100,000 (up to $120,000 as of fall 2016). In addition, UMD offered over 250 Best in Class scholarships in 2015 to students who ranked either first or second in their high school class. UMD offers multiple financial aid strategies to all students such as scholarships, work study, and loans. Funding has increased significantly for financial aid to help students manage the cost of their education (Table 4-4).

Table 4-4. Student aid trends, degree-seeking undergraduates, Duluth campus, 2005, 2010, 2015

	2005	2010	2015
Gift Aid	$18.9m	$38.2m	$38.5m
Employment	$4.1m	$4.2m	$4.5m
Loans	$44.2m	$63.0m	$64.5m
Total Student Aid	$70.7m	$107.0m	$109.4m
% of Students Receiving Gift Aid	47%	95%	63%
% of Students Receiving Loans	62%	65%	64%

Source: Office of Institutional Research Student Aid Profile, University of Minnesota

Diversity

The Duluth campus has a commitment to equity and diversity and has placed a high priority on creating an environment that is welcoming and respectful. A campus change team was named in 2010 and charged with developing campus-wide action plans at all levels to create a more inclusive environment for students, faculty, and staff; the integration of cultural diversity, cultural competence, and social justice topics into curriculum and campus life; increased training and development opportunities that promote equity, diversity, and social justice; and the implementation and rigorous enforcement of policies and procedures that advance cultural diversity and social justice, including progress on diversity initiatives as an explicit part of performance reviews of campus leadership.

In 2013, UMD added a cabinet-level leadership position to facilitate campus climate training and development for faculty, staff, administration, and students. The Faculty Fellow began a process for Comprehensive and Integrated Intercultural Development through a Model for Institutional Change. The development of internal capacity for staff and faculty intercultural competence completed its eleventh cohort (198 faculty, staff, and administrators) in an intensive Intercultural Leadership Development initiative. Another two cohorts are planned for 2016–17. In fall 2015, UMD students, staff, and faculty participated in a Campus Climate Survey. In fall 2016 the results and next steps were shared with the campus community. The Campus Climate Change Team has continued into its sixth year with 18 unit change teams working on incorporating values of diversity, equity, and inclusion in every aspect of the institution. In addition, the UMD Employees of Color Mentoring Program continues to meet, with over 180 employees invited to attend monthly meetings.

The Duluth campus values diversity as a means of enriching the educational experience of all students and continues its strong commitment to building a more diverse student body. To that end, UMD utilizes a holistic undergraduate admission review process by which the strength of the applicant is evaluated through multiple factors that incorporate academic measures, relevant co-curricular and work

Figure 4-F. Percent undergraduate students of color by fall term, Duluth campus, 2006–2016
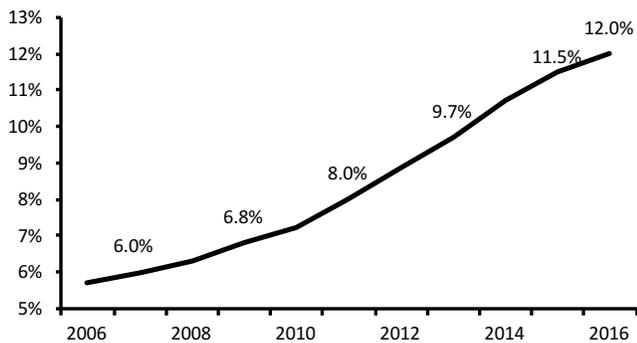
Source: Office of Institutional Research, University of Minnesota

experiences, and other individual characteristics. Over the past decade UMD has experienced steady growth in the percentage of students of color (Figure 4-F).

Transfer Student Initiatives

The Duluth campus is committed to increasing transfer student recruitment and academic success and has made a concerted effort to become a more transfer-friendly institution, including:

- UMD has partnered with Lake Superior College (LSC) on *Link,* which provides an education pathway for interested LSC students to complete their baccalaureate degree through UMD.

- In 2015–16 the Reverse Transfer collaboration between UMD and Lake Superior College identified 135 UMD students who met the criteria for participation. Of those, 26 students responded with interest in participating and of those, seven students received their Associate of Arts degree from Lake Superior College while attending UMD. Reverse Transfer offers significant gains for both institutions, as well as for students. LSC gets to count a completed degree earner; UMD adds a committed transfer student earlier than it might otherwise have had; and the student receives a degree while remaining at UMD, which caps off the efforts put in at LSC. Plans are underway to expand the Reverse Transfer initiative to other community colleges in Northern Minnesota.

- In fall 2014, UMD launched the *Connect* initiative, a campus-wide, credit-based peer-mentoring program that pairs current transfer students with incoming transfer students to help smooth their transitions to UMD.

Attracting Outstanding Students to the Duluth Campus

Strategic Investment in Enrollment

In January 2015, the Duluth campus developed six initiatives for strategic investment in undergraduate enrollment (Table 4-5). Four initiatives allocated resources to support programs currently at capacity but with demonstrated additional enrollment demand, i.e. programs requiring additional resources to meet student demand. Those programs include:

- Cultural Entrepreneurship (College of Liberal Arts)

- Graphic Design & Marketing (School of Fine Arts) and Marketing & Graphic Design (Labovitz School of Business and Economics)

- Chemical Engineering, Civil Engineering, and Mechanical Engineering (Swenson College of Science and Engineering)

- Computer Science (Swenson College of Science and Engineering)

These programs are supported by additional instructional positions and one-time funds for space

Table 4-5. Fall enrollment, Duluth campus, 2006, 2012–15

	2006	2012	2013	2014	2015	Percent Change 2014 to 2015	Percent Change 2006 to 2015
Undergraduate	9,172	9,452	9,239	9,120	8,929	-2.1%	-2.6%
Graduate	736	753	781	715	652	-8.8%	-11.4%
Non-degree	968	932	874	903	942	4.2%	-2.7%
Total	10,876	11,137	10,894	10,738	10,523	-2.0%	-3.2%

Source: Office of Institutional Research, University of Minnesota

remodeling to increase capacity, with a goal to grow undergraduate enrollment by 350 students across these seven programs within four years. Allocated funds will be made recurring if enrollment goals are met.

Two additional enrollment initiatives are focused on enrollment marketing efforts. The Office of Undergraduate Admissions is leading an effort to increase prospective student awareness of programs with enrollment capacity, i.e. programs not requiring additional resources to serve an increased number of students. Fourteen programs are being highlighted within this effort with the goal of an overall increase of 100 enrolled students within the next four years.

A second enrollment marketing initiative is centered on currently enrolled students. Housed within Academic Affairs and aligned with campus student retention goals, this strategy reinforces the UMD brand and the value of a University of Minnesota degree and seeks to improve student messaging and student awareness and use of support resources. This initiative is anticipated to grow continuing student enrollment by approximately 75 students over the next three years.

Return-on-investment modeling and accountability for achievement of established enrollment goals are key elements of each strategy. Outcomes were reviewed in fall 2016 to assess progress to goal.

Offering a Great Student Experience on the Duluth Campus

The Duluth campus overlooks the shores of Lake Superior in a thriving community that offers over 11,000 acres of public space, more than 160 miles of hiking trails, and a vibrant arts scene. UMD takes pride in providing a high-quality living and learning experience, abundant opportunities for undergraduate and graduate research, and a strong presence in the cultural, economic, and intellectual life of the Duluth community. Providing an alternative to large research universities and small liberal arts colleges, UMD attracts students looking for a personalized learning experience on a right-sized campus of a major university.

Undergraduate students can choose from 14 bachelor's degrees in 92 degree programs across five collegiate units, including the Labovitz School of Business and Economics, the College of Education and Human Service Professions, the School of Fine Arts, the College of Liberal Arts, and the Swenson College of Science and Engineering. The Duluth campus offers graduate programs in 19 fields and six cooperative programs offered through the Twin Cities campus in addition to a two-year program at the University's School of Medicine Duluth and a four-year College of Pharmacy program.

Undergraduate Research

UMD continues to be a leader in undergraduate research, providing opportunities in research, scholarship, and creative activity. The Undergraduate Research Opportunity Program has a very high participation rate of 150–200 students annually. Faculty grants and donor gifts add to the funding of undergraduate research, scholarship, and creative activity. Several departments at UMD have nationally recognized summer undergraduate research programs, the newest being the BURST program (Biological Undergraduate Research in Science and Technology).

All stakeholders on campus recognize the impact that undergraduate research, scholarship, and creative activity have in the academic life and future careers engagement of students. For example, donor and friend of UMD Jim Swenson valued his undergraduate research so much that the Swenson Family Foundation has funded summer research in chemistry and biochemistry every year for more than two decades. Brian Kobilka, the 2012 Nobel Prize winner in Chemistry, credits his involvement in undergraduate research with UMD professor Conrad Firling for much of his success as a scientist.

UMD celebrates undergraduate research and artistic activities with two Undergraduate Research/ Artistic Showcases each year. These half-day campus events feature student posters, computer demonstrations, art exhibits, and theatre productions, all providing information about projects completed by undergraduate students working with faculty mentors.

UMD is a strong contributor to the research mission of the University system. With a research footprint that is proportionally larger than its size, UMD complements

the Twin Cities campus in serving the needs of the State of Minnesota.

Internationalization

During 2015–16, the Duluth campus continued work to implement the UMD Global 2020: Strategic Plan for Comprehensive Internationalization that was developed as part of its participation in the American Council on Education's Internationalization Laboratory. The current year's activities focused on activities to achieve the UMD Global 2020 vision and goals. Accomplishments during 2015–16 include:

- holding meetings of the Internationalization Advisory Committee to coordinate international activities and of the International Student Services Coordinating Council to integrate services for international students;

- finalizing indicators of goal achievement related to the UMD Global 2020 plan;

- designing and beginning to develop a Global Engagement website that will provide information about various aspects of internationalization at UMD;

- creating a definition of strategic international partnerships and developing criteria for all international partnerships;

- developing a faculty survey of global engagement and receiving over 80 responses that will be summarized in the global engagement website;

- coordinating international and intercultural campus initiatives; and

- developing a list of priorities for enhanced internationalization at UMD and a list of costs for these activities.

UMD plans to build on and complete these activities during 2016–17.

Center for Writing & Learning Excellence

UMD's Center for Writing and Learning Excellence contributes significantly to student persistence and retention by providing services students need to be successful at UMD. Fall semester 2015 saw an increase of nearly 75 percent in the number of writing sessions held in the Writers' Workshop over its first year of operation, fall semester 2013. In November

2015 a full-time ESL specialist was hired who held workshops as well as hundreds of individual sessions with non-native speakers of English, including faculty and graduate students. The Supportive Services Program piloted a course, one of the first of its kind in the nation, to train business majors as peer mentors in financial literacy. The pilot was so well received that the courses will be made permanent and may become a requirement for the Financial Planning program.

The Tutoring Center recruited a record number of academically high-achieving students (158) to tutor fellow undergraduates in over 50 different courses in the most challenging subject areas, including mathematics, statistics, biology, chemistry, engineering, physics, business, economics, and computer science. It is important to remember that all 158 tutors receive course credit rather than an hourly wage for their time, making this program both a financial and academic success story for the University. Additional academic support is provided through a growing Supplemental Instruction program, run by selected students trained to lead groups of peers in hour-long weekly review sessions for high-risk courses.

Recreational Sports Outdoor Program

UMD's Recreational Sports Outdoor Program (RSOP) has been a national leader in engaging students in healthy, active lifestyles and connections to the natural world through personal and professional experiences. RSOP programming areas include Intramural Sports, Informal Sports, Fitness and Wellness, Sport and Outdoor Clubs, Aquatics, Kayaking and Canoeing, Stand-Up Paddle Boarding, Kiting and Surfing, Climbing, Environmental Education, Outdoor Trips, Crafts and Youth Programming. RSOP also serves employees and alumni through a wide variety of programming and facility options and contributes to the University's mission of outreach through youth and community programming.

Almost 90 percent of UMD students participate in RSOP facilities and services. The overall RSOP and intramural participation rates are 20 percentage points above national benchmarks placing UMD among the top schools in the nation. The latest major benchmarking occurred in spring 2016. Results include that:

- 91 percent participate in RSOP programs and services;
- 75 percent indicated that RSOP was important in their decision to attend UMD;
- 77 percent indicated that RSOP was important in persisting; and
- 73 percent indicated that their academic performance improved due to participation.

Center for Excellence in Teaching & Learning

The Duluth campus has long recognized the importance of faculty development activities focused on student learning and success. In fall 2015, a task force was created to develop a model for faculty instructional development. In January 2016, UMD's Center for Excellence in Teaching and Learning (CETL) was launched. CETL's work is guided by a director and advisory council, and works closely with the Center for Educational Innovation (CEI) on the Twin Cities campus. While CETL supports and offers instructional development and scholarship programming for all faculty, programming focused on the role of active learning in student success and research-based teaching methods is emphasized.

The Center will partner with CEI again this year on four major activities: (1) developing a faculty handbook; (2) identifying grant and funding opportunities; (3) facilitating a Scholarship of Teaching and Learning Community; and (4) co-conducting the New Faculty Seminar Series. Additionally, in the 2016–17 academic year, CETL will launch several initiatives intended to encourage faculty to embrace active learning strategies and research-based teaching methods in their classes. These initiatives will include a Faculty Fellow for Retention and Student Success whose work will target increasing student engagement and success, and a book club style faculty learning commu-nity focused on research-based teaching methods and active learning.

Preparing Duluth Campus Graduates for Success

In spring 2015, the Strategic Enrollment Management subcommittee of the Strategic Planning and Budget governance committee communicated a campus-wide goal of increasing first-to-second year campus retention to 80 percent within the next three years and introduced a framework for achieving that goal (Figure 4-G). Demonstrable progress has been made during the 2015-2016 academic year, including: a Chancellor's Town Hall Meeting on student success and retention with more than 120 faculty, staff, and student leaders in attendance; the creation of the Action Plan for Student Retention with more than 50 action items; and the initiation of a student success and retention small grants program supporting course and program initiatives to improve academic success and student engagement in the freshman and sophomore years.

Using improved student success and retention as the foundation, Duluth continues to work to improve graduation rates (Figure 4-H). The 13 percent increase in four-year graduation rates and the ten percent increase in six-year graduation rates since 2002, while maintaining a similar academic profile and increasing traditionally underrepresented populations, are evidence of the University's continuing commitment to student success and access.

Table 4-6 shows how the Duluth campus compares to its peer group institutions, using rates for the class matriculating in 2008, the most current data available. As Figure 4-I shows, UMD awarded 15 percent more degrees in 2015–16 than in 2005–2006.

Figure 4-G. First-year retention rates of first-time, full-time undergraduate students, Duluth campus, classes matriculating in 2005–2015
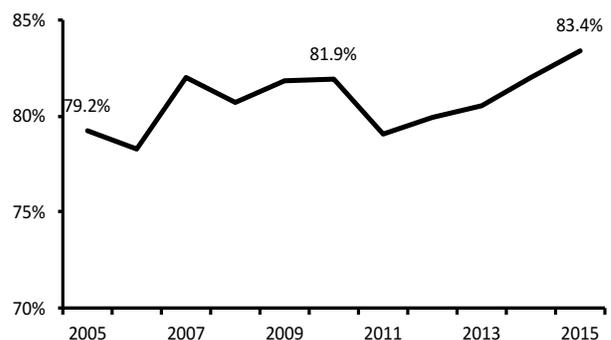
Source: Office of Institutional Research, University of Minnesota

Figure 4-H. Four-, five-, and six-year graduation rates of first-time, full-time undergraduate students, Duluth campus, classes matriculating in 2002–2012

☐ 4-year rates   ▨ 5-year graduation rate   ■ 6-year graduation rate

Year	4-year	5-year	6-year total
2002	26.0%	50.6%	56.2%
2003	25.8%	51.9%	57.7%
2004	28.8%	55.4%	60.4%
2005	29.1%	54.3%	60.4%
2006	30.6%	54.5%	59.9%
2007	32.9%	61.0%	66.7%
2008	37.9%	61.2%	65.6%
2009	37.8%	62.3%	66.5%
2010	38.5%	61.1%	**64.7%**
2011	39.0%	**61.0%**	
2012	**38.9%**		

Year of Matriculation
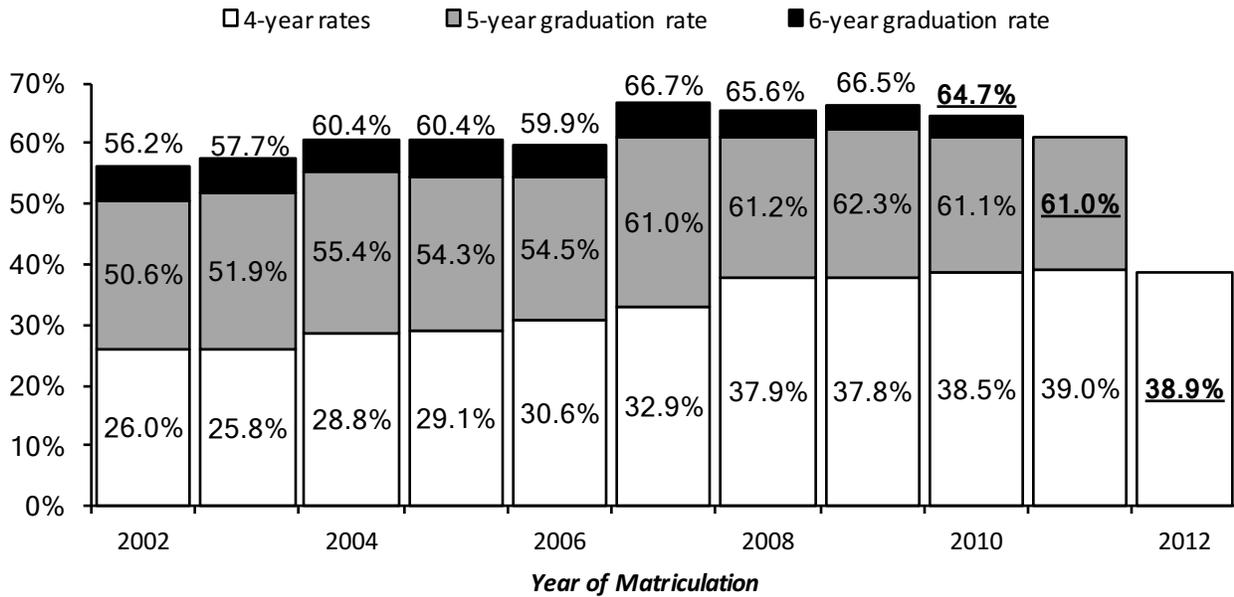
*Rates include graduates who transferred to another University of Minnesota campus. Graduation rates displayed in Table 4-6 are those reported to the national database (IPEDS), which counts only students who matriculated at and graduated from the same campus. As a result, the rates presented in the figure above differ slightly than those displayed in Table 4-6.

Source: Office of Institutional Research, University of Minnesota

Figure 4-I. Undergraduate degrees awarded, Duluth campus, 2006–2016

Labeled data points: 1,817 · 2,007 · 1,875
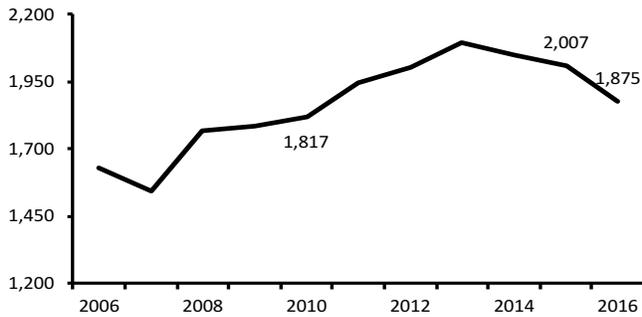
Source: Office of Institutional Research, University of Minnesota

Table 4-6. Six-year graduation rates (class matriculating in 2008), Duluth campus and comparison group institutions

	6-year Graduation Rate	Institutional Rank
CA Poly. State U.–San Luis Obispo	75%	1
Western Washington U.	72%	2
Col. of Charleston	67%	3
U. of Northern Iowa	64%	4
U. of Minnesota–Duluth	**59%**	**5**
South Dakota State U.	58%	6
U. of N.C.–Charlotte	55%	7
Western Michigan U.	54%	8
Minnesota State U.–Mankato	50%	9
U. of Michigan–Dearborn	50%	10
Southern Illinois U.–Edwardsville	50%	10
U. of Mass.–Dartmouth	47%	11
Comparison Group Average	58%	-

See footnote on Figure 4-H.
Source: Integrated Postsecondary Education Data System (IPEDS)

MORRIS CAMPUS

As a public liberal arts college, the University of Minnesota Morris occupies a distinctive place in the landscape of higher education and within the University system. Morris is the only public liberal arts college so designated in the state of Minnesota by the Council of Public Liberal Arts Colleges. With its focus on undergraduates in a residential, human-sized, and community-based setting, it resembles the many private liberal arts colleges that populate the upper Midwest while serving a more diverse student population.

The campus mission unfolds within the context of the land-grant charge of the University system. The Morris campus provides a rigorous undergraduate liberal arts education, preparing its students to be global citizens who value and pursue intellectual growth, civic engagement, intercultural competence, and environmental stewardship. The Morris campus is a center for education, culture, and research for the region, and is committed to outstanding teaching, dynamic learning, innovative faculty and student scholarship and creative activity, and public outreach. The residential academic setting fosters collaboration, diversity, and a deep sense of community.

On the Morris campus, classes are taught almost exclusively by full-time faculty members, 99 percent of whom have earned terminal degrees in their fields. Morris campus faculty members are talented instructors and active in the production of scholarly and artistic works. In the past four years, the 125 Morris campus faculty members have authored over 35 books and well over 350 refereed journal articles, including many with students as coauthors.

Young as an institution of higher education—the first college class entered in 1960—the Morris campus was founded by community members in the region who advocated for a public liberal arts college on the Minnesota prairie. Preceded by two boarding schools—an American Indian boarding school and an agricultural boarding high school—the campus has a long history of serving the region, finding innovative solutions to complex problems, and providing access to students who would otherwise go unserved.

Maintaining Access to the Morris Campus

Enrollment Strategy

The Morris campus's enrollment strategy has been developed within the context of its 2007 strategic plan, with specific goals set to increase racial and ethnic diversity and to increase the number of international students while continuing to serve the west central Minnesota region and the state. In addition, the campus enrollment strategy aims at recruiting and retaining a talented group of undergraduates—the average ACT score for entering students has remained stable at 25 for at least ten years. The combined focus on selectivity and diversity in an undergraduate-focused residential setting makes Morris a unique campus within the University system and in the state.

Accessible to Minnesotans

The Morris campus is accessible to Minnesota students, many from traditionally underserved backgrounds. In fall 2016, nearly 80 percent of Morris students are from Minnesota; about a third are from the Twin Cities metropolitan area. The campus continues to serve students from Stevens County and the immediate region at approximately the same percentage as it always has—however there are fewer students in west central Minnesota than there were when the Morris campus opened in 1960.

Accessible to Students with Financial Need

One indicator of family financial need is found in the number of federal Pell Grant recipients on a campus: in fall 2015, 30 percent of Morris students received Pell Grants, supporting students with high financial need. Another indicator is found in median income: on the Morris campus, median income of families of Morris students who have completed the FAFSA is $81,159. Overall 84 percent of students received financial aid in fall 2015.

Accessibility and Racial Diversity

The Morris campus's strategic plan set an enrollment goal of 25 percent students of color. In fall 2016, 28 percent of degree-seeking students on the Morris campus are students of color and American Indian students, the highest percentage in the University

Figure 4-J. Percent undergraduate students of color by fall term, Morris campus, 2006–16
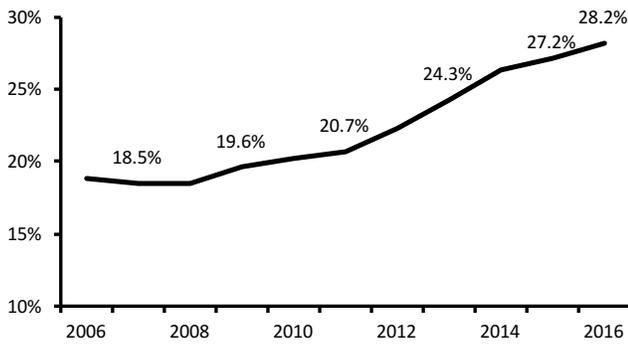
Source: Office of Institutional Research, University of Minnesota

system (Figure 4-J). Nineteen percent are American Indian students, and the Morris campus has the highest percentage of Native students at a four-year, non-tribal institution in the upper Midwest. When considering only the first-year class, students of color and American Indian students comprise 31 percent of new students in fall 2016. Morris's record of success serving these students positions the campus well to respond to the changing demographic trends in the region, the state, and the nation.

Accessibility and Underserved Students

Forty percent of the Morris campus's 2016 new first-year students will be the first generation of their family to graduate with a four-year baccalaureate degree, and approximately one third of Morris students overall are first generation. In 2014–15, two programs funded by the Great Lakes Guaranty Corporation provided academic coaching and support to students from traditionally underserved populations, including students of color, first-generation, and low-income students. These programs served as a pilot and a foundation for a grant submitted under the Federal TRIO program, and in July 2015, the campus received a five-year federal Student Support Services (TRIO) grant of over $1 million, dedicated to supporting the success of underrepresented student groups. This grant was followed in August 2015 by another federal grant, this one under the Native American Serving Non-Tribal Institutions (NASNTI) program of Title III. The campus expects that, once fully implemented, both these grants will have a positive impact on student success, persistence, and retention.

Access and Affordability

Eighty-four percent of Morris campus students receive need-based, merit, and/or donor-funded financial aid (2015). The campus offers three merit-based scholarships. An "achievement" scholarship is awarded to students who exhibit exceptional academic promise. In addition, two scholarships are awarded based on previous academic achievement and performance at a campus competitive scholarship day; students who receive these scholarships enroll and persist at rates well above the Morris campus's average for admitted students.

In addition, a high number of Morris students (40 percent in 2015–16) benefit from UPromise Scholarships, and Morris campus gift dollars add to the financial support for students. In 2015–2016, 346 students on the Morris campus received donor-funded scholarships.

In addition to the sources of financial support described above, the Morris campus offers a federally mandated and state-statute-supported American Indian tuition waiver unique to the Morris campus and tied to its history as an American Indian boarding school. The waiver poses a growing and significant financial challenge for the Morris campus. Nevertheless, it provides an attractive incentive to qualified Native students (admitted with the same requirements as all students) to enroll and to persist, with educational benefit for these students and for the campus as a whole.

Attracting Outstanding Students to the Morris Campus

The Morris campus attracts talented, intelligent students who want to make a difference in the world. The campus is selective, with an average ACT score of 25 for entering students. This number is noteworthy given the high percentage of Morris students from groups underrepresented in higher education.

Morris students have earned a reputation as smart and action-oriented, excelling within the classroom but also taking their learning out into the world. Morris students are responsible for a number of successful initiatives on campus, including the student-run recycling program; the composting initiative; the

green revolving fund; the organic garden and the Native American garden; and the weekend bus that transports students to and from the Twin Cities.

Morris students win national awards—including the American Indian Science and Engineering Society "best chapter" award and the Association for the Advancement of Sustainability in Higher Education student leadership award. In spring 2015, two Morris students won Fulbright scholarships and another earned a Fulbright in spring 2016.

The Morris campus is ranked by many national publications—including as a top ten public liberal arts college for the 17th year in a row by *U.S. News and World Report*; by the *Princeton Review* and Sierra Club; by *Money* magazine (2016) as one of the ten most improved colleges and universities in the country based on graduation rates, alumni responses, and overall return on investment; in the *Forbes* (2016) annual ranking for best colleges and universities in the nation; and by Fiske in its 2017 guide as one of the best and most interesting schools in the United States, Canada, and the United Kingdom.

Offering a Great Student Experience on the Morris Campus

The Morris campus offers a distinctive student experience, preparing students for success

and producing outcomes that matter. With its undergraduate, residential focus, the campus offers a distinctive value proposition as a public "private," providing the same focused experience as the upper Midwest's many excellent private liberal arts colleges, but at half or a third the price, even factoring in typical financial aid packaging at the privates. The Morris campus's ongoing efforts to create a model sustainable community make it an exciting destination for young people poised to invent a new future.

With an average class size of 17 and a faculty/student ratio of 1:14, Morris students are taught almost exclusively by full-time faculty—a faculty with the University's highest percentage of Horace T. Morse award winners for excellence in undergraduate education. Morris supports a rich environment for student engagement. Virtually every student participates actively in campus and community life. The most recent National Survey of Student Engagement data show that 97 percent of Morris seniors participated in at least one (and 77 percent participated in two or more) high impact practices recognized for their transformational impact on student learning and success (e.g., service-learning, research with faculty, internship/field experience, study abroad, a culminating senior experience), well above students at other public liberal arts colleges. Key engaged learning experiences are detailed in Table 4-7.

Table 4-7. Student engagement rates, Morris campus and comparison group institutions, spring 2014

	Morris Seniors	COPLAC	Bac LA	NSSE All
Completed a culminating senior experience (capstone, project, thesis)	94%	77%	85%	69%
Attended art exhibits, dance, music, theater, or other performances	89%	65%	78%	58%
Participated in co-curricular activities during senior year	84%	62%	80%	55%
Held a formal leadership position in a student group	67%	49%	66%	43%
Worked on campus in a paid position during senior year	60%	35%	54%	28%
Worked on a research project with a faculty member	51%	43%	52%	37%
Studied abroad	46%	22%	42%	21%

Source: National Survey of Student Engagement
This table presents the percentage of seniors engaging in an activity prior to graduation at Morris compared to Council of Public Liberal Arts Colleges (COPLAC) peers as well as Baccalaureate Liberal Arts colleges (largely private colleges) (Bac LA), and all four-year universities participating in the National Survey of Student Engagement (NSSE All).

Morris students serve as teaching assistants, are peer mentors and tutors, and present at professional conferences alongside their faculty mentors. These experiences, of the type and quality often reserved for graduate students, serve as a springboard for employment and post-baccalaureate education.

Morris students are advised by faculty members and, with support from the TRIO and NASNTI grants mentioned above, the campus is adding professional success coaches to augment the faculty advising model through frequent contact and interaction with students and by connecting them to the many resources that exist to support them, from the academic success center and counseling resources to the one stop financial center. The ultimate goal is to promote student success and improve retention.

The student demographic at Morris has changed significantly over the past ten years—the number of American Indian students has doubled; student financial need has increased; and more students who are the first in their families to attend college or university are enrolling. Many of these students also come from high schools that are themselves under-resourced. These factors combine to create retention challenges and the campus expects that the new approaches and dollars invested will have a positive impact over the course of the next several years.

The Morris campus has a robust service learning and engagement program, partnering with 44 area agencies and organizations to enrich student learning and meet community needs. Cadres of students conduct community-based research and statistical analysis of real-world issues for communities in the region through the Center for Small Towns; other students engage in research that benefits corporate entities, such as the Schneider Trucking "Truckers and Turnover" projects. In 2015, the Morris campus was awarded the Carnegie Classification for Community Engagement, a designation which remains until the year 2020 and has been included in the U.S. President's Honor Roll of campuses outstanding in their commitment to service.

A variety of student opportunities add value to the undergraduate experience and to the Morris campus mission. For example, study abroad promotes not only the mission of providing an environment for

the development of global citizenship, but also gives students experience and maturity that serves them well when they leave the institution. Thirty-seven percent of Morris students have studied abroad by the time they graduate.

Faculty-mentored undergraduate research or artistic production is another value-added experience. In 2015, Morris students participated in 165 paid undergraduate research experiences. These projects are funded through a variety of sources: the University's Undergraduate Research Opportunities Program; the National Science Foundation; the Howard Hughes Medical Institute grant; the Truckers and Turnover Project, funded by Schneider Trucking in Green Bay, Wisconsin; and the Center for Small Towns. In the most recent National Survey of Student Engagement, 90 percent of Morris seniors reported that, if they could start college all over again, they would go to Morris (8 percent above seniors at other liberal arts colleges) and 94 percent rate their overall educational experience at Morris as good or excellent, with the majority choosing excellent.

Preparing Morris Campus Graduates for Success

Ninety-five percent of Morris students who graduated in 2014 indicated that they were employed and/or in graduate or professional school one year after graduation; nearly one-fourth of Morris students proceed directly to graduate and professional school following graduation. Figure 4-K shows the total number of undergraduate degrees awarded.

Figure 4-K. Undergraduate degrees awarded, Morris campus, 2006–2016
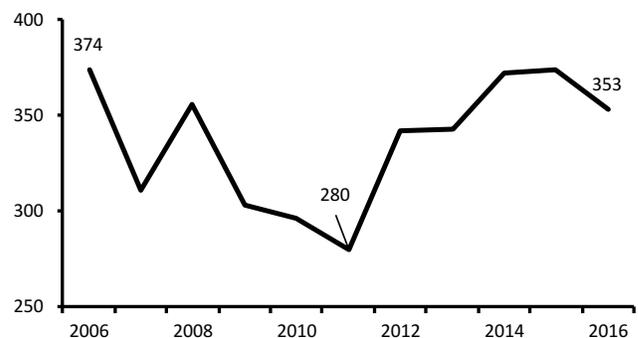
Source: Office of Institutional Research, University of Minnesota

Figure 4-L. First-year retention rates of first-time, full-time undergraduate students, Morris campus, classes matriculating in 2005–2015
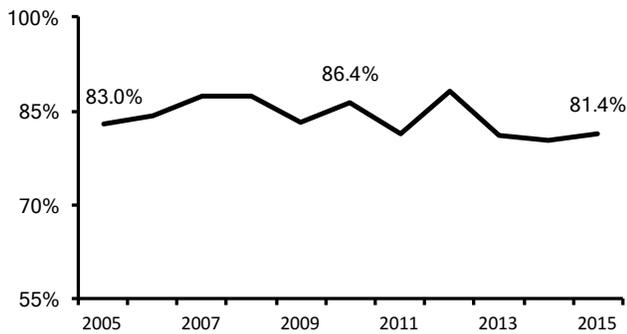
Source: Office of Institutional Research, University of Minnesota

The Morris campus continues to improve graduation and retention rates. In the past several years the first-year retention rate has slipped from an all-time high of 88 percent to just around 80 percent (Figure 4-L). This is accounted for in part by the challenges found in enrolling a talented but under-resourced undergraduate population. As described above, the campus has put in place a new model to support faculty advising intended to bring those numbers back toward its goal of 90 percent. In addition, the campus has expanded its peer mentoring program and academic alert initiatives, expanded its grant-funded individualized academic success plans to include all students, and has developed a plan for parallel major program pathways.

Graduation rates continue to be high when compared to many other public, four-year baccalaureate institutions, especially when characteristics of the student population are taken into account. A Midwestern Higher Education Compact 2015 report ranks Morris as the most effective and efficient four-year university in Minnesota. The study's two metrics allow a more meaningful comparison of graduation rates and cost-per-graduate among disparate institutions taking into account differences in demographics and environments. Morris produces more graduates than expected (a high Effectiveness Score) while spending less than expected per graduate (a low Expenditures Score). Of the 634 high performing four-year institutions included in the national report, Morris ranks in the top 5 percent. There are only 27 four-year universities in the nation that outperform Morris on both metrics simultaneously.

Figure 4-M. Four-, five-, and six-year graduation rates of first-time, full-time undergraduate students, Morris campus, classes matriculating in 2002–2012

Year of Matriculation
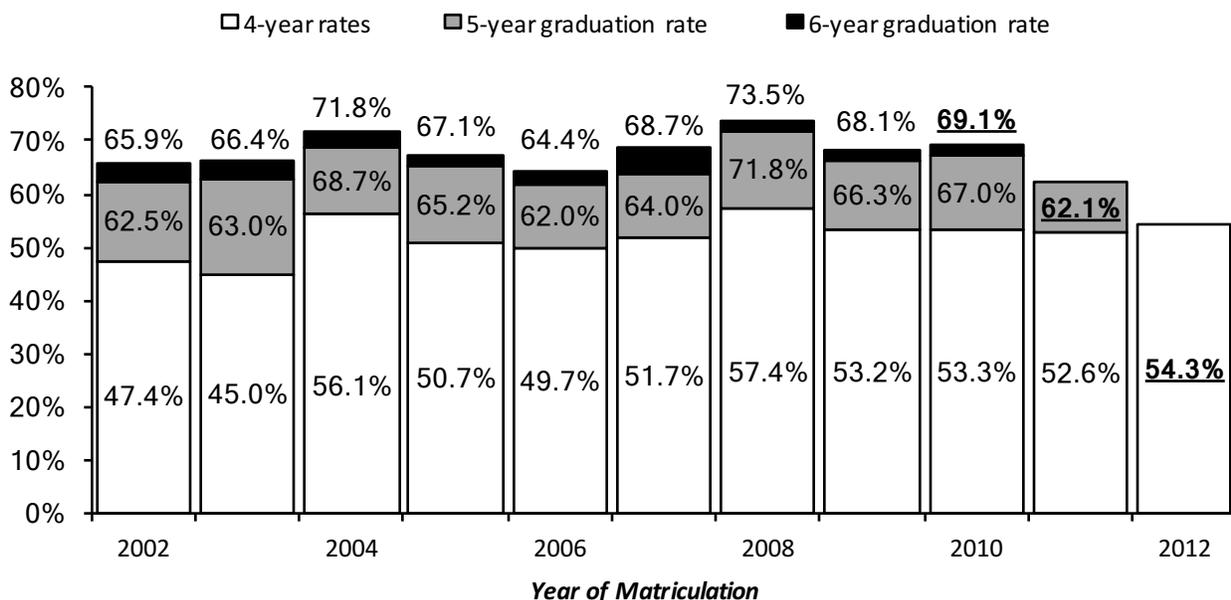
*Rates include graduates who transferred to another University of Minnesota campus. Graduation rates displayed in Table 4-8 are those reported to the national database (IPEDS), which counts only students who matriculated at and graduated from the same campus. As a result, the rates presented in the figure above differ slightly than those displayed in Table 4-8.

Source: Office of Institutional Research, University of Minnesota

Over 50 percent of Morris students graduate in four years. The 2012 four-year graduation rate of 57 percent is the Morris campus's highest on record, a 17 percent increase since 1998. Six-year rates are exceeding 65 percent (Figure 4-M). Table 4-8 shows how the Morris campus compares to its peer group institutions, using rates for the class matriculating in 2008, the most current data available.

Table 4-8. Six-year graduation rates (class matriculating in 2008), Morris campus and comparable/aspirational peer institutions

	6-year Graduation Rate	Institutional Control	Institutional Rank
Macalester Col.*	90%	Private	1
St. Olaf Col.*	89%	Private	2
Kalamazoo Col.*	82%	Private	3
Gustavus Adolphus Col.*	81%	Private	4
St. Mary's Col. of Maryland	81%	Public	4
DePauw U.*	80%	Private	5
Albion Col.	72%	Private	6
Concordia Col.–Moorhead	72%	Private	6
Coe Col.	70%	Private	7
SUNY at Purchase Col.	67%	Public	8
U. of Minnesota–Morris	**67%**	**Public**	**8**
U. of N.C.–Asheville	64%	Public	9
Lycoming Col.	62%	Private	10
U. of Maine–Farmington	54%	Public	11
Mass. Col. of Liberal Arts	52%	Public	12
U. of Virginia's Col. at Wise	42%	Public	13
Comparison Group Average	70%	-	-

See footnote on Figure 4-M
Source: Integrated Postsecondary Education Data System (IPEDS)
*Aspirational peer institutions

CROOKSTON CAMPUS

Maintaining Access to the Crookston Campus

Marking its 50th anniversary as a college in September 2016 (its 24th year as a baccalaureate-level institution), the Crookston campus continues to attract a diverse group of high potential students—both traditional and non-traditional—from across the region, state, country, and globe. Students indicate they choose Crookston because they seek a supportive small campus experience, a distinctive academic program, and/or a personalized online experience connected to workforce needs—all while earning a degree signifying the University of Minnesota's brand of excellence. The campus serves as an important access point to University of Minnesota programs for citizens living across Minnesota. Accessibility is reflected in enrollment trends.

As shown in Figure 4-N, 15.2 percent of Crookston's degree-seeking students identify themselves as students of color, and, based on country of citizenship, Crookston's student body includes representation from 33 countries (fall 2016). In addition, the campus has a long history of serving students from low socio-economic backgrounds. Recruitment of these students is part of an intentional strategy that aligns with the campus's core values, which include diversity.

A large percentage of new high school graduates attending Crookston are first-generation students. The percentage for fall 2016 is not yet available, but it was 46 percent in fall 2015. These students benefit

Figure 4-N. Percent undergraduate students of color by fall term, Crookston campus, 2006–16
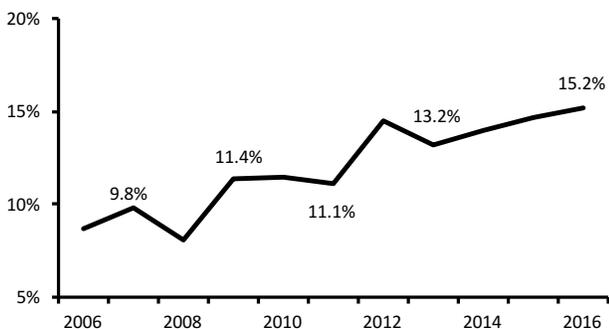
Source: Office of Institutional Research, University of Minnesota

from the campus's personalized focus on teaching and advising as well as its small class sizes and numerous leadership opportunities. Conditionally admitted and at-risk students—and essentially all students—benefit from Crookston's small classes and personalized, supportive environment.

The Crookston campus is extremely cost efficient and cost effective, as demonstrated by the relatively low expenditure per degree within the University system. It also offers the lowest tuition rate within the system, in part, to serve students with the lowest average family income. For fall 2015 (2016 data was not available at printing), students enrolled at Crookston:

- come from families with the lowest average household income for students who applied for and received financial aid (Crookston $65,392; Morris $88,928; Rochester $91,429; Duluth $98,746; Twin Cities $99,098);

- receive the need-based federal Pell Grant at a higher rate than students at other system campuses (Crookston 33 percent; Rochester 31 percent; Morris 30 percent; Duluth 26 percent; Twin Cities 23 percent); and

- are significantly more likely to be first generation college students (Crookston 46 percent; Rochester 42 percent; Morris 39 percent; Duluth 29 percent; Twin Cities 28 percent).

Since it began offering baccalaureate degrees in 1993, the Crookston campus has drawn a steady number of transfer students who are seeking the prestige of a University of Minnesota degree. The graduation rate for these students is 61 percent. Due to historically strong relationships with two-year colleges, the Crookston campus has developed more than 50 active articulation agreements with community and technical colleges across the Upper Midwest.

The Crookston campus has a strong record of being nimble and rejecting complacency, and it has a demonstrated history of adapting to and embracing new technologies such as online learning. Crookston's initial online degree program had its first graduates in 2001. Today, 14 of the 34 majors are offered fully online as well as on campus, and over 50 percent of total degree-seeking student enrollment is composed of online students (Figure 4-O). An extension of the modern land-grant mission, these online degree

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Figure 4-O. Total enrollment and online enrollment, Crookston campus, fall 2006–2016

Legend:
☐ Total Degree Seeking Students
■ Student Seeking Degrees through Online Delivery

Year	Total Degree Seeking Students	Student Seeking Degrees through Online Delivery
2006	1056	21
2007	1142	93
2008	1207	149
2009	1310	262
2010	1462	355
2011	1600	471
2012	1802	678
2013	1813	818
2014	1876	935
2015	1874	963
2016	1821	921
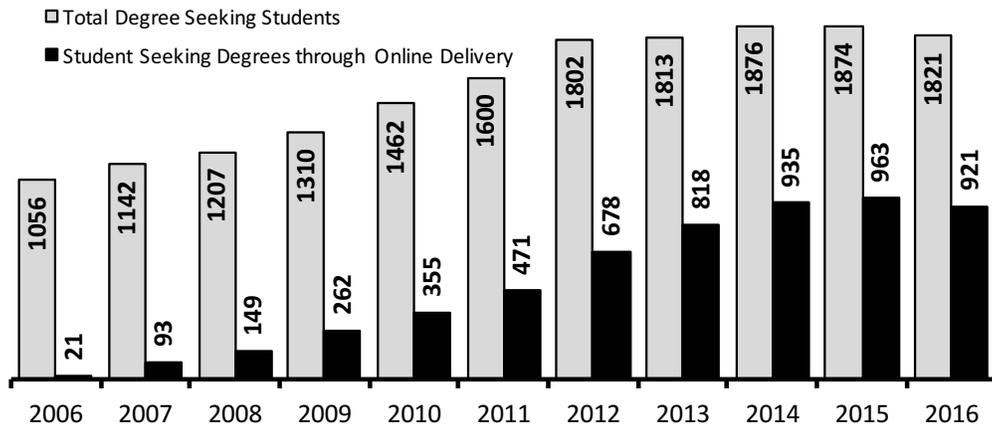
Source: University of Minnesota Crookston

programs allow working professionals to complete their bachelor's degree and advance within their career path when traditional programs don't meet their needs. Students attending online overwhelmingly fall into the non-traditional category. The average age of these students is 32 (with 81 percent over 25), they are enrolled for an average of nine credits, and are currently employed. Most have already completed a significant number of college credits (an average of 70 transfer credits). While the majority are Minnesota residents (70 percent), there is rich diversity among Crookston's online students, with 16 percent identifying as students of color and 28 countries represented (fall 2016).

In addition to degree-seeking students, the Crookston campus serves other non-traditional students. For example, College in the Schools and Post-Secondary Enrollment Option students are high-school students concurrently earning college credit, and they comprise 95 percent of Crookston's 855 (fall 2016) non-degree students. Through these programs, the Crookston campus helps make higher education accessible and more affordable for students and their families, and gives them flexibility to graduate from college more quickly or to take lighter course loads while balancing working, internship requirements, conducting undergraduate research, and/or participating in intercollegiate athletics.

Attracting Outstanding Students to the Crookston Campus

The Crookston campus attracts outstanding students through its distinctive learning environments and

academic programs. The Crookston campus's marketing theme "Small Campus. Big Degree." is reinforced by the reasons students give for choosing to attend. Of the respondents to the new student survey in fall 2016, 83 percent indicated the size of campus was a reason for selecting Crookston, 78 percent indicated that Crookston was their first-choice college, and 57 percent indicated the type of academic programs available was a reason.

Crookston's average ACT score for incoming new high school graduates is 22.1, which is lower than the other campuses in the University system. Published research acknowledges limitations of standardized tests as the sole gauge of likely postsecondary success, and at least one study noted a positive correlation between test scores and socioeconomic status. Within the University system, Crookston students who applied for and received financial aid have the lowest average family incomes; 42 percent come from families with average incomes of $48,000 per year or less (the Twin Cities campus is next closest in this range with 28 percent), and 25 percent come from families with average incomes between $0 and $30,000 (the Twin Cities campus is next closest in this range with 19 percent). Crookston's holistic admissions process considers ACT scores along with high school GPA and leadership experience, and it often involves personal interaction with the applicant. Crookston's smaller, more personalized campus environment and strong focus on student support services further nurture and enhance student success and, combined with this holistic admissions process, allow a wider array of students to fulfill their potential while maintaining access to University of Minnesota programs.

Distinctive majors attract excellent students. The Crookston campus offers several majors that are not found elsewhere in the University system, including agricultural systems management, agronomy, applied health, aviation, criminal justice, equine science, golf and turf management, horticulture, manufacturing management, quality management, and software engineering. The pre-veterinary option in animal science and equine science has been growing for many years, drawing students from across the United States. It has also developed a distinctive measure of quality: in just the past six years, 47 percent of Crookston graduates with a pre-vet emphasis have gone on to veterinary school (the national average of successful applicants is approximately 10 percent).

The Crookston campus is continuing work to expand the capacity for undergraduate research consistent with the increasing numbers of students who indicate a desire to continue their education beyond the baccalaureate degree. Through careful hiring of new faculty and cost-effective space renovations, opportunities for students to engage with faculty in research are growing. Crookston's acceptance into the Small World Initiative (SWI) escalates the role and visibility of undergraduate researchers as they work with biology faculty in this international research effort to find countermeasures to antibiotic resistance and the resulting diminishing supply of effective antibiotics—two of the biggest challenges to global health today. A number of biology faculty and students have been researching alternatives in this area for a number of years, and through this affiliation Crookston has joined a larger effort. The Crookston campus is the first in the University system to be a part of this initiative.

Outstanding students are also attracted to Crookston's Honors Program, which includes an honors proposal course that culminates in an honors essay, research, or creative project that requires a public defense.

Technology is embedded throughout the curriculum. The Crookston campus's innovative and longstanding laptop initiative puts computers in the hands of all full-time, on-campus students and faculty members. A specialized informatics laboratory suite offers students the opportunity to work with emerging technologies. This lab is used by students from many different majors, but it is especially important to

software engineering students who use it to develop software and engage in research. Online coursework offers flexibility for online-only students and also for on-campus students with class schedule conflicts. Crookston has prioritized strengthening its software engineering degree program through faculty hires and student recruitment, because of its potential to draw talented students as well as to contribute to society.

The Crookston campus has a culture of continuous improvement. For example, during the 2014–2015 academic year, faculty collected and analyzed data on student learning outcomes. In 2015–2016, they used their findings to improve student achievement. In preparation for its once-every-eight-years accreditation site visit, the Crookston campus submitted documents and action projects related to data-driven decision making, which involved developing metrics and a campus-wide dashboard. In November 2016, the Crookston campus successfully completed its Comprehensive Quality Review under the Academic Quality Improvement Program pathway, earning many compliments from the site visit team as well as reaffirmation of accreditation from the Higher Learning Commission (HLC) in February 2016. As a member of the HLC's Persistence and Completion Academy, the Crookston campus will focus considerable continuous improvement efforts on increasing student retention and graduation rates over the next four years.

The Crookston campus continues to use existing programmatic strengths as well as current faculty expertise to offer an expanded array of majors. With very little associated cost, this helps drive additional enrollment through recruitment and retention and provides new and current students with more choices. In December 2014, two new majors were approved by the Board of Regents—English and International Business—both of which became available to students in January 2015. In June 2015, two additional majors—Exercise Science & Wellness and Medical Laboratory Science—were approved by the Board of Regents and became available to students in fall semester 2015. The Board of Regents also approved a new major in Agricultural Education, which was reviewed by the Minnesota State Board of Teaching and granted licensure approval in October 2015.

Offering a Great Student Experience on the Crookston Campus

Students receive outstanding support and have an enriching experience through small class sizes; strong personalized advising and access to faculty; experiential learning, often through working with regional businesses and organizations; and opportunities for undergraduate research.

The Crookston campus's small class sizes offer students personalized attention and greater access to faculty members for advising and mentorship. Presently, 88 percent of on-campus classes have 25 or fewer stuents. The largest class is 68 students, and the average class size is 15. Online classes, which average 20 students per class, also offer a very personalized quality educational experience.

A longstanding hallmark of the Crookston campus is its focus on experiential learning. Students learn concepts and actively apply them through projects, simulations, field trips, site visits, community engagement and service learning projects, and interactions with professionals in the field. An internship experience is required of on-campus students. Online students also complete an internship unless their work experience allows them to waive the internship requirement.

Most academic majors have a corresponding student club or organization. These contribute to the student experience by providing opportunities for student interaction, community engagement, and professional/career development. Many classes also incorporate service learning projects working with the campus's Office of Community Engagement. All officially recognized student clubs are required to participate in two service projects per semester. In 2015–16 Crookston students volunteered a total of 10,800 hours of volunteer service.

NCAA Division II athletics provides student-athletes with balanced opportunities for academic excellence, leadership, and honing athletic skills. In 2015–16, 21.9 percent of Crookston's student-athletes earned Northern Sun Intercollegiate Conference All-Academic Team honors, recognizing 3.2 or higher

GPAs. Students continue to cite Division II athletics as a reason they choose to attend the Crookston campus, and student-athletes comprise 32 percent of Crookston's on-campus enrollment.

While Crookston faculty members' primary focus is on teaching, many also conduct research and engage in scholarship, frequently involving students in that work. Such faculty mentorship and role modeling offer students excellent graduate school preparation. There is growing interest in and support for undergraduate research by faculty from all academic departments. In addition to one Undergraduate Research Opportunities Program project, twelve Crookston Student Research and Creative Works projects were funded in 2015–16. Eight Crookston students had proposals to present their projects at the 2016 National Conference on Undergraduate Research accepted. For the second consecutive year, another student's undergraduate research project led to a research internship in Nancy, France. Two faculty members are integrating active, ongoing research into the undergraduate curriculum throughout all microbiology lab sections. Several faculty members also engage in the scholarship of pedagogy. This applied research, which is often based in the faculty member's discipline, contributes directly to Crookston students' learning experiences while also spreading valuable pedagogical insights through publications and presentations.

In the area of internationalization of the curriculum, the Crookston campus works closely with various departments on the Twin Cities campus, including the Global Programs and Strategy Alliance, the Learning Abroad Center, the Confucius Institute, International Students and Scholars Services, and the Center for Educational Innovation. Two biology faculty members mentored faculty in the 2014–15 cohort of the University-wide Internationalizing Teaching and Learning (ITL) Program. They will mentor the 2016–17 cohort as well. These same faculty members are currently seeking grant funding to internationalize the Crookston campus's entire biology program. Two additional faculty have been accepted into the 2016–2107 ITL cohort.

The Crookston campus provides a safe and welcoming environment for its students, employees, and visitors. The campus will continue its efforts to be ranked

among the safest public campuses in Minnesota and among the safest in the country.

The Crookston campus has been recognized for its quality programs by such organizations as *U.S. News & World Report*, which not only ranked the campus first in the category "Top Public Regional Colleges–Midwest" for 2014 and 2015, and second for 2016, but also ranked Crookston online programs within the top quartile in the category "Best Online Bachelor's Programs" for 2014, 2015, and 2016, ranking 63 of 195 in 2016.

The new campus Wellness Center opened for use in fall 2016, and has been well received by the student body. The facility offers on-campus students an important space to develop wellness habits, and it supplements the existing living-learning environment in many ways, especially for students enrolled in Crookston's new major in Exercise Science & Wellness as well as the established major in Sport & Recreation Management. Facilities like this have been shown to aid in recruitment and retention efforts as well.

Preparing Crookston Campus Graduates for Success

The Crookston campus continues to improve retention and graduation rates, and students are positioned to be successful and productive employees and citizens. Over the 2015–16 academic year, 426 bachelor's degrees were awarded (Figure 4-P), close to the historic high of 2013–14, and nearly double the number of 2006.

There is a national and state interest in meeting workforce needs in science, technology, engineering, and math (STEM). In fall 2016, 63 percent of Crookston's on-campus and 17 percent of online students were enrolled in STEM-related majors, such as agriculture, natural resources, environmental sciences, software engineering, information technology, and biological and health sciences.

Work to improve graduation rates began before the 2006 strategic planning efforts established goals to improve the campus's four-, five-, and six-year graduation rates to 40, 50, and 55 percent. The campus met the goal of 50 percent of those entering in fall 2008 graduating in five years. In summer 2015 new graduation rate goals were set: the four-year target graduation rate for students entering in fall 2016 and graduating in 2020 is 45 percent; the six-year target graduation rate for this class is 60 percent. Recent trends indicate rates are up from the entering classes of 2000–2004. The first-year retention rate is higher than it was ten years ago (Figure 4-Q), while the four-year graduation rate of the entering class of 2012 nearly doubled that of the entering class of 2002 (Figure 4-R). Table 4-9 shows how the Crookston campus compares to its peer group institutions, using rates for the class matriculating in 2008, the most current data available. The most recent rates suggest that the campus will rank better when data for those classes become available for comparision.

Crookston's Strategic Enrollment Management Committee continues its charge to guide campus efforts to achieve and maintain a critical mass of

Figure 4-P. Undergraduate degrees awarded, Crookston campus, 2006–2016

Source: Office of Institutional Research, University of Minnesota

Figure 4-Q. First-year retention rates of first-time, full-time undergraduate students, Crookston campus, classes matriculating in 2005–2015
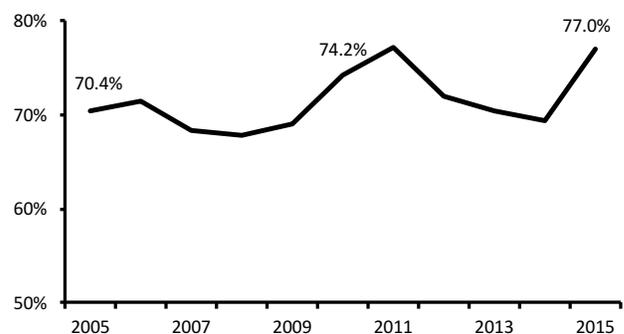
Source: Office of Institutional Research, University of Minnesota

Figure 4-R. Four-, five-, and six-year graduation rates of first-time, full-time undergraduate students, Crookston campus, classes matriculating in 2002–2012

☐ 4-year rates   ▦ 5-year graduation rate   ■ 6-year graduation rate

Year of Matriculation
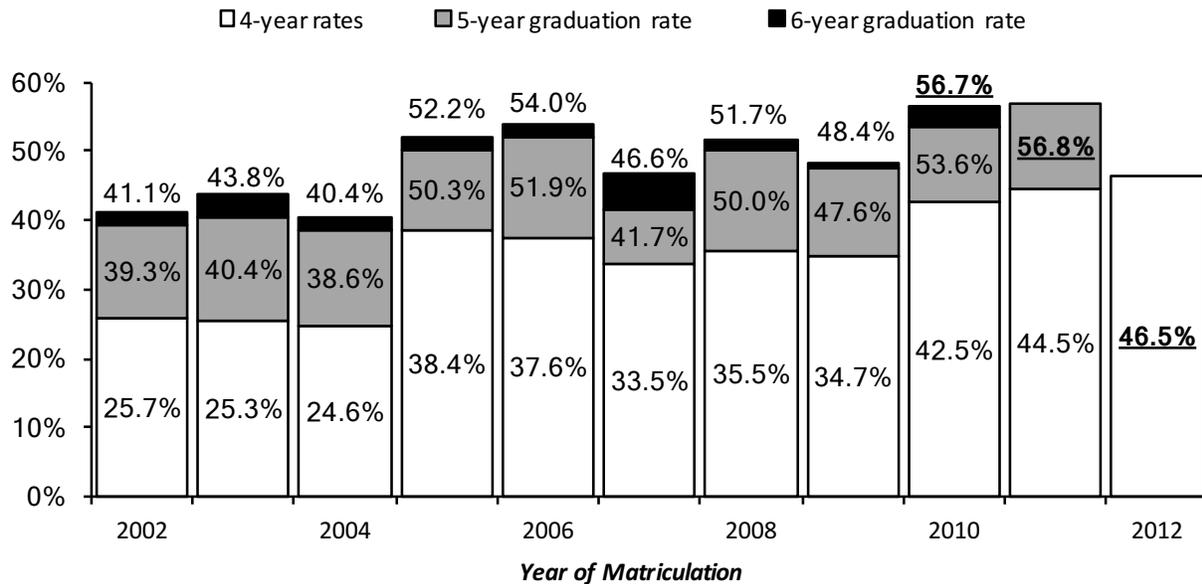
*Rates include graduates who transferred to another University of Minnesota campus. Graduation rates displayed in Table 4-9 are those reported to the national database (IPEDS), which counts only students who matriculated at and graduated from the same campus. As a result, the rates presented in the figure above differ slightly than those displayed in Table 4-9.
Source: Office of Institutional Research, University of Minnesota

students on campus while also growing strategically online. As part of the strategic enrollment management initiative, all Crookston units have developed and are implementing plans to contribute to recruitment and retention efforts.

In year two of using the Strengths Finder Assessment with students, the Crookston campus evaluated this program in fiscal year 2017. The main focus in the first year was integrating the program into courses traditionally taken by incoming students. Students enrolled in these courses took the Strengths Finder inventory, and the Strengths curriculum was built into the course requirements and objectives. The intent is for students to use this tool to discover early in their college experience their strengths and talents and to learn how to effectively utilize them as they persist with future goals and challenges. Pre- and post-assessment tools have been included to help evaluate the students' success. If this strategic change in curriculum and programming proves effective, the campus plans to expand these efforts to include all new incoming students and additional strategic courses.

Table 4-9. Six-year graduation rates (class matriculating in 2008), Crookston campus and comparison group institutions

	6-year Graduation Rate	Institutional Rank
U. of Minnesota–Morris	67%	1
Delaware Valley Col.	58%	2
U. of Maine–Farmington	54%	3
U. of Wisconsin–River Falls	54%	3
U. of Wisconsin–Stout	53%	4
U. of Pittsburgh–Johnstown	51%	5
U. of Minnesota–Crookston	**48%**	**6**
Northern State U.	46%	7
Bemidji State U.	45%	8
Dakota State U.	41%	9
Comparison Group Average	52%	-

See footnote on Figure 4-R
Source: Integrated Postsecondary Education Data System (IPEDS)

ROCHESTER CAMPUS

The University of Minnesota Rochester is distinctive in its approach to undergraduate education. With a health sciences focus, students explore the wide array of healthcare career pathways while completing an innovative, integrated common core in their first two years. This interdisciplinary, integrated coursework includes mathematics, physics, chemistry, biology, Spanish, literature, philosophy, writing, and history. Students progress through this integrated coursework toward defined learning and development outcomes, engaging in the high-impact practices identified by the American Association of Colleges and Universities (learning communities, first-year experiences, common intellectual experiences, writing-intensive courses, collaborative assignments and projects, undergraduate research, global learning, community-based learning, internships, and capstone courses and projects).

Offering a Great Student Experience on the Rochester Campus

Extraordinary Core Curriculum and Research-Fueled Instruction

Pedagogical decisions are made through a collective process, based on teaching and learning research:

- Flipped classrooms are the norm.
- Rigor begins on day one. For example, first-year students start with Organic Chemistry in a unique model supported by UMR learning research.
- Relevance and efficiency are standard, as liberal education objectives are contextualized in the health sciences.
- Academic support is personal and available in the Just Ask center staffed by teaching and subject-matter specialists.
- Relationships are central. Student development support is personal and available with the unique Student Success coaching model.
- Collaborative teaching teams enhance student learning and development.

- Writing instruction is integrated in the curriculum and supported by writing specialists.
- Collaborative and active learning are routine.
- Community-based learning is valued and thus required.
- Grand challenges of 21st-century healthcare frame student learning and development in and out of the classroom.
- Intentionality and coordination in the design and assessment of the curriculum further enhances student learning as faculty commit to "our curriculum" rather than "my course."

Extraordinary Customization

As students emerge from their foundational learning and development having participated in intentional career pathway exploration, a customized learning experience occurs in their junior and senior years. All students engage deeply in community-based learning, after which they determine, propose, enact, and present a capstone experience tailored to their emerging interests. Nearly half of our students study away during their capstones. Though most complete a Bachelor of Science in Health Sciences, other students at this level may apply for and complete the Bachelor of Science in Health Professions (BSHP) in sonography, echocardiography, radiography, or respiratory care.

Extraordinary Expectations for Success and Evidence-Driven Decisions

This distinctive undergraduate educational journey is guided by a success coach, with student learning and development outcomes assessed in both curricular and co-curricular endeavors. Results of faculty research are informing revisions of student outcomes, an assessment plan, and the campus's approach to optimizing distinctive sets of high-impact practices.

Maintaining Access to the Rochester Campus

Given the Rochester campus's commitment to student success through personalized academic and life coaching, the rigor of the Rochester campus is accessible to a wider range of students than many health sciences programs.

The campus recruits, values, and remains accessible to students with interest and aptitude in the health sciences, including:

- in-state and out-of-state students
- low- and middle-income students
- students of color
- first-generation students
- international students
- transfer students

In addition to the Rochester campus's continued efforts to improve the undergraduate education experience and student outcomes, the campus is working to meet a challenge for the healthcare industry: workforce diversification. There are many reasons the industry values diversity in the healthcare workforce, but according to a U.S. Department of Health and Human Services report, one of the most compelling reasons is that a "more diverse health professions workforce…will lead to improvements in public health" (2006). In other words, greater diversity leads to improved health outcomes.

The Rochester campus is uniquely positioned to take on this challenge. Rochester campus graduates of color succeed at the same or greater rates than their peers. This evidence reveals the effectiveness of its established approach to undergraduate education. To further address this challenge, the campus has launched Health CORE (Community of Respect and Empowerment), a living, learning community of 30 competitively selected, underrepresented students.

This residential life and civic engagement program builds on the Rochester campus's strengths in undergraduate health sciences education, including its learning cohort model for years one and two. The mission of Health CORE is to enhance diversity and inclusivity in the student experience through intentional community development and support. The vision of the CORE is *to support the success of underrepresented, undergraduate students who will infuse the healthcare field with their distinct perspectives, a necessary development to solve the grand healthcare challenges.*

In addition to HealthCORE, the Rochester campus is developing living and learning communities for

international students and students in long-term recovery from addiction. The Global Connections program aims to support the success of international and domestic Rochester students who will model intercultural competence, global citizenship, and commitment to solving global health challenges within the healthcare field. The ROC! (Recovery on Campus) program is a collegiate recovery community, expected to model transformational living, civic engagement, wellness, and high-integrity leadership within the healthcare field. The Minnesota legislature designated funds to support the launch of ROC! and dissemination of information regarding collegiate recovery communities to other public universities in the state.

The required student development courses support the accessibility of the curriculum to both transfer and traditional students. The path for transfer students who wish to enter the Health Professions program has recently been enhanced with a transfer coordinator serving their specific needs. Retention rates (as shown in Figure 4-S) are one indication of this accessibility and academic support. The Rochester campus is committed to inclusivity, striving to become a diversity pipeline for healthcare workforce development needs.

As depicted in Figure 4-T, the Rochester campus is moving steadily toward its goal: a percentage of undergraduate students of color equal to or higher than the percentage of people of color in the general population of Minnesota.

Figure 4-S. First-year retention rates of first-time, full-time undergraduate students, Rochester campus, classes matriculating in 2009–2015
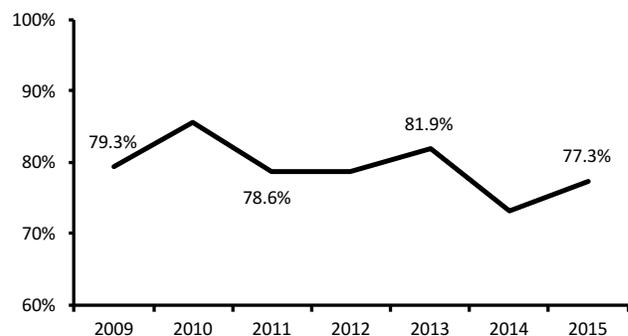
Source: Office of Institutional Research, University of Minnesota

Figure 4-T. Percent undergraduate students of color by fall term, Rochester campus, 2010–16
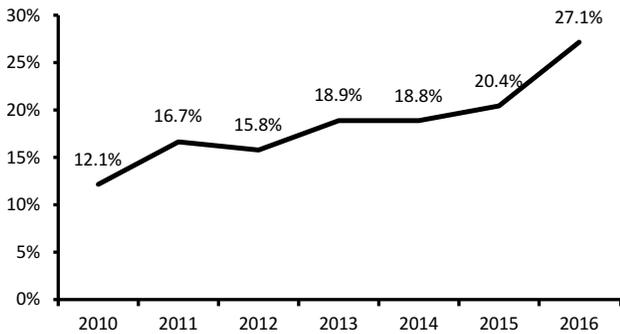
Source: Office of Institutional Research, University of Minnesota

Preparing Rochester Campus Graduates for Success

Four classes of students have now graduated from Rochester. Figure 4-U indicates those graduate numbers, with increases expected each year. Of the students who have graduated in the first four classes, nearly all have "finished in four," an initiative and commitment central to the Rochester approach to undergraduate education (see Figure 4-V).

Alumni of the Bachelor of Science in Health Sciences are moving into a range of positions following graduation, including but not limited to:

- Dental, Medical, Pharmacy, or Veterinary School
- Health Care Administration
- Health Care Policy
- Health Care Research
- Health Care Technology
- Law School
- Medical Lab Science
- Naturopathic Medicine
- Occupational Therapy
- Physician Assistant School
- Public Health Education
- Sports Medicine
- Varied Ph.D. Programs

To date, 100 percent of Bachelor of Science in Health Professions graduates passed their exams and are employed in the fields of echocardiography, radiography, respiratory care, and sonography.

Figure 4-U. Undergraduate degrees awarded, Rochester campus, 2013–2016
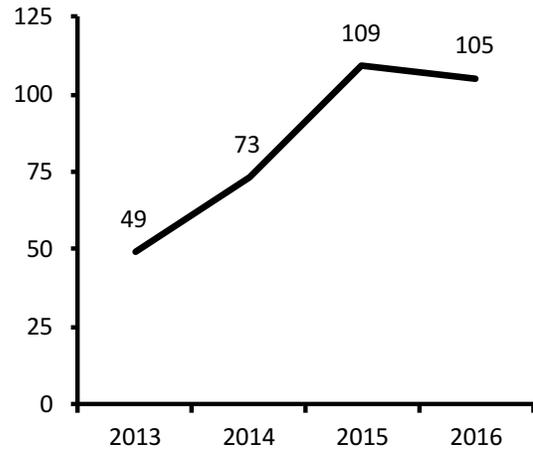
Source: Office of Institutional Research, University of Minnesota

Figure 4-V. Four- and five-year graduation rates of first-time, full-time undergraduate students, Rochester campus, classes matriculating in 2009–2012

Year of Matriculation
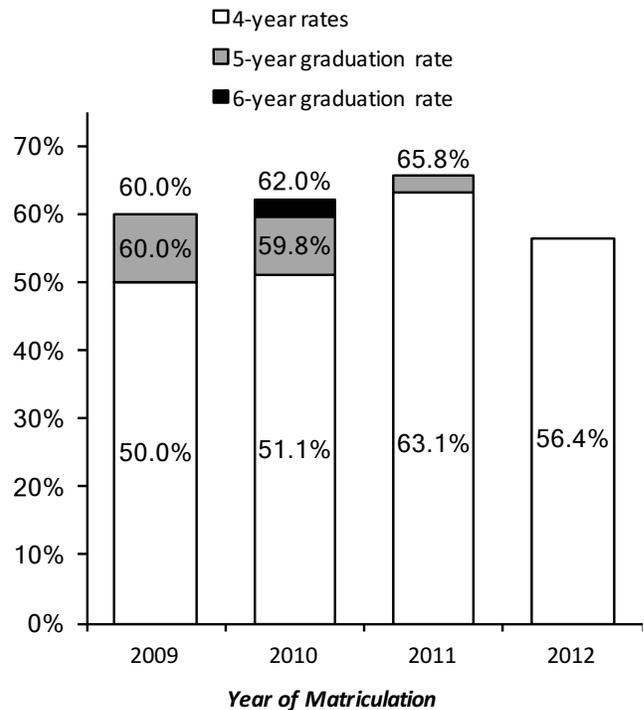
*Rates include graduates who transferred to another University of Minnesota campus.

Source: Office of Institutional Research, University of Minnesota

65

Of the 2016 graduating class, 96 percent graduated in four years or less, with 100 percent of BSHS students completing a faculty-supervised capstone experience. Of those graduates, 61 percent are employed and 36 percent had been admitted into graduate school prior to graduation. Over all, graduates' self-reported data at the time of commencement indicate that that 64 percent of 2015 graduates expect to attend a health-sciences related graduate or professional school.

Extraordinary Future UMR 2.0

Having established a nationally distinctive undergraduate health sciences program in the campus's first eight years, the Rochester campus will now work to remain agile, effective, and innovative in addressing the ever-evolving needs in higher education and healthcare. For example:

- to further serve student learning and development, the campus will explore additional avenues for partnerships that serve community-based learning and customized capstones;

- to further the individualized care of students, the Rochester campus will document, assess, enhance, and share its Student Success Coach model;

- to further the benefit of learning communities, the Rochester campus will launch and assess three living-learning communities;

- to further students' academic achievement while addressing the challenges of higher education, the Rochester campus will document, assess, enhance, and share its Collaborative and Integrated Teaching model; and

- to share the Rochester campus story nationally and continue to grow, the campus will invite dialogue with other higher education innovators.

Graduate Education

The quality and quantity of the University of Minnesota's contributions to society are highly dependent on the quality of its graduate programs. The University's reputation is enhanced by the accomplishments of graduate alumni and by the significant contributions of graduate students to the teaching, research, and outreach mission.

Maintaining Access to Graduate Programs

The University is committed to maintaining access to its graduate degree programs for members of the military, students of color, first-generation students and others with diverse backgrounds and experiences.

Application Fee Waivers

To encourage applications from members of the military, the Graduate Admissions Office offers application fee waivers for active duty members of the military and veterans. During 2015–2016, 166 applicants benefited from this application fee waiver.

In addition, McNair Scholars—applicants who are either first-generation college students with financial need, or members of a group that is traditionally underrepresented in graduate education and have demonstrated strong academic potential—receive application fee waivers. Sixty-two McNair Scholars benefited from this fee waiver during 2015–2016.

Recruiting and Retaining Highly Prepared Students from Diverse Populations

The University defines diversity as a driving force and necessary condition for academic excellence. A diverse student body contributes to a rich graduate education experience—one in which students with vastly different backgrounds and experiences come together to learn, conduct research, and create new knowledge.

In addition to collaborating with the colleges and supporting college-level activities to promote the recruitment and retention of a high-quality, diverse student body, a number of system-wide events and initiatives promote greater diversity in graduate education. While overall enrollment has been declining at both the master's and doctoral levels for the past few years, the number of students who self-identified as students of color (American Indian, Asian, Black, Hawaiian or Hispanic) has grown from 1,584, or 11.3%, in 2012 to 1,653, or 13.0%, in 2016.

Graduate Ambassadors Program

The Graduate Ambassadors Program aims to ease the transition into graduate school for students from underrepresented backgrounds. Prospective students connect with current graduate students with similar backgrounds who have agreed to share information about their campus experiences. In addition to building community once these students are on campus, the ambassador program is also a useful tool for recruitment: prospective students often receive information about and connect with an ambassador in the early stages of the admission process.

McNair Scholars Visitation Program

Regional McNair Scholars from surrounding colleges and institutions are invited to a Graduate School Visitation Program held on the Twin Cities campus once a month during the summer. These students are either first-generation college students with financial need, or members of a group that is traditionally underrepresented in graduate education and have

demonstrated strong academic potential. The day consists of a presentation about the process of applying for admission to graduate programs, meetings with faculty and staff to discuss their research, and a staff-led tour of the campus. During 2016, a record 200 students participated in visitation events.

DOVE Fellowship

The DOVE Fellowship Program assists graduate programs with recruitment and support of academically excellent students with diverse ethnic, racial, economic, and educational backgrounds and experiences. The one-year fellowship has an approximate value of $44,000 (a $23,000 stipend and approximate tuition and health insurance of $21,000). However, the number of qualified applicants exceeds the number of fellowships granted: in 2015, 144 students were nominated for 30 fellowship awards.

Graduate and Professional Education Assembly

In April 2016, more than 100 graduate students, faculty, and staff explored issues of equity and diversity in graduate education at the Graduate and Professional Education Assembly, "Achieving Excellence through Diversity: Equity, Access & Diversity Issues in Graduate & Professional Education." Attendees heard leading diversity advocates, scholars, and practitioners from other universities talk about new research, national initiatives, and best practices. In addition, University leaders, graduate students, and professional staff described their successful approaches, organizations, and opportunities. Concurrent discussions produced recommendations that have helped inform activities throughout the year.

One recommendation was to conduct workshops for graduate admissions committee members to improve recruitment and admissions practices that contribute to a more diverse graduate student population. In October 2016, graduate admissions committee members and admissions professionals participated in a workshop entitled "Inside Graduate Admissions: Improving Student Diversity through Holistic Admissions Review." Attendees articulated and assessed their current admissions practices, developed tools that they can bring back to their programs, and engaged in activities that helped them anticipate responses to common challenges.

Providing a Great Student Experience and an Extraordinary Education

As the designated research institution of the state of Minnesota, the University has the responsibility to provide graduate students with a great experience and an extraordinary education so that they can conduct breakthrough research, generate new knowledge, drive growth in our economy, and become the next generation of leaders.

Graduate and Professional Student Welcome and Orientation

The University organizes new student orientation sessions before the academic year begins, offered to all graduate and professional students on the Twin Cities and Duluth campuses. Although many programs provide local orientation for their new students, these campus-wide events focus on navigating the University and cover such topics as library resources, wellness and self-care, working well with an academic advisor, and creating a multi-year academic and professional strategy. More than 1,300 students representing 15 colleges registered for the 2016 event.

Community of Scholars Program

The Community of Scholars Program (COSP) works toward creating an institutional environment that supports the academic and professional success of graduate students who are underrepresented in academia. COSP helps students participate more fully in the University; develop supportive relationships with advisors and mentors; build a sense of community through academic seminars and professional development workshops; and connect students to the Twin Cities and broader University system through teaching, research, and community engagement opportunities.

COSP collaborates with various institutions and organizations within and outside the University to provide professional development opportunities to students. In summer 2016, an internship program was established with Hennepin County to expose COSP students to work environments in the government sector while gaining research and administrative skills. The three students selected for this pilot

initiative worked on specific projects for 40 hours a week, participated in bi-monthly professional development seminars and conducted a presentation summarizing their work.

The DOVE Summer Institute, a seven-week COSP program that takes place before the academic year begins, helps create a welcoming and inclusive climate for entering graduate students of color and students from underrepresented backgrounds. During the summer, these students work with a faculty mentor to build networks of support across the University, develop a research topic, and attend weekly seminars on communicating with faculty and proposal writing. A Bush Foundation study concluded that institute attendees make progress toward a degree at a rate that puts them essentially a year ahead of their peers. During 2016, a record 29 graduate students took part in the institute, the greatest number since its inception in 1998.

Funding Support

Competitive financial support is critical for the recruitment and retention of high-quality students and contributes to a positive student experience. Programs and colleges are responsible for allocating resources to provide funding offers to attract and matriculate prospective students. Financial support may come in the form of teaching and research assistantships, fellowships, traineeships, or tuition waivers.

While support for graduate education is not as high as many would like, overall funding for graduate education is not declining. The total amount of funding for graduate assistants, fellows, and trainees during fiscal year 2016 was $173,124,721, a 4 percent increase over the previous year and a five-year change of +7.4 percent (see Table 4-10).

Several University-wide competitions reward exceptional students, including the Thesis Research Travel Grant, Interdisciplinary Doctoral Fellowship, Bridging Funds, Training Grant Matching Funds, and the Doctoral Dissertation Fellowship. This type of financial support enables students to focus more time and effort toward research and also encourages more timely degree completion. The Doctoral Dissertation Fellowship, for example, continues to be effective in reducing the time to degree for outstanding students across most disciplines (see Figure 4-W).

Increasing the number of external fellowships awarded to graduate students is a priority. Such fellowships are important: to students for providing them with resources and recognition; to graduate programs for providing a level of budget relief and evidence of quality; and to the University for providing an objective external measure of the quality of graduate students and programs. The University offers workshops to help graduate students be competitive in securing external fellowships. In the past year, graduate students have been awarded a number of prestigious fellowships: a record 37 new graduate students were awarded National Science Foundation (NSF) Fellowships; two graduate students received CIC/Smithsonian Fellowships and; for the fourth year in a row, the University was named a "Top Fulbright Producing University" (see Table 4-11).

Regrettably, some external fellowships do not cover the full cost of graduate tuition and health care, which has at times meant that students have turned down fellowship offers, preferring to take a less prestigious teaching assistantship that covers full costs. To prevent students from having to make such a choice, the Bridging Funds program has been expanded to provide coverage for any funding shortfall associated with competitively awarded external fellowships.

For the second year, 24 graduate students were awarded stipends of up to $4,000 each for research internships during summer 2016. These awards supported projects in partnership with a wide array of host organizations, including Urban Farm & Garden Alliance (St. Paul), the African Federation in Emergency Medicine (Cape Town, South Africa), Steps Drama (Pune, India), and Picture the Homeless (New York, NY). Priority was given to applications from students in non-STEM fields that don't typically include internships—either paid or unpaid—as part of their graduate student training.

Services and Support for Graduate Students

In 2016, all graduate students were surveyed about their advising experience over the previous year. Overall, responses were positive; the highest average response was to the statement: "I respect my adviser" and "My adviser treats me with respect." The lowest average response was to the statements "My adviser provides me with a clear understanding of my status

Table 4-10. Total funding for Graduate Assistants, Fellows and Trainees Based on Expenditures from FY11 to FY16

	FY11	FY12	FY13	FY14	FY15	FY16	5-year change
O&M	$76,123,646	$77,661,581	$77,640,828	$78,387,582	$83,807,619	$85,717,270	+12.6%
Sponsored	$62,476,228	$59,606,642	$57,445,165	$56,448,220	$57,063,613	$60,004,779	-4.0%
Other	$22,545,978	$23,099,737	$26,176,348	$25,838,896	$25,554,690	$27,402,672	+21.5%
Total	**$161,145,852**	**$160,367,960**	**$161,262,341**	**$160,674,699**	**$166,425,921**	**$173,124,721**	**+7.4%**

Source: Office of Institutional Research, University of Minnesota

Figure 4-W. Impact of Doctoral Dissertation Fellowships (DDF) on median time to degree (in years) for Ph.D. degrees awarded, University of Minnesota, 2006–2016

Legend:
- ■ Years to Degree for Students Not Nominated for DDF
- □ Years to Degree for Students Nominated for but not Awarded DDF
- ▨ Years to Degree for Students Awarded DDF

Field	Not Nominated	Nominated not Awarded	Awarded DDF
Arts and Humanities	7	7	6.3
Business	5.8	5.4	5.7
Education	6	5.3	4.8
Engineering	5.4	5.3	5.1
Life Sciences	5.3	5.4	5.1
Physical and Earth Sciences	5.8	5.7	5.1
Social and Behavioral Sciences	6.1	6.7	6
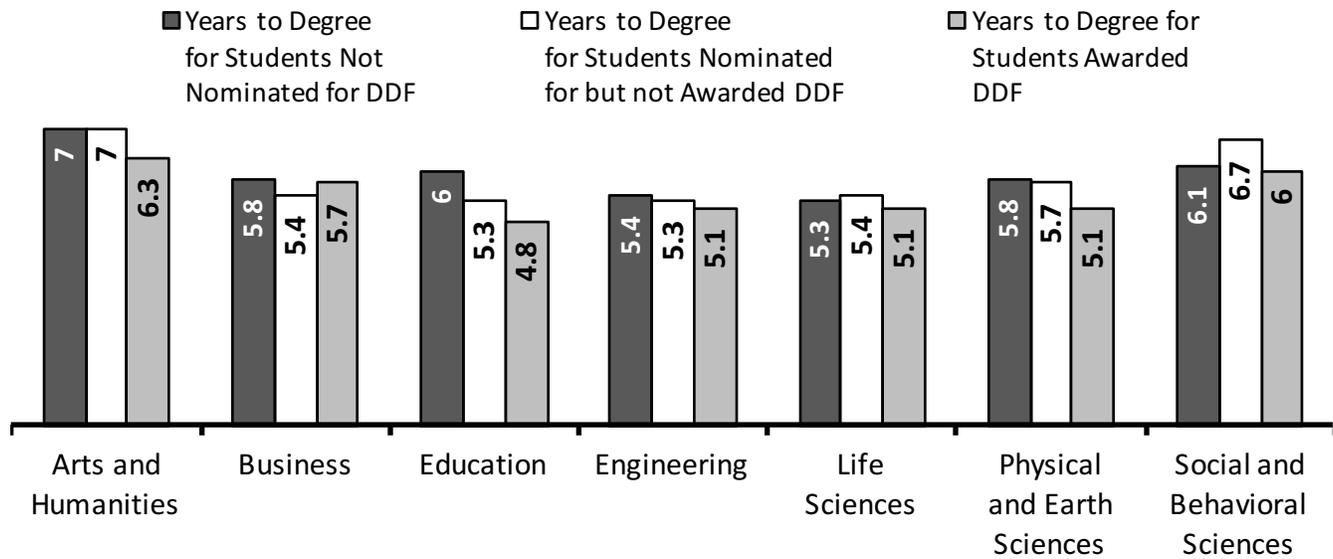
Source: Graduate School, University of Minnesota

Table 4-11. Number of National Science Foundation Fellows and Fulbright Scholars, 2008–2017

	NSF Fellows	Fulbright Scholars
2008–09	28	8
2009–10	33	5
2010–11	49	9
2011–12	68	4
2012–13	86	6
2013–14	94	3
2014–15	106	5
2015–16	110	6
2016–17	118	4

Source: Graduate School, University of Minnesota

related to progress toward graduation" and "I am satisfied with the amount of guidance I receive from my adviser." Twelve percent reported having significant difficulties with their adviser.

The 76 students who requested a follow-up consultation were contacted for additional support, and the University worked with over 100 graduate students to resolve their stated University-based problem or complaint. About 95 percent of these matters were resolved informally between the parties; the remaining cases were referred to the formal grievance process.

Resources for graduate students in the areas of "improving advising and mentoring" and "responding to academic incivility" have been developed, and survey results will be used with the colleges in the coming year to help improve the advising experience for graduate students.

Services and Support for Graduate Staff and Faculty

The University maintains public data about graduate programs, including application, admission, matriculation, enrollment, time-to-degree, faculty characteristics, completion rates, and demographic information. The Quality Assessment Allocation Plan website, developed in 2015, provides graduate staff and faculty with access to student data at the collegiate, broad field, and programmatic levels.

There is a need, however, for more comprehensive tracking of student careers and job placement, as well as an understanding of how well students' degrees are preparing them for the careers they choose. Developing an institution-wide understanding of job placement of graduate alumni will be a priority in the coming year. With a better understanding of where students go, the University can assess the appropriateness of the training its graduate programs are providing.

During 2016, a work group examined the support structures for graduate program staff. Previous staff titles have now been replaced with the single term "Graduate Program Coordinator," or GPC. GPCs are responsible for graduate student support and guidance; overall graduate program coordination; and ensuring compliance with University, program,

and college policies and procedures. The work group also developed a GPC Responsibilities guide, which assists programs in formally defining roles and duties for their staff, and launched a campus professional organization called the "GPC Network," with approximately 120 GPCs. Members meet regularly to share problems, issues, and best practices; help the University understand the work of graduate education; and gain graduate-level-specific skills and knowledge.

Support for Postdoctoral Researchers

Due to their non-student status, postdocs are not served by collegiate Career Services Offices, and there is significant unmet need for postdoc professional development opportunities. Current support for postdoctoral researchers includes making relevant graduate student workshops, trainings, and other opportunities available to postdocs. While some workshops target postdocs at the request of the Postdoctoral Association (PDA), staffing constraints limit the ability to do this on a regular basis. The University is exploring the feasibility of creating an Office of Postdoctoral Affairs to better serve and advocate for postdocs.

Preparing Students for Success

Employment that requires post-baccalaureate education is projected to grow by 18 percent for master's degrees and 16 percent for doctoral or professional degrees from 2012 to 2022, according to the Bureau of Labor Statistics. Approximately half of today's doctorate recipients find initial employment in non-academic jobs in industry, government, and nonprofit organizations. To succeed in this changing labor market, graduate students must leave the University with the right set of skills and an awareness of the full range of career options available to them, whether inside or outside of the academy.

Academic and Professional Development

Levels of career development support for graduate students varies widely by college and program. The University directs some staff time to collaborating with staff and faculty across the system on programming and services in response to those identified needs. Because demand often exceeds capacity, and because so many graduate students

will pursue non-academic careers, the University is prioritizing non-academic career exploration and preparation to meet this demand.

Throughout the year, workshops are offered on various academic and professional development topics. In addition, a graduate student/postdoc-focused career networking event is held each year, at which nearly 70 employers and several hundred students participate. A survey conducted after this year's event found that 65 percent of respondents made connections that will help them in their future employment search, and 77 percent planned to follow up with at least one of the employers they met at the event.

The Duluth campus also surveyed graduate students for the first time, achieving a 91 percent response rate and showing a 97 percent placement rate for students receiving graduate degrees in 2014–15 from the Duluth campus.

The University's APD Update, a periodic email with information about academic and professional development opportunities across campus, has been an effective tool for increasing student, staff, and faculty awareness of the opportunities available, and has led to more efficient use of limited resources.

Publicly Engaged Graduate Education

Community-based experiential opportunities involving graduate students are a key strategy for incorporating public engagement with academics. Programs and initiatives are designed to connect graduate students with social issues in real time to enhance students' academic, professional, personal, social, career, and civic development.

Graduate level community-based research and scholarship opportunities such as thesis and capstone projects, internships, and clinical practica are routinely found in many academic programs. In addition, the University offers robust programs to expand graduate students' community-based experiences.

For example, the Resilient Communities Project connects communities in Minnesota with the wide-ranging expertise of faculty and students to address pressing local issues in ways that advance sustainability and resilience. In partnership with Carver County during the 2015–2016 academic year,

29 locally identified projects were matched with 50 University courses across 22 departments and ten colleges at the Twin Cities campus, providing more than 350 students with community-engaged sustainability research and education opportunities. The partnership with Carver County garnered national recognition, receiving the first annual Educational Partnerships for Innovation in Communities Network award for Outstanding Community Partner.

The Kris Nelson Community Based Research Program connects Minnesota communities to the University through community-driven applied research. Research and technical needs of community organizations are matched with graduate student research assistants to carry out community-defined and guided projects. During the 2015–2016 academic year, 50 graduate students worked on over 50 projects.

In spring 2016 the Economic Development Fellows Pilot Program launched. In this program, graduate students and postdocs form transdisciplinary teams to work on consulting projects with local businesses and industry. Eighty-one participants worked with 14 Minnesota businesses. As a result of the program, 15 students have been offered paid positions at the participating businesses.

Acara trains students to develop financially sustainable solutions to local and global challenges. Acara courses include two of the University's new Grand Challenge courses (Global Venture Design and Seeking Solutions to Global Health Issues), which are open to both undergraduate and graduate students. The annual Acara Challenge invites University students to present innovative ideas developed in these, or other, courses and compete for donor-supplied fellowship funds. These fellows receive seed funding, training, and mentorship to pilot their ideas. The 2016 fellows' work ranges from a Native American fashion business to an inexpensive water filter in India and Cameroon. Previous Acara Challenge students have started such ventures as MyRain, which received $500K from USAID for a drip irrigation business serving small farmers in India, and Mighty Axe Hops, which, with its recent $4.6M expansion, has become the largest hops grower in Minnesota.

Interdisciplinary Research and Scholarship

The solutions to the world's biggest challenges lie at the intersection of multiple disciplines. To encourage graduate students to pursue interdisciplinary research opportunities, the University organized the third annual Discovery Across Disciplines Showcase in October 2016. The event highlighted the work of more than 60 of the University's interdisciplinary research centers and institutes. At the two-hour, poster-session-style event, graduate and undergraduate students, faculty, postdoctoral associates, and industry representatives networked with the directors of these centers, learned about the research that is being conducted, and explored potential opportunities for engagement and collaboration across disciplines in seeking answers to some of the world's most pressing challenges. The Duluth campus is also sponsoring a series of talks, providing a forum for graduate students to discuss their research and scholarship with an interdisciplinary campus-wide audience.

Demonstrating How Graduates Contribute to Society

Graduate students have the potential to help solve some of the world's most critical problems, but it can be difficult for them to know how their research can contribute to solutions and how to connect and work with others who have similar interests.

The new Seminar Series on Collaborative Leadership and Grand Challenges Research, offered during the 2016–17 academic year, helps students get involved in tackling some of the world's most vexing problems, whatever their discipline or preferred career path. In the discussion-oriented series, graduate students meet with some of the University's top faculty and staff to wrestle with topics such as the innovative mindset/design thinking; leadership to address global grand challenges; team leadership and facilitation; and setting up teams for success.

The University also helps students learn to communicate effectively to different types of audiences through the Doctoral Research Showcase, which provides a casual and conversational environment for recipients of the Interdisciplinary Doctoral Fellowship and the Doctoral Dissertation Fellowship to present their research to faculty, staff, students and friends of the University with diverse background and from different fields of studies. More than 80 fellows participated in the 2016 showcase, which was attended by over 500 members of the University community. In addition, monthly Doctoral Dissertation Seminars provide opportunities for Doctoral Dissertation Fellows to present and discuss their research before their peers.

The University also promotes the contributions of graduate students and postdoctoral associates through stories, profiles, videos, and media pitches in an effort to help inform the University community and the public about the importance and relevance of graduate student research. In 2016, graduate students were featured on the University's website and also received coverage from media outlets such as MinnPost and Minnesota Public Radio.

Professional Education

The University of Minnesota offers nearly 100 professional degrees as well as certificates and other experiences at the postbaccalaureate level. These programs, sometimes thought of as other graduate degrees, attract students whose primary objective upon completion is to acquire an applied professional or practice-based job outside the typical academic or research environment. These programs are often shaped by ethics or principles established by the respective industry or profession, guided by quality standards enforced by a professional association or accreditation body, or require professional licensure or passage of examination to practice.

Professional programs are offered on the Duluth, Rochester, and Twin Cities campuses in fields including education, design, business, science, engineering, public policy, and many more. Examples of professional degrees are the Master of Education (M.Ed.), Doctor of Education (Ed.D.), Doctor of Audiology (Au.D.), Master of Engineering (M.Eng.), Master of Health Informatics (M.H.I.), Master of Public Policy (M.P.P.), Master of Social Work (M.S.W.), Master of Tribal Administration and Governance (M.T.A.G.), Master of Urban and Regional Planning (M.U.R.P.), Master of Architecture (M.Arch.), Master of Landscape Architecture (M.L.A.), and Master of Accountancy (M.Acc.). In addition, the University of Minnesota Law School offers comprehensive legal education that prepares students to become skilled and ethical professionals. These graduates are leaders and innovators in the legal profession, the business and nonprofit communities, and every branch of government at both the state and national levels.

Health professions education is provided through the School of Dentistry, Medical School, School of Nursing, College of Pharmacy, School of Public Health, College of Veterinary Medicine, the Center for Allied Health Programs, and associated programs and centers on the Duluth, Rochester, and Twin Cities campuses. In collaboration with affiliated health systems, the University also trains over 1,200 pharmacy, medical, and dental primary care and specialty residents each year.

Maintaining Access to Professional Education

The University is committed to maintaining access to its professional degree programs for members of the military, students of color, first-generation students and others with diverse backgrounds and experiences. Since fiscal year 2015, the Admissions Office that serves most professional programs has waived the application fee for all McNair Scholars. These are nationally recognized scholars who are either first-generation college students unable to afford postbaccalaureate education or underrepresented minorities with a strong demonstrated academic record. This fee waiver is in addition to that for active military personnel or veterans that has been in place since late 2013. Another example is the application fee grants that the Humphrey School of Public Affairs offers to Pickering Fellows, Truman Scholars, and other outstanding applicants with an interest in the fields of public/foreign affairs and public service leadership as well as those with demonstrated financial need. While many colleges have seen a declining trend in total applications for postbaccalaureate degree programs, the Humphrey School has been able to reverse the trend and recorded the highest number of applications from students of color in 2015–16 (the most recent data available).

The Master of Social Work program provides financial support to approximately 60 percent of its students through foundation funds from donors and pursuing federal training grants in child welfare and health services. In addition, initial licensure Master of Education students receive over $600,000 in scholarships annually.

Table 4-12. Selected Health Professions Program Loan Data

	Number of Graduates	% with Loans	Average Loans
Doctor of Dental Surgery (D.D.S.)	109	84	$241,411
Doctor of Veterinary Medicine (D.V.M.)	97	90	$175,365
Medical Doctor (M.D.)	232	87	$173,613
Doctor of Pharmacy (Pharm.D.)	153	84	$155,184
Doctor of Nursing Practice (D.N.P.)	96	70	$89,697
Master of Nursing (M.N.)	64	80	$42,215
Bachelor of Science in Nursing (B.S.N.)	137	72	$33,092

The part-time Master of Business Administration (M.B.A.) program on the Twin Cities campus, which has approximately 1,000 students enrolled, has been reimagined as a fully flexible hybrid program with simultaneous delivery of the core in online and offline sections, along with compressed format courses and online electives. Online "seats" have grown from 166 in 2011 to 1034 in 2015. The introduction of 21 online courses as well as compressed-format courses delivered in short time frames have increased average credit consumption in the program by about three credits per year. The program now has the flexibility to recruit part-time M.B.A. students from a broader regional geography.

The Master of Business Taxation (M.B.T.) Program has been making plans to launch a fully online program beginning in fall semester 2017. The plan is consistent with the role and mission of the M.B.T. program to offer graduate tax education to working professionals in outstate Minnesota and surrounding communities in addition to those who live and work in the Twin Cities area. Tax professionals in the M.B.T. program come from CPA firms that range from the Big Four to small local companies. The ability to increase enrollment in courses by offering an online program is consistent with offering a broad-based graduate tax education.

With critical concerns about student debt, the health professions programs and schools closely monitor student financing of health professions degrees. In a review of loan data from selected health professions programs (Table 4-12), more than 70 percent of 2016 graduates reported the use of loans to finance their education. Over 70 percent of the students enrolled in doctoral training programs (D.D.S., D.N.P., M.D., Pharm.D.) supported their education through loans.

The Law School has sharply increased scholarship support for its students. More than 90 percent of the most recent entering J.D. class received grant aid. The percentage of students graduating with no Law School debt has been increasing since 2011–12 to 28 percent in the most recent reporting period, while in the same period the average amount of Law School debt for the remaining students has decreased to $92,190 (which is much lower than the national average). The Law School continues to make fundraising for student scholarships one of its highest priorities.

Recruiting and Retaining Outstanding Students from Diverse Populations

Recruiting, training, and graduating diverse students who will become teachers, policy makers, counselors, social workers, and other professionals to serve communities is not only a priority of the University, it is also an increasingly important aspect of accreditation review. The Diversity of Views and Experiences (DOVE) Fellowship is the University's main funding program for the recruitment of "academically excellent students with diverse ethnic, racial, economic, and educational backgrounds and experiences." This fellowship is open to the majority of professional degree programs and has been

helpful in successfully recruiting diverse students for programs such as social work and public policy that have some similarities to research-based graduate programs.

The Master of Social Work (M.S.W.) program actively recruits a diverse population with between 25–30 percent of students coming from communities that are underrepresented in higher education, and overrepresented in seeking social work services. Emphasis in the Master of Social Work "Community Change" concentration has increasingly looked at changing demographics of the surrounding community and building on assets of new communities, particularly immigrant and refugee communities. One of the courses in this concentration regularly meets at the Brian Coyle Center, which houses a number of agencies and groups that support the Somali community in the Twin Cities. Master of Social Work students and faculty draw from the expertise of these agencies in the classroom.

The new Minneapolis Residency Program (MRP), an elementary education Master of Education (M.Ed.) program, focuses on diversifying the teacher candidate pool by partnering with the Minneapolis Public Schools, the Minneapolis Federation of Teachers, and the Education Support Professionals Local 59. Accepted applicants enter a graduate program and work toward an elementary license. Each MRP "resident" earns payment from the school district, is eligible for benefits during the residency, and pays a reduced fee for their program at the University. The program's inaugural cohort is made up of 25 individuals selected from an initial pool of more than 100 applicants. The group is 76 percent residents of color, compared with 14 percent of teachers currently in Minneapolis Public Schools overall.

The Department of Landscape Architecture leverages fellowships to specifically recruit and retain diverse students for the Master of Landscape Architecture (M.L.A.) program, including the Ager Fellowship and the Clinton N. Hewitt Prize. The Research Assistants in Practice program—in which students partner directly with non-profit organizations, government agencies, or firms—supports the success of underrepresented students via salary, tuition benefits, and health benefits.

The Carlson School's diversity of student body statistics have held steady. The school moved the responsibility for student diversity efforts from the dean's office into the program offices, so that the diversity director could work closely with recruitment and student services within the M.B.A. and new specialty master's programs, with the mission of better supporting the recruitment of a diverse student body and supporting the academic success of students from historically underrepresented and non-traditional backgrounds. A recent curriculum overhaul in the executive and full-time M.B.A. programs has incorporated the advancement of diversity and intercultural competencies into leadership development as essential aspects of intellectual growth and development for students.

The percentage of women entering the full-time M.B.A. program in fall 2015 is 29 percent; the part-time M.B.A. program and the executive M.B.A. program achieved 38 percent and 28 percent women, respectively. In the full-time M.B.A., a successful effort to recruit veterans, with philanthropic support for fellowships, resulted in a decline in gender balance. The Carlson School continues to actively support the recruitment and retention of women through a strategic women's initiative that features productive engagement with the Forte Foundation, Women in Business, and the National Association of Women MBAs, as well as a slate of activities throughout the year such as an annual Women's Leadership Conference, Women in Finance and Women in Entrepreneurship conferences, as well as a concerted effort to raise more fellowship support for women.

Other initiatives supported by the Carlson School include a travel stipend program and on-site career services to support student participation in annual affinity conferences for National Black MBA Association, National Society of Hispanic MBAs, Asian MBA and others; hosting high-ability prospective MBA students annually from diverse backgrounds at the school.

The Law School continues to recruit a highly qualified, talented, and diverse student body. The most recent entering class of J.D. candidates had a median LSAT at the 89th percentile nationally and a median undergraduate GPA of 3.76. Approximately 14

percent of the students are of color, and ten percent are from other countries. Students come from throughout Minnesota, from 29 other states, and from around the world. Many students recruited from outside the state remain in Minnesota and become leaders in law firms and businesses, as well as in state and municipal governments and community organizations. In addition, the Law School has an LL.M. class consisting of 61 talented foreign lawyers from 21 countries who have come to Minnesota for a one-year master's program designed to introduce them to the U.S. legal system.

The Law School has pursued multiple strategies to enhance recruitment. Students are more inclined to apply to highly ranked schools, and the Law School has maintained a top-25 *U.S. News and World Report* ranking. Admissions staff and faculty members are extensively involved in recruitment through attendance at information sessions around the country, informal meetings with visiting applicants, and phone calls to admitted students. In addition, the Law School has expanded its efforts to recruit promising students through a combination of scholarships, fee waivers, admissions outreach, and the development of web and print promotional materials.

The Law School has also taken steps to improve diversity and inclusion. It participates in pipeline initiatives to expose promising potential students from diverse communities to the possibilities of legal education, including the annual JTB-APO Summer Legal Institute for high school students and the Minnesota Pre-Law Scholars Program for undergraduates, which is a comprehensive summer-long law school and LSAT preparation course targeted to underrepresented Minnesota residents. The Law School's Admissions Office and Faculty Diversity Committee are also experimenting with new outreach programs to connect prospective applicants with current law students and members of the local bar. Once students enroll, they have access to a wide range of courses taught from diverse perspectives. The Diversity Committee has driven efforts to expand programming support for affinity student organizations, with dedicated staff advising and funding to supplement student-driven practitioner panels, social events, and service projects. Starting in January 2016, the Law School launched an annual

MLK Convocation program, featuring distinguished panelists (such as Justice Alan Page '78) addressing areas of legal inequity.

Applications to the Law School have followed nationwide trends and have declined substantially from their peak, although only by one percent since 2015. Despite receiving fewer applications, the Law School has continued to recruit highly qualified and diverse classes. The Law School has compensated for the smaller size of the entering J.D. class by creating and expanding other degree programs (such as the Master's in Patent Law, L.L.M., and S.J.D.), as well as by reducing expenses.

Health professions program admissions continue to be competitive, with applications far exceeding the open positions. In the 2015–16 academic year, the Twin Cites campus of the Medical School had the highest number of applications: 4,226 for 160 positions (Table 4-13).

The health professional programs place significant emphasis on training health professionals that value differences and demonstrate cultural competence to meet the needs of the populations they serve. Programs actively recruit and work to retain students, staff, and faculty from underrepresented groups to increase diversity in the healthcare workforce (Table 4-14).

The Medical Laboratory Sciences program student population is one of the most culturally diverse undergraduate programs at the University, with 49 percent of students self-identified as multicultural. These students are also multilingual speakers of English representing an array of primary language backgrounds including Akan, Amharic, Arabic, Cambodian, Cantonese, Chinese, Kiisi/Swahili, Korean, Oromo, Russian, Somali, and Vietnamese. The program serves as a gateway for diverse student populations to enter the healthcare workforce.

The School of Nursing was one of twelve schools of nursing nationally to receive the 2016 *Insight into Diversity Magazine*'s Excellence in Diversity Award, open to all colleges and universities across the U.S. The award measures an institution's level of achievement and intensity of commitment in regard to broadening diversity and inclusion on

Table 4-13. Health Professional Program Admissions

	Applications	Offers	Enrolled
Bachelor of Science (B.S.) in Medical Lab Science	99	65	55
Bachelor of Science in Dental Hygiene (BSDH)/ Master of Dental Therapy (MDT)	19	8	6
Bachelor of Science (B.S.) in Dental Hygiene	73	28	24
Doctor of Dental Surgery (D.D.S.)	1,268	200	111
Doctor of Medicine (M.D.) at Duluth	1,700	89	60
Doctor of Medicine (M.D.) at Twin Cities	4,226	256	160
Bachelor of Science (B.S.) in Nursing	203	129	125
Doctor of Nursing Practice (D.N.P.)	227	150	107
Master of Nursing (M.N.)	279	86	64
Master of Occupational Therapy (M.O.T.)	584	101	45
Doctor of Pharmacy (Pharm.D.)	747	345	165
Master of Public Health (M.P.H.)	1,014	521	174
Doctor of Veterinary Medicine (D.V.M.)	887	187	104
Total	11,326	2,165	1,179

Source: Office of Institutional Research, University of Minnesota

Table 4-14. Racial and ethnic diversity of students enrolled in health professional programs, all campuses, 2012–2016

	2012	2013	2014	2015	2016
American Indian	1.5%	1.4%	1.3%	1.7%	2.4%
Asian/Pacific/ Hawaiian	8%	8%	8.4%	9.2%	8.9%
Black/African American	3.3%	3.7%	3.9%	4.1%	4.3%
Hispanic	1.6%	1.7%	2.1%	2.5%	2.5%
International	2.8%	3.1%	2.8%	3.2%	3.3%
White	72%	70.8%	71.3%	70%	68.8%
Unknown	10.8%	11.3%	10.2%	9.3%	9.8%

Source: Academic Health Center, University of Minnesota

campus through initiatives, programs, and outreach; student recruitment, retention, and completion; and hiring practices for faculty and staff. The School of Nursing has also seen consistent and positive growth in enrollment of highly qualified students of color in all programs. In 2015, 21 percent of the School of Nursing's student body were students of color.

Other health professional programs also reflect a commitment to student diversity. The Duluth campus of the Medical School is ranked second in the nation for graduating American Indian students. Twenty-nine percent of the students enrolled in the Pharm.D. program self-identify as multicultural. Of the 471 students enrolled in the Doctor of Dental Surgery (D.D.S.) program, 23 percent (n=101) self-identify as multicultural. Twenty-two percent of 820 students enrolled in the Twin Cities campus of the Medical School self-identify as multicultural. Twenty-nine percent of the students enrolled in the Master of Health Care Administration and Master of Public Health programs self-identify as multicultural.

Providing a Great Student Experience and an Extraordinary Education

As the state's flagship higher education institution, the University has the obligation to produce well-trained professionals that meet the workforce demands of local communities and beyond. Professional education at the University is responsive to the changing labor market landscape, as demonstrated by the following examples.

- The Master of Social Work (M.S.W.) program places students in internships in counties throughout the state, preparing students in all aspects of child welfare including child protective services, foster care and foster care licensing, adoption and kinship adoption, and family group conferencing. The program also seeks community input through monthly "Conversations with the Community." In this lunch-time seminar series, agencies that serve specific communities converse with social work students and faculty members about all aspects of their services.

- The Special Education Master of Education (M.Ed.) initial licensure program created the "Emotional and Behavioral Disorders" (EBD) residency-based program to address a statewide shortage of special education teachers. Faculty members created a new delivery method for EBD, so that existing curriculum could be taught to working professionals in five school districts in the Twin Cities and surrounding areas.

- The Master of Landscape Architecture (M.L.A.) program redesigned a required course sequence to cover topics related more directly to practice. These new courses teach the topics synthetically and realign the content by scale and complexity to better match projects that students will encounter in the real world.

- A distinctive feature of the full-time Master of Business Administration (M.B.A.) program on the Twin Cities campus is that every student has to spend 15 months in one of four "Enterprises" (Funds, Brands, Consulting, Ventures). Students work on live projects for firms in the brands, consulting, and ventures enterprises, and select investments for about $38 million of client money invested in an Equity and a Fixed Income fund in the funds enterprise.

- The Executive M.B.A. program features a Virtual Team Project, a required course where students work on a new product introduction in cross-national teams from November through April of their second year. Students complete and present their projects before a panel of industry and academic judges.

- The College of Continuing Education redesigned its postbaccalaureate Addiction Studies certificate program to be a Master of Professional Studies in Addictions Counseling degree that meets the Minnesota state requirements for the Alcohol and Drug Counselor licensure.

- The Master of Human Rights program is an intercollegiate, interdisciplinary collaboration between the College of Liberal Arts and the Humphrey School of Public Affairs that prepares students for positions addressing global human rights challenges through research, policy analysis, and advocacy.

- The Master of Tribal Administration and Governance degree on the Duluth campus, developed after two years of consultation with Indian tribes, meets the need for applied training to become tribal employees and executives, using best practices for running a tribal government. Graduates have an understanding of relevant federal laws, federal accounting requirements, and federal-tribal-state relations, as well as training in leadership, ethics, and tribal management skills.

Similarly, the following examples demonstrate that health professional schools are developing new degree programs, implementing curricular innovations, and establishing new clinical practice models and programs in response to the emergence of new professions as healthcare transformation continues.

- The Bachelor of Science Dental Hygiene/Master's in Dental Therapy Dual Degree Program prepares students for Minnesota's newest oral health profession, and continues to evolve as clinics and dentists better understand the value that dental therapists bring to the oral healthcare team. In fall 2016, Dentistry admitted its first cohort of students who will earn both a Bachelor of Dental

Hygiene and a Master of Dental Therapy degree. In this 32-month program, dual-degree students will continue to learn alongside dental and dental hygiene students in a team environment. Graduates will be eligible to be licensed as both a dental hygienist and a dental therapist. Dental therapists are required by law to work in settings that serve low income and underserved populations or in an area with a dental health professional shortage. Expressed demand for a dual-licensed dental hygienist/therapist is high among dental clinics that are interested in incorporating dental therapy into their practice and are located outside the seven-county metropolitan area. The School of Dentistry's educational program also continues to evolve based on findings from research studies and conversations with safety-net dental providers and other potential employers.

- The School of Nursing fully implemented a Freshman Nursing Guarantee Program for the B.S.N. program on the Twin Cities campus. This provides high school students interested in attending the School of Nursing with the opportunity to apply to the Freshman Nursing Guarantee program and begin the nursing major after the freshman year.

- The Medical School, in partnership with the College of Liberal Arts, has established a B.A. to M.D. program. The initial pilot will enroll up to ten students.

- In fall 2016, the School of Public Health launched the doctoral program in Molecular and Systems Toxicology to develop leaders in toxicology research and practice who will create new strategies to predict and manage environmental determinants of human disease. The Ph.D. program collaborates with the Minnesota Department of Health, the USEPA Laboratory in Duluth, the Center for Stem Cell Research, and the Masonic Cancer Center.

- The School of Public Health also developed a graduate minor in Health Equity.

- The 4/1 Joint Bachelor's Degree/Master of Public Health with the College of Biological Sciences and the Environmental Health program was designed for highly motivated students who are interested in practicing in the field of Environmental Health

Sciences emphasizing education, practice in the community, and promoting public health.

- The 4/1 Joint Bachelor's Degree/Master of Science with the School of Statistics and the Biostatistics program was designed for highly motivated students who are interested in the field of biostatistics, balancing education in applied and theoretical biostatistics, mathematical statistics, and computing, all within the context of public health, medicine, and clinical translational research.

The Law School offers one of the most rigorous and comprehensive legal education programs in the country. Almost all J.D. candidates graduate in three years, except for those earning joint degrees in other University programs. The Law School is at the forefront of a small group of schools leading the transformation of legal education nationally and internationally. Recent changes to the curriculum are designed to integrate doctrine, theory, professional values, and lawyering skills to ensure that students graduate with the tools necessary to be effective advocates and counselors. Recently launched initiatives include:

- A new required Legislation/Regulation course that introduces students to the tools of statutory interpretation, the operation of administrative agencies, and judicial review of agency decisionmaking.

- Early implementation of the American Bar Association's experiential learning requirement a year ahead of most law schools, including a required first-year experiential course, more than a dozen simulation-based courses that enroll hundreds of students in small sections that facilitate intensive training and feedback, and one of the largest live client clinics in the United States that offers more than 200 seats and opportunities for students to represent clients in approximately 400 matters each year.

- Two new concentrations (Immigration Law and Family Law), bringing the total number to eleven.

- The new Minnesota Law Public Interest Residency Program expands career opportunities by connecting leading public interest and government organizations with law students

interested in public service. Students receive real-world experience as externs while also earning credit and are guaranteed a full-time, paid legal position with their host organization during the year following graduation.

- New courses designed to ensure that the curriculum adapts to the changing legal landscape, including: Data Compliance Practicum, Intellectual Property and Entrepreneurship Clinic, and Military Law and Advocacy.

Preparing Professional Education Graduates for Success

The University is the state's primary source for many professional industries. For example, the University granted 1,385 health professional degrees (including undergraduate degrees), 327 legal-related degrees, 536 Master of Education degrees, and 606 M.B.A. degrees in 2016 (Table 4-15). The University seeks to ensure that these students obtain the experiences they need and graduate in a timely fashion. For example, graduation rates in the health professional programs are very high, with the five-year graduation rates for 2011 matriculating classes across most of the health programs exceeding 90 percent (Figure 4-X).

Graduates Prepared to Serve

As demonstrated by the following examples, the University strives to prepare its professional education graduates to serve their professions and the public.

College of Education and Human Development
The Master of Social Work (M.S.W.) "Mental Health" concentration focuses on providing services for diverse populations, including newly arriving immigrant and refugee populations. The curriculum also focuses on the role of trauma in mental health.

An unmet need in the community has been services for persons with co-occurring problems of mental illness and chemical dependency. The School of Social Work is addressing this through a course on substance abuse and social work, and by looking at co-occurring disorders in all of its mental health assessment and intervention classes.

The M.S.W. program has designed a curriculum that intersects with the Academic Health Center, providing

all social work students in the Health Disability and Aging concentration with the requirement to complete a seminar in working in interdisciplinary and interprofessional healthcare teams.

Minneapolis Residency Program Master of Education students participate in clinical practices that are contextualized to district-identified needs so that graduates are well prepared for the first year of teaching. Coursework emphasizes racial equity and pedagogical content. Students complete competency-based performance assessments throughout their residency year, and assessments are aligned to district, university, and state evaluation tools.

College of Design
Students in the Master of Landscape Architecture program have the unique opportunity to serve as Research Assistants in Practice, working directly with non-profit organizations, government agencies, or firms, which sets the RAs in Practice apart from conventional research assistantships.

Carlson School of Management
The Graduate Business Career Center provides comprehensive support to students in professional programs. In the full-time M.B.A. program, coaches see more than 3,300 appointments across the different programs, schedule more than 100 on-campus recruiting information sessions, post more than 100 active positions and host more than 1,400 students in over 80 career workshops. These efforts are reflected in the School's most recent 96 percent placement rate, as well as rising starting salaries. The School's top 15 hiring companies in 2015 included General Mills, Deloitte, Accenture, Land O'Lakes, Target, Dish Networks, McKinsey, 3M, UnitedHealth Group, Pepsico, Medtronic, Boston Scientific, Valspar. Students also accepted offers from Google, LinkedIn, Kimberly Clark, Lazard Middle Market, Johnson & Johnson, Bain, and Boston Consulting Group.

In addition, the full-time M.B.A. curriculum includes a Minnesota model of leadership development, jointly developed by Professor Theresa Glomb and Kevin Wilde, Chief Learning Officer of General Mills. Integrated throughout the entire two-year experience, and particularly embedded in the M.B.A. Enterprises, this leadership practicum prepares students for pivotal leadership moments, and to work in teams.

Table 4-15. Fall 2016 enrollment and degrees awarded in select professional programs

Program	Campus	Enrollment	Degrees Awarded
Dental Hygiene (B.S.D.H) & Dental Therapy (M.D.T)	Twin Cities	51	32
Dental Surgery (D.D.S.)	Twin Cities	443	109
Medicine (M.D.)	Duluth, Twin Cities	943	232
Mortuary Science (B.S.)	Twin Cities	52	34
Physical Therapy (D.P.T.)	Twin Cities	146	51
Bachelor of Science in Nursing (B.S.N.)	Rochester, Twin Cities	395	137
Master of Science in Nursing (M.S.N.)	Twin Cities	127	64
Doctor of Nursing Practice (D.N.P.)	Twin Cities	353	96
Pharmacy (Pharm.D.)	Duluth, Twin Cities	666	153
Public Health (M.P.H.)	Twin Cities	513	219
Healthcare Administration (M.H.A.)	Twin Cities	162	61
Occupational Therapy (M.O.T.)	Rochester, Twin Cities	98	51
B.S. in Medical Lab Sciences	Rochester, Twin Cities	65	49
Veterinary Medicine (D.V.M.)	Twin Cities	405	97
Law and Business Law (L.L.M.)	Twin Cities	62	74
Doctor of Law (J.D.)	Twin Cities	573	248
Patent Law (M.S.P. L.)	Twin Cities	10	5
Master of Architecture (M.Arch.)	Twin Cities	85	43
Master of Landscape Architecture (M.L.A.)	Twin Cities	53	21
Master of Education (M.Ed.)	Duluth, Twin Cities	996	536
Master of Social Work (M.S.W.)	Duluth, Twin Cities	327	150
Master of Business Administration (M.B.A.)	Duluth, Twin Cities	1,275	606

Source: Office of Institutional Research, University of Minnesota

Figure 4-X. Five-year graduation rates of health education programs, student matriculating in 2011
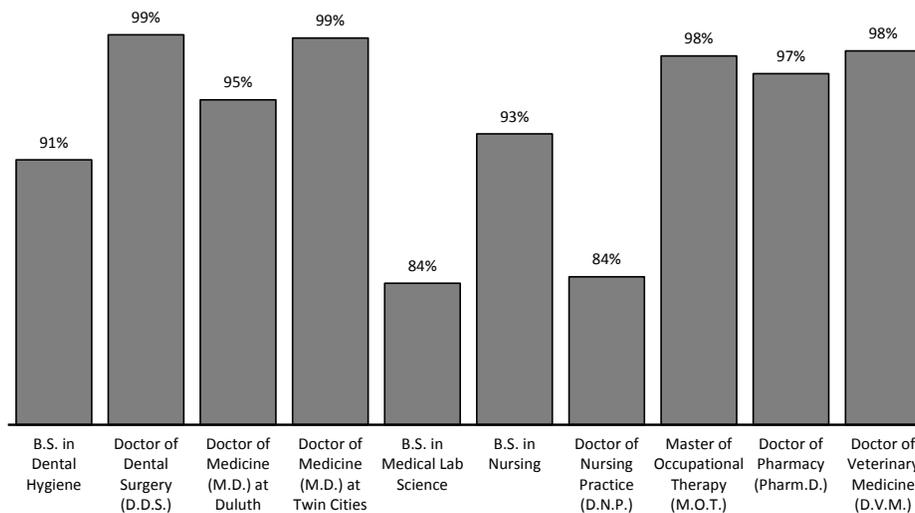
Source: Office of Institutional Research, University of Minnesota

School of Nursing

The School of Nursing completed its third successful year in partnership with the Minneapolis Veterans Administration Health Care System in Minneapolis, giving students experience in the unique needs of veterans and enabling Nursing to expand cohort size.

The Doctor of Nursing Practice program began admitting its first students in 2009. The program has grown significantly to meet the needs of the state and region. In 2016, the program had the largest full-time D.N.P. program in the country, producing 95 graduates.

A program collaboration begun in 2016 with the Rochester campus makes it possible for students with no prior college experience to complete all prerequisites and program requirements for the Bachelor of Science in Nursing program entirely on the Rochester campus.

A team of researchers and clinicians have been deployed in western Minnesota to build the capacity of rural providers to diagnose and treat peripheral artery disease. Field-shaping research at the University has identified new and effective ways to detect and manage this often undiagnosed and debilitating vascular disease. This work is funded with a $1.2 million grant from the Margaret A. Cargill Foundation.

Nursing is leading a family-based initiative in the New Ulm area of the state designed to prevent childhood obesity, in partnership with Allina Health and the Minneapolis Heart Institute. This farming region reports one of the highest childhood obesity rates in the country. The initiative is funded by a $3.3 million grant from the National Institutes of Health.

Nursing maintains an integrated leadership and research structure with University of Minnesota Health and Fairview Health Services, called the Nursing Collaboratory. A lead research scientist has been jointly hired, and a project database system was developed to give doctoral students opportunities to study and address real system concerns.

School of Dentistry

The Minnesota Collaborative Rural Oral Health Project (MN-CROHP) aims to bring dental and dental therapy students together with medical and other health professional students in rural practice settings and train them to provide integrated health care services and team-based oral health care. This project grew out of the increasing need of rural Minnesotans to access oral health care. The shortage of oral health care providers in rural areas, an insufficient number of providers willing to accept Minnesota Health Care Program patients, a slow acceptance of dental therapists, insufficient dental insurance coverage, and a lack of integrated medical/oral health care and team-based care contribute to this need.

The project's goal is to increase access to oral healthcare in underserved rural Minnesota communities by creating a new model of care that integrates interprofessional education, team-based delivery of care, and utilizes mid-level providers. The project objectives are to 1) integrate oral health into the health care delivery systems in underserved rural communities; 2) prepare dental and dental therapy students to practice in underserved rural communities; 3) expand access to oral health care for children; 4) enhance training for dental therapists; and 5) prepare students to deliver culturally sensitive care. The project will educate dental and dental therapy students alongside medical, pharmacy, and nursing students in rural interprofessional settings. Students will provide oral health screening, promotion, preventive services, and referrals for children.

The project will also establish a rural preceptorship and mentoring program for private practitioners to mentor students with the anticipated outcome of new graduates serving in rural communities after graduation. With the support of the Minnesota Dental Association, 19 rural dentists have been recruited to serve as mentors/preceptors. The project team has also established networks with non-profit organizations serving children and families in these communities.

Nineteen dental and dental therapy students have been selected as MN-CROHP scholars for 2016–2017. Eighteen students completed their community engagement in different rural communities under the preceptorship of their mentors who practice in the communities.

Medical School

To enhance the clinical training experiences of medical students, the Medical School developed two

new programs focused on providing longer clinical experiences at a single site and with a specific focus. These new programs complement the traditional block rotations where students rotate to different sites for up to eight weeks. Education in Pediatrics Across the Continuum (EPAC) uses a competency-based framework to redesign a medical education pathway from early in medical school through completion of residency focused on pediatrics. This pilot program completed its first year with two out of the four students meeting all of the competencies to advance from medical school to pediatric residency earlier than expected. A second cohort of students is now enrolled in this program.

The VA Longitudinal Undergraduate Medical Education (VALUE) is a ten-month longitudinal integrated clerkship for third-year medical students at the Minneapolis VA Health Care System. The program is focused on providing education in multiple specialties with a focus on quality improvement and patient safety. The first cohort of students met all goals of the program including completion of a quality improvement project.

A new program of longitudinal clinical training is set to begin based at Hennepin County Medical Center with a focus on underserved populations and health disparities.

These new programs are modeled after the successful Rural and Metropolitan Physicians Associates Programs that embed students in rural or urban underserved clinical practices for nine months during their third year of medical school. These programs are setting the framework for the Medical School's greater emphasis on competency-based assessment and progression with the goal of individualizing learning pathways but standardizing outcomes.

Law School
Law faculty and students are involved in numerous projects designed to serve the public. In many cases faculty and students work side by side, blending the Law School's education and outreach missions. The Robina Institute of Criminal Law and Criminal Justice is working with state and local governments on multiple aspects of criminal justice policy. The Institute is working directly with Massachusetts, New York City, two counties in Texas, and several urban

and rural counties in Minnesota to study and improve the probation system. The Institute is also working with the Pennsylvania Board of Probation and Parole to study and improve parole practices. The Institute is also working with Massachusetts and Nevada on sentencing guidelines systems. The Institute's Executive Director recently served on the Minnesota Senate's Prison Population Control Task Force and is currently serving on a committee formed by the state legislature to consider whether Minnesota should enact an earned compliance program for probation.

The Institute on Metropolitan Opportunity investigates how laws, policies, and practices affect development patterns in U.S. metropolitan regions and provides resources that policymakers, planning officials, and community organizations need to address reform in taxation, land use, housing, metropolitan governance, and education. The Institute's work has received extensive national media coverage, including by *The New York Times*, *National Public Radio*, *The Guardian*, *The PBS Newshour*, *The Washington Post*, *The Wall Street Journal*, *USA Today*, *U.S. News and World Report*, *Business Week*, *The National Journal*, *Crain's Chicago Business*, and dozens of local papers and radio stations throughout the country.

The Corporate Institute, which brings students and mentoring attorneys together to help women- and minority-owned businesses start up or grow, logs more than 8,000 service hours each academic year.

The Clemency Project course enables students to prepare clemency petitions for non-violent drug offenders serving lengthy prison sentences who would be sentenced to shorter terms if the sentencing were to take place today. President Obama recently granted seven petitions drafted by law students and their faculty advisor.

Hundreds of law students receive academic credit for serving the public while developing professional skills. Examples include 24 legal clinics that allow students to work directly with members of the local community, a judicial externship program that places students in the chambers of state and federal judges, and a field placement program that enables students to work with government offices and legal service providers.

The Center for New Americans continues to engage law students and volunteer attorneys in high-impact

public service, winning changes in U.S immigration laws that have benefited thousands of people. In the last year, center faculty have supervised over 50 students in prominent cases that have expanded protection for refugees and freed asylum seekers from unconstitutional detention. Last December, *The New Yorker* featured the center's successful litigation that brought national attention to the government's controversial policy of detaining traumatized refugees.

The Public Service program encourages students to provide free legal assistance to the local community. Last year, students devoted more than 12,000 hours of their time to numerous organizations, including the Minnesota Assistance Council for Veterans, Legal Services of Northwest Minnesota, and the Minnesota Disability Law Center.

Dozens of faculty members are involved in helping to shape state, federal, and international law through their scholarship, testimony, commentary, public service, membership on boards, and advising work with governmental and private organizations. For example:

- Prof. Robert Stein is one of Minnesota's commissioners on the Uniform Law Commission;

- Prof. Kevin Reitz is the American Law Institute's Reporter for revisions to the Model Penal Code;

- Prof. Susan Wolf is a principle investigator for an NIH-funded program to establish a legal framework for regulating the human genome;

- Prof. Ruth Okediji was appointed to the United Nations Secretary-General's High-Level Panel on Access to Medicines;

- Prof. William McGeveran testified before the Minnesota Senate Judiciary Committee on the PRINCE Act;

- Prof. Hari Osofsky chaired the American Society of International Law's observer delegation to the Paris climate change negotiations and has been instrumental in obtaining external funding for research projects that help local governments develop bipartisan approaches to energy planning;

- Prof. June Carbone is involved in efforts to transform domestic and international practices regarding surrogate motherhood, including through testimony before the Minnesota Surrogacy Commission and participation in a project at the University of Hong Kong that is creating a foundation for a UK Law Reform Commission;

- Prof. Richard Painter—who was President Bush's chief ethics lawyer in the White House—has been frequently featured in the national media as an expert on campaign finance reform, banking regulation, and the recent presidential election; and

- Prof. Francis Shen is leading a new collaboration involving six University researchers and multiple community organizations to develop a Minnesota Model for addressing youth sports concussions.

Interprofessional Education

Given the continued transformation of healthcare environments to achieve the goals of providing patient-centered care, improving community health outcomes, and reducing healthcare costs, it is important that University health professional programs evolve to educate future professionals to work effectively in these transforming environments. To support these efforts, the 1Health initiative is integrating interprofessional education across the Academic Health Center (AHC) and other University health professions schools and programs.

The components of the 1Health effort are designed to foster and support the development of the essential competencies of collaborative practice: development of shared values and ethics, understanding and appreciation of roles and responsibilities of other health professionals, interprofessional communication skills, and competencies in team work.

The 1Health curriculum consists of three sequential phases:

- Phase I—Orientation: The Foundations of Interprofessional Communication and Collaboration course provides tools to support student learning for effective communication, collaboration, and teamwork. In fall 2016, 1,022 students from 16 different professional programs participated in the course.

- Phase II—Necessary Skills: Learning activities in this phase provide students opportunities to develop the necessary skills to work interprofessionally. In fall 2016, a Community Teacher program connected students from five professions with a patient in the community

with a chronic disease. The teams of students visited with their teacher in a variety of clinical settings followed by a debriefing session with their classmates to share what they have learned. Additionally, students from dental hygiene, nursing, occupational therapy, and social work can take an online team communication skills course.

- Phase III—Expertise in Practice: The final phase of the 1Health initiative consists of the experiential portion of interprofessional education. Students in pharmacy, nursing, occupational therapy, social work, and medicine participate in an embedded interprofessional observational activity within a required clinical rotation.

An interprofessional curriculum for medical and pharmacy residents and doctorate of nursing practice students has also been developed. In 2016, 128 learners participated in a full-day workshop on teamwork, roles and responsibilities, and conflict management.

Finally, in 2015–2016, 112 faculty members have taken advantage of faculty development sessions on interprofessional facilitation, case writing, and assessment.

The Academic Health Center also provides financial assistance to students doing rotations in rural communities. In summer 2015, this program was refocused to advance interprofessional practice and education among students and practitioners by integrating interprofessional learning objectives into student training experiences in rural communities. Additionally, through preceptor and site development, the number of exemplary interprofessional learning sites where health professions students rotate will be increased.

National Reputations

The University's professional education programs have strong reputations nationally and around the world, which allows graduates of these programs to engage in their chosen professions and serve with a high level of credibility and public confidence. For example, the Law School has maintained a top-25 *U.S. News and World Report* ranking over many years. Additionally, *DesignIntelligence* magazine's 2016–17 report on the best architecture and design schools in America

ranked the College of Design's School of Architecture as the second most admired graduate architecture program by deans and chairs and the undergraduate Interior Design program among the top 20 in the nation. Interior Design was also selected by hiring professionals as one that best prepares students for a future in their professions.

The health professional schools have national prominence through a variety of national rankings as well:

- The Medical School is ranked 32nd in National Institutes of Health funding (2015, Blue Ridge Institute).

- The Department of Family Medicine and Community Health in the Medical School is ranked third in NIH funding among departments of Family Medicine (2015).

- In comparative data provided by the Association of American Veterinary Medical Colleges, the University's College of Veterinary Medicine compares with its 28 peer colleges in the following metrics: sixth in total sponsored programs, fifth in total revenue, fifth in teaching hospital revenue, and 19th in state appropriations.

- *U.S. News and World Report* ranks a number of the health professions programs highly:

  ◦ The College of Pharmacy ranks second among all pharmacy schools in the nation, and is ranked third in research funding for pharmacy schools.

  ◦ The Medical School is tied for ninth in primary care.

  ◦ The School of Nursing's Nursing Informatics specialty ranks second, the Nurse Midwifery specialty fourth, and the Doctor of Nursing Practice twelfth.

  ◦ The School of Public Health is ranked eighth in the nation; among schools in public universities it is ranked fourth.

  ◦ The Master of Health Administration program is tied for third nationally.

  ◦ Veterinary Medicine ranks ninth.

Research and Discovery

Conducting breakthrough research that moves us forward. Our researchers improve our understanding of the world and how we work and live.

Introduction

As described earlier in this report, the University's research mission is to generate and preserve knowledge, understanding, and creativity by conducting high-quality research, scholarship, and artistic activity that benefit students, scholars, and communities across the state, the nation, and the world.

With this mission as a guide, the University in 2013 created a five-year research strategic plan, Five Years Forward, with partners across the University system. In alignment with the Twin Cities strategic plan and other campus plans, the research plan builds upon the University's many strengths and creates opportunities to bring researchers together through collective inspiration and discovery. The following sections are the cornerstones of that vision.

Enhancing Research Excellence

The University seeks to enhance research excellence by investing in research infrastructure and faculty and educating our students for the challenges and opportunities of tomorrow. As the state's major research university, the University plays an integral role in Minnesota's academic research and knowledge creation. The University ranks eighth among public universities in research spending, with more than $881 million in research expenditures (Table 5-1), and because of survey reporting requirements, that figure represents research expenditures for the Twin Cities campus only. If all University campuses were reported together, the total would grow to $910 million. University of Minnesota research generates an estimated $8.6 billion annual economic impact for Minnesota.

A 2015 report, "America's Knowledge Economy: A State-by-State Review," highlighted public research universities as crucial contributors to the knowledge economy, providing advances in knowledge and technology that drive innovation, attract jobs, and foster economic growth.

According to the report, the impact of academic research in Minnesota, home to the University and the Mayo Clinic, exceeds the national average for nearly all fields of study. Minnesota ranks third in the nation for the number of publications produced per $1 million spent on research and has the highest number of publications per capita in the Midwest. The University also tracks the influence of these publications, including how often they are cited by other scholars in their own research (Progress Card measure).

The report also highlighted medicine as the field Minnesota research has the most impact on, noting that almost 27 percent of the state's research pertains to the medical sector—the highest of any state—and its medical research is cited 32 percent more than the national average.

The University's Academic Health Center (AHC) faculty typically expends more than $400 million in research grants each year, accounting for close to half of the University's research portfolio shown in Table 5-1. The National Institutes of Health is the single largest sponsor of research at the AHC and the larger University, funding important projects across the entire continuum of biomedical and healthcare research in cancer, cardiovascular disease, neuroscience, infectious disease, diabetes, obesity, lung disease, child health, and fundamental studies in genetics, biochemistry, and cell biology.

Institutional Support for Research

Over the past five years, several funding programs from the Office of the Vice President for Research have provided more than $36 million to researchers.

Research Infrastructure Investment

The Research Infrastructure Investment program is one way the University ensures it maintains robust, state-of-the-art equipment to support research and academic endeavors, even as federal funding for research stagnates nationwide. These improvements to research infrastructure are key to catalyzing research and innovation, and support the University's talented researchers as they explore new ideas, form interdisciplinary partnerships, and make groundbreaking discoveries.

In 2016, over $1.2 million dollars were matched one-to-one by funds from supporting colleges or centers, yielding over $2.5 million in total. Twelve proposals in at least nine colleges and eight centers and institutes across the University's colleges and campuses

Table 5-1. Top 15 institutions reporting largest research and development expenditures, fiscal years 2014 and 2015

		2014		2015		Percent Change 2014–15
		Total*	Public Rank	Total*	Public Rank	
1	Johns Hopkins U.	$2,242 million		$2,306 million		3%
2	U. of Michigan–Ann Arbor	$1,349 million	1	$1,369 million	1	1%
3	U. of Washington–Seattle	$1,176 million	2	$1,181 million	2	0%
4	U. of California–San Francisco	$1,084 million	3	$1,127 million	3	4%
5	U. of California–San Diego	$1,067 million	4	$1,101 million	4	3%
6	U. of Wisconsin–Madison	$1,109 million	5	$1,069 million	5	-4%
7	Duke U.	$1,037 million		$1,037 million		0%
8	Stanford U.	$959 million		$1,023 million		6%
9	U. of California–Los Angeles	$948 million	6	$1,021 million	6	7%
10	Harvard U.	$933 million		$1,014 million		8%
11	U. of North Carolina–Chapel Hill	$989 million	7	$967 million	7	-2%
12	Cornell U.	$883 million		$954 million		7%
13	Massachusetts Inst. of Technology	$908 million		$931 million		2%
14	**U. of Minnesota–Twin Cities**	**$877 million**	**8**	**$881 million**	**8**	**0%**
15	Columbia U.	$891 million		$868 million		-3%

Source: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey

were chosen for funding, ranging from an asphalt performance tester at the Duluth campus to expanded 3D Bioprinting capacity to the Driven to Discover Research Facility at the Minnesota State Fair.

Minnesota Futures

The Minnesota Futures program supports extraordinary research by nurturing interdisciplinary ideas. The two-year grants, which are supported by technology commercialization revenue, fund research opportunities that cross disciplinary and professional boundaries and support in-depth research that aims to address society's grand challenges. Since 2008, the Minnesota Futures grants have supported research by faculty who go on to win substantial grants and whose innovations reach the market to potentially improve the lives of millions.

The 2016 Minnesota Futures grants went to two projects, one to develop new therapies to fight life-threatening fungal infections and one to explore genetic control of invasive fish species.

Grant Match/Grant-in-Aid

The Grant-in-Aid of Research, Artistry and Scholarship Program provides grants to support scholarly and artistic activities of faculty and their graduate students to foster excellence throughout the University. Grant-in-Aid (GIA) projects represent the breadth and depth of University research in all disciplines and fields. While any faculty can apply for GIA funding, it plays an especially important role by providing new professors and emerging researchers opportunities to pursue research and scholarship that may not yet have received external funding. In the past

five years, $14.5 million has been awarded through the GIA program.

Research Opportunities for Students

An important part of the educational experience at the University is the opportunity for students at all levels on all five campuses to engage with outstanding research faculty, not just in the classroom, but also in new research and creative projects. Undergraduate students can develop valuable skills through the Undergraduate Research Opportunities Program, and can present their research findings at campus symposia and a national conference dedicated to undergraduate research. Graduate and professional students work alongside faculty in the laboratory, the archives, and the studio, helping to generate new knowledge and creative works. Graduate and professional research roles prepare students to become future faculty as well as leaders in higher education, business, government, and non-profit organizations around the world.

Advancing Human Research Protections

Research has significantly contributed to improvements for many people from every walk of life. Many advances in knowledge would not have been possible without individuals willing to participate. The University is dedicated to meeting, upholding, and exceeding the highest ethical standards in research practices involving human participants.

Following a rigorous review and assessment of its human research policies and practices in 2015, the University is now implementing major changes to enhance its human research protection program. The Advancing Human Research Protections initiative has the aims of strengthening protections for human research participants and establishing a program that will serve as a national model.

Key areas targeted for enhancements include renewing the University's commitment to research ethics, more education and training for investigators and staff, changes to Institutional Research Board (IRB) processes and policies, new approaches for managing conflicts of interest, and increased community participation and oversight.

The end of fiscal year 2016 marked the end of a busy phase for Advancing Human Research Protections,

with 16 work teams of faculty and staff completing final reports and putting their findings into operation. Specific examples of progress include:

- Providing more rigorous and timely IRB reviews, which meant restructuring the IRB with more panels involving more members. The increase in membership ensures the relevant expertise is available to effectively evaluate the diverse and complex portfolio of research conducted by University investigators.

- Adopting new policies for research participants who have impaired or fluctuating capacity to consent. These policies were developed in consultation with the Center for Bioethics, the Research Compliance Advisory Committee, and the newly-created Community Oversight Board.

- Creating, with the Fairview Health System, the Fairview University Research Oversight Committee (FUROC) to improve communication and partnership between researchers and nursing staff.

- Launching a research ethics campaign to build awareness of the University's principles, policies, and processes that uphold ethical research practices.

Advancing Transdisciplinary Partnerships

Transdisciplinary partnerships are research partnerships involving collaborators from different disciplines and from outside organizations. The research is aimed at solving grand challenges that require multi-disciplinary perspectives, with outcomes that are societally significant and transformative.

Minnesota's Discovery, Research and InnoVation Economy (MnDRIVE)

MnDRIVE is a landmark partnership between the University and the state that aligns areas of University strength with the state's key and emerging industries to produce breakthrough research that addresses the state and society's greatest challenges. Since inception, more than $71 million in state funding has been authorized for research across the four MnDRIVE research areas, catalyzing projects involving nearly

832 researchers in 103 departments, 21 colleges, and three campuses (Twin Cities, Duluth, and Morris).

With these funds and others leveraged, the four MnDRIVE areas (robotics, sensors and advanced manufacturing; global food ventures; advancing industry, conserving our environment; and discoveries and treatments for brain conditions) have hired 511 people, including 31 new faculty, 246 graduate and undergraduate students, and 63 post-docs and have conducted some substantial outreach: more than 900 meetings, symposia, workshops, and conferences with more than 77,000 attendees ranging from researchers to industry partners.

MnDRIVE researchers in total leveraged $167 million in state, federal, and private funding from major companies and agencies such as Boston Scientific, the National Science Foundation, the U.S. Department of Agriculture, and the National Institutes of Health. These groups have also submitted 184 disclosures for inventions and helped launch 13 startup companies.

Another success is the fate of MnDRIVE students—so far, more than 30 MnDRIVE-supported students have graduated, and twelve of those students went to work at places like Medtronic, Seagate, and Toro.

The MnDRIVE Transdisciplinary Research program was a one-time grant opportunity to promote cross-disciplinary, collaborative research addressing at least three of the four MnDRIVE research areas. In 2014, nearly $6 million was awarded to twelve transdisciplinary research projects, including a precision agriculture project, headed by Associate Professor Demoz Gebre-Egziabher, who has partnered with private corporation Sentera to develop next-generation pest control for research and agricultural use. Another transdisciplinary success is the launch of a major clinical trial by Dr. Alexander Khoruts to study bioremediation of gut microbiota.

Increasing Informatics Capabilities
The University established Research Computing to consolidate management of services provided by the Minnesota Supercomputing Institute, the University of Minnesota Informatics Institute, and U Spatial. These three units offer increasingly customized resources for computer- and data-intensive research to the University research community.

The Minnesota Supercomputing Institute (MSI) is a nexus for leading-edge research in scientific computing, for fostering interdisciplinary research on campus, and for enabling public-private collaborations. With approximately 600 research groups, MSI plays enables high-impact research across the life, health, and social sciences and the more traditional high-performance computing tasks common to the engineering and physical sciences. Some recent publications generated by MSI researchers include an analysis of how the change from a prairie landscape to crop fields has affected Minnesota weather and a study indicating that mice from "dirtier" environments replicated human immune systems more closely than their "cleaner" counterparts.

The University of Minnesota Informatics Institute (UMII) was founded in 2014 to foster and accelerate research across the University system in agriculture, arts, design, engineering, environment, health, humanities, and social sciences through informatics services, competitive grants, and consultation. UMII funding supports undergraduate research through the UROP program and provides graduate fellowships for MnDRIVE-related research with a strong informatics component. One of the projects develops a high-throughput sensor technology together with real-time analysis to provide a rapid, automated diagnostic approach to pathogen or toxin screening in foods and food products.

U Spatial collaborates with departments and centers across the University to serve a fast-growing need for expertise in Geographic Information Systems (GIS), remote sensing, and spatial computing. One recent project allowed the Institute on the Environment's Natural Capital Project researchers to learn more about the value recreational lake users place on water quality, and another mapped the age of sewers and water infrastructure across Minnesota towns and cities to help inform policymakers' choices and investments.

Increasing Prominence of International Research
In 2015, an International Research Committee of faculty and staff reviewed the breadth of international research across the University and made recommendations to increase the prominence of international research to advance transdisciplinary partnerships. As a result, two funding opportunities

were announced in 2016 that primarily target three geographic areas: (i) Sub-Saharan Africa: Kenya, Tanzania, Uganda, South Africa, and Nigeria; (ii) South-East Asia: Indonesia, Hong Kong, Singapore, and Thailand; and (iii) South America: Argentina, Chile, and Peru. Projects in other countries may be considered.

One program supports visits of international visitors from high-potential geographic regions who hold faculty or senior research positions at a university or research organization in their home country. Additional funding is provided to the hosting academic unit for networking events. The second targets capacity building in centers and institutes to develop international research collaborations. This funding opportunity was established recognizing the substantial coordination that is required for the development of international collaborations and grant proposals with international partners.

Grand Challenges Research

Grand challenges are, simply stated, society's most complex and vexing problems. The focus on grand challenges research is part of the vision to enhance exceptional cross-disciplinary research strengths and expand collaborations for greater impact. Indeed, the goal is for the University to be preeminent in solving the grand challenges of a changing world. The overarching goal, however, is for institutional transformation—making the cultural and systemic changes that remove barriers and disincentives and support faculty scholarship in new ways. The identification of research grand challenges through a faculty-based process is one approach, but many opportunities are being created to foster and reward interdisciplinary and disciplinary research. The four-year-old MnDRIVE initiative provides one glimpse at what success and culture change looks like. The faculty's innovations in disciplinary, interdisciplinary, and publicly engaged research are all efforts that collectively move the institution toward transformational change. The University announced an initial set of investments to seed high potential collborations. See the Twin Cities Planning chapter on page 10 for more detail.

Publicly Engaged Research

Public engagement, in part, is the partnership of university knowledge and resources with those of the public and private sectors to enrich scholarship, research, and creative activity. Through these partnerships, engaged research can address critical societal issues and contribute to the public good. The local knowledge of community partners can be an important complement to the scientific inquiry that University researchers provide to address problems— with a focus on working with the community, rather than doing for the community.

Public engagement also serves as a strategy for enhancing research. By partnering with local, regional, and international community residents, agencies, businesses, governmental agencies, and others, public engagement can leverage research funding, provide new opportunities for faculty, enrich the student educational experience, and enhance the University's contributions to addressing issues in local and broader societies. Faculty members in departments and centers across the University have developed quality partnerships with external entities that have leveraged research funding and have implemented research that focused on addressing important societal issues. See the following Outreach, Service, and Engagement chapter on page 97 for select examples of community-engaged research.

Accelerating the Transfer of Knowledge

Economic Development

The Office of University Economic Development (UED) was established in 2014 to address an increasing need for public-private partnerships in economic development. The office's vision is that Minnesota's economy will grow, diversify, and yield benefit to the state's citizens—with the University of Minnesota pursuing innovative strategies to stimulate and contribute to shared economic success.

UED works to leverage the assets, resources, and knowledge of the University to encourage economic growth, building a vibrant innovation ecosystem that strengthens businesses and promotes discovery, entrepreneurship, and workforce development.

In fiscal year 2016, UED approved a strategic action plan that establishes a vision and set of strategic imperatives that create a framework for increasing statewide collaboration, pursuing public-private partnerships, and promoting economic opportunity.

In alignment with this strategic action plan, UED hosted 70 business and community partner visits at the University and made 40 on-site visits to business and community partners. Over a third of these visits were to greater Minnesota. UED represented the University's innovation and talent resources at 68 conferences and events—presenting, hosting, sponsoring, or exhibiting at 22 of them.

UED is expediting access to the University's resources for the drivers of Minnesota's economic development—businesses, associations, governments, and communities in both the metro area and Greater Minnesota—and is implementing "best in class" tools and systems, including an enhanced online presence, a menu-based approach that serves diverse audiences and interests, and a portfolio management approach for developing, maintaining, and evaluating University-industry engagement.

UED responded to 166 "Front Door Requests" in 2016 (Figure 5-A), connecting business and community partners to University research and talent resources, a 70 percent increase from 2015. Sixteen percent of requests from industry involved Fortune 500 (or FT Global 500) companies.

Going forward, UED will identify new opportunities to connect the resources of the University with

Figure 5-A. Front Door requests by organization type, fiscal year 2016

Source: University of Minnesota, Office of the Vice President for Research

business, government, and community leaders working to advance talent, innovation, and global trade. Those efforts include developing a stronger voice in Minnesota's workforce issues, participating in promotion of Minnesota as a business destination, and creating experiential learning opportunities within Minnesota's business community, such as the Economic Development Fellows Program, which oversaw nine projects involving 65 graduate students during spring and summer 2016.

Technology Commercialization

The University is committed to accelerating the transfer of knowledge by creating opportunities for public-private partnerships that move information out of the University and into the world, where it can do the most good.

To this end, the Office for Technology Commercialization (OTC) has contributed to these successes:

- The University experienced another record year in fiscal year 2016 with 17 startups. This is the seventh consecutive year of launching a record number of startups.

- Since the OTC-Venture Center was formed in 2006, University startups have raised in aggregate almost $220 million in investment capital.

- The University has launched 101 startups, with over 80 percent still active, and has developed a strong startup pipeline.

- Minnesota Innovation Partnerships (MN-IP) has led to 261 agreements with 159 companies since its inception. MN-IP has two programs:

  - Try and Buy, a low-risk, low-cost trial to University technology, including pre-set, industry-friendly licensing terms.

  - MN-IP Create, which streamlines the process for industry-sponsored research and licensing of resultant IP with a menu of licensing options from which companies can choose, including a new option developed in fiscal year 2016 that allows for a worldwide non-exclusive royalty-free license for a single fee.

- Five promising University startup companies have been approved for funding consideration under the
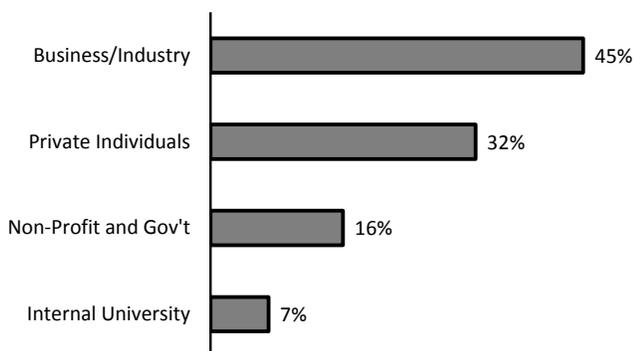
Discovery Capital investment program. Launched in 2014, the program offers seed funding with a requirement that the investment be matched by external partners. The program has invested $1.1 million, attracting total matches of $9 million.

- The University is one of only three institutions with a National Institutes of Health Research Evaluation and Commercialization Hub (REACH) grant. When combined with University matching funds, these grants make a total of $6 million available to selected teams over three years. MN-REACH provides University-wide commercial expertise and resources to help develop and commercialize diagnostics, therapeutics, preventative medicine, and medical devices. Now in the middle of its second year of operation, the program has trained 59 faculty members and awarded grants totaling $1.59 million to eleven promising projects.

- MIN-Corps is the University's site for I-Corps (Innovation Corps), part of the National Science Foundation's (NSF) programming that focuses on expanding scientists' skill set out of the laboratory to translate their discoveries into the commercial world. NSF funding provides University teams with micro-grants to fund initial prototyping and customer research. Funding is provided as part of a 14-week STARTUP curriculum in which students and faculty are paired with industry mentors to test their assumptions and search for a sustainable business model. A recent survey of participants since the program's inception in 2013 found that respondents have raised $6.2 million in funding and that, collectively, the businesses are supporting 40 full-time employees and 100 part-time employees, most of which are based in the state of Minnesota. Beyond the STARTUP curriculum and MN-REACH support, MIN-Corps delivers training and information sessions to faculty and students to promote the University's entrepreneurial culture. Over 350 faculty and students attended one or more MIN-Corps content offerings throughout the year.

- Staff continued to reinforce OTC's internationally recognized leadership in university technology transfer, piloting a successful professional development leave (sabbatical) focused on benchmarking and sharing technology commercialization best practices, and being invited by the U.S. State Department as the only U.S. university to join an international group to discuss how best to facilitate transfer of academic technology to the marketplace.

External Stakeholder Engagement

The External Stakeholder Engagement program promotes collaborative research across disciplines with external stakeholders, such as industries, government agencies, nonprofits, and community organizations. The program started in 2016 with four pilot projects to co-locate visiting experts to accelerate the transfer of knowledge for the public good. One of the projects brings a graphic designer from a major graphic design firm to campus to bridge the experimental and practical worlds of graphic design through scholarship and creative production. Another project develops scientific methods to optimize workforce deployment at Metro Transit. The program emphasizes the bi-directional transfer of knowledge between academia and external stakeholders for the benefit of both the University and the external stakeholder. The visiting experts spend time embedded in academic units, and participate in research, scholarship, or artistic and creative experiences, with University faculty, students, and staff.

Promoting a Culture of Serendipity

Promoting a culture of serendipity is central to connecting researchers across departments, colleges, and disciplines—and with colleagues and communities outside of the University—to think creatively and cultivate new ideas. Connectors, individuals across and at all levels within the University, play essential roles in bringing together seemingly unrelated disciplines and ideas to foster creativity and innovation.

Convergence Colloquia

Convergence Colloquia are multi-disciplinary gatherings that advance cutting-edge research to develop innovative solutions and build long-term partnerships that improve the world. The idea behind the gatherings is to bring together University

researchers with private, public, and nonprofit stakeholders to identify strategic collaboration opportunities that can lead to significant impact at the local, state, national, and global levels.

Seven highly successful Convergence Colloquia were held between February 2015 and May 2016 on the topics of smart cities and infrastructure, aging, health equity, renewable energy, sustainable food systems, water supply, and citizen science. More than 600 people, with roughly half from the University and half from outside, participated in these action-oriented "think tanks." Internal participants came from all five University campuses and 15 colleges on the Twin Cities campus, and external participants represented the nonprofit, public, and private sectors.

Surveys of participants indicated a high level of satisfaction with the colloquia, with more than half reporting that they met more than five new people at their event and 95 percent or more of respondents saying they had productive opportunities for interaction and the chance to meet people outside their discipline.

The colloquia have been followed by the opportunity to build new collaborative research teams with funding from dedicated Serendipity Grants. For the first six Convergence Colloquia (smart cities and infrastructure, aging, health equity, renewable energy, sustainable food systems, and water supply), 21 Serendipity Grants (out of 49 proposals) were awarded for a total of $452,360, with $103,123 supported by the McKnight Foundation.

Serendipity Grants supported projects to map the age of infrastructure across Minnesota's towns and cities to help inform policymakers' decisions, to benchmark the growing sector of urban agriculture for environmental sustainability and production efficiency, and to examine the opportunities and barriers to the use of renewable energies by municipal and cooperative utilities in Greater Minnesota.

Connectors Network and Serendipity Team

Two new committees are working to identify, network, and empower the administrators, faculty, and staff that play an essential role in bringing together seemingly unrelated disciplines to foster creativity and innovation. The Connectors Network began convening to foster networking among collegiate and research center staff who are involved in research advancement activities and who play an important role in spurring cross-disciplinary research within their colleges and across the University. The related Serendipity Team draws on the expertise of administrators and faculty from across the University who are leaders in advancing cross-disciplinary connections. Both the Serendipity Team and Connectors Network are creating plans for events, meetings, and tools that will help the University leverage interdisciplinary work across the breadth of its many disciplines.

Outreach, Service, and Engagement

Partnering with communities to advance research, share knowledge,

and provide students with powerful academic experiences that address

society's most challenging issues.

Introduction

The University's three-fold mission includes the imperative to partner with communities to advance research, share knowledge, and provide students with the real-time, real-life academic experience. To this end, the University has put in place a comprehensive Ten-Point Plan for public engagement that focuses on what contemporary higher education calls a "new engagement." This new engagement shifts the focus away from traditional, uni-directional outreach efforts to more academically integrated activities in which the University's research, teaching, and learning efforts are designed to address societal issues through reciprocal, mutually beneficial partnerships.

Reciprocal public engagement is one of the four interrelated goals articulated in the Twin Cities campus strategic plan, which supports the vision of the University as preeminent in solving the grand challenges of a diverse and changing world. Although initially anchored in strategic planning for the Twin Cities campus, this vision—which supports dynamic University-community partnerships to advance discovery, create pathways for students, and benefit the state of Minnesota and the world—is consistent with the goals and strengths of all five campuses and their various colleges.

The University's public engagement Ten-Point Plan supports building long-term relationships with public and private sectors and connects community engagement to all aspects of the institution's identities—a land-grant university, an institution of higher learning, a research university, a metropolitan university, and a public university. Publicly engaged research, teaching, and outreach initiatives enhance the University's capacity to produce research of significance, to improve educational experiences of students, and to be a source of knowledge and solutions for communities. The University's campuses are located across the state, in thriving metropolitan areas and in rural regions with agricultural strengths and traditions. The University leverages the distinctive strengths and location of each campus to engage with a range of partners—communities, businesses, nonprofits, civic and governmental bodies, arts and cultural organizations.

While notable engagement programs exist across each campus and region of the state, a renewed emphasis on community-engaged research among faculty members will further integrate research, teaching, and outreach activities in ways that are able to more fully serve the public good. This emphasis includes the creation of the Public Engagement College Leaders Roundtable whereby representatives from each college on the Twin Cities campus present and share their agendas for deepening their respective college's "new engagement" agenda through broader departmental, faculty, and student support. Other accomplishments this year include the implementation of an enhanced communication strategy for elevating the visibility of successful community engagement efforts, the improved recognition of public engagement activities in promotion and tenure decisions, and the broader inclusion of University-wide metrics for measuring the scale, scope, and impact of the University public engagement activities.

Leading Nationally as an Engaged University

During the 2015–2016 academic year, three of the University's campuses—Crookston, Morris, and Twin Cities—were named to the 2015 President's Higher Education Community Service Honor Roll, which recognizes institutions of higher education that support exemplary community service programs and raises the visibility of effective practices in campus-community partnerships. The Honor Roll's Presidential Award is the highest federal recognition an institution can receive for its commitment to community, service-learning, and civic engagement.

Three faculty members and one community partner were inducted into the selective Academy of Community Engagement Scholarship. Inductees are singled out and recognized for significant contributions to strengthening collaborations between educational institutions and communities and for field-shaping work that furthers community-engagement theory, policy, and practice.

In addition, during this same period, the University of Minnesota was named one of four regional winners of the 2015 W. K. Kellogg Foundation Community Engagement Scholarship Award for the Hennepin-University Partnership. The award

recognizes programs that demonstrate how colleges and universities have redesigned their learning, discovery, and engagement missions to become even more involved with their communities. As a finalist for this award, the University was honored as a regional model at the national level as part of the C. Peter Magrath Community Engagement Scholarship Award, facilitated by the Association of Public and Land-Grant Universities.

The University was also named the winner in the Innovation category for the Association of Public and Land-Grant Universities' 2015 Innovation and Economic Prosperity Universities Awards. The awards recognize exemplary, innovative, and sustainable efforts by universities to advance the engagement and economic well-being of their regions. The University took the prize for the MnDRIVE initiative, which has helped catalyze the launch of a record 17 startups in 2016, bringing its total to 101 since 2006. To be eligible for this prestigious award, an institution must first have been previously designated an Innovation and Economic Prosperity university. The University, which received designation in 2013, is one of 30 institutions across the nation to hold this title.

Both the Twin Cities and Morris campuses received Career Ready Internship Grants from the Great Lakes Higher Education Corporation and Affiliates to award paid internships in their field of study to low-income juniors and seniors. The Twin Cities campus funded 170 internships through a $374K grant and the Morris campus funded 191 internships through a $361K grant. For students who participated in this paid internships program, 96 percent either graduated or re-enrolled for fall semester.

The University remains an active member of and plays a leadership role in national and international peer networks devoted to strengthening and leading higher education's "new engagement" agenda. These include: Campus Compact; Imagining America; the Council of Engagement and Outreach of the Association of Public and Land-Grant Universities; Big Ten Academic Alliance Engagement Council; Community-Campus Partnerships for Health; National Academy for Community Engagement Scholarship; International Association for Research on Service-Learning and Community Engagement; Coalition for

Urban and Metropolitan Universities; National Review Board for the Scholarship of Engagement; Engagement Scholarship Consortium; and the Talloires Network.

Commitment to public service is one of the cornerstones of the University's mission as a public land-grant institution. Like teaching and research, public service is embedded in the many diverse functions of the institution, from medical clinics and service-learning classes to extension research and education centers throughout the state and world. Although no one metric can capture the quality or impact of the University's public service activities, expenditures on public service activities are an indication of its commitment, similar to expenditures on research activities (which is also a Progress Card measure). The University expects to maintain or increase its level of public service expenditures.

Deepening the Culture of Publicly Engaged Research and Teaching

Several strategic initiatives were advanced to strengthen and deepen the integration of local, regional, national, and international public engagement into faculty research, academic curricula, and student learning. These initiatives included engagement recognitions, policy developments, and actions that promote the principles of high quality, reciprocal University-community engagement. A few examples from the 2015–2016 academic year include:

- The Public Engagement Council, a system-wide deliberative body that addresses critical and complex issues concerning public engagement, advanced twelve policy issues including setting standards for community-engaged scholarship that can guide department- and college-level promotion and tenure review committees in assessing the quality and scholarly value of faculty members' community-engaged research, teaching, and public engagement; and streamlining various transactional processes for community partners who collaborate with the University.

- Nine departments were selected through a competitive process to participate in the fifth cohort of the Engaged Department Grant Program. The program is designed to further the integration of public engagement into the research

and teaching agendas of academic departments. Participating departments include: American Indian Studies; Center for Learning Innovation (Rochester); Communication Studies; Educational Psychology; Gender, Women, and Sexuality Studies; Institute on Community Integration; Pharmacy Practice and Pharmaceutical Sciences; and Speech-Language-Hearing Sciences.

- The University selected nine faculty members as 2016 Community-Engaged Teaching and Learning Faculty Fellows. The fellows program, which aims to expand the quantity of community-engaged learning courses on the Twin Cities campus, provides support to faculty to utilize community-engaged learning through the development of new courses or through revisions of an existing course.

- University faculty, staff, students, and community partners showcased the University's most innovative engagement practices through more than 100 presentations at the system-wide conference, "Meeting Society's Grand Challenges through Community-Engaged Research, Teaching, and Learning." Over 400 individuals from the University community attended this day-long conference.

- Metropolitan Engagement Zones were established in North Minneapolis and the University District neighborhoods. The program aims to develop strategies for strengthening community-university partnerships operating within a particular metropolitan neighborhood or region and demonstrating the collective impact of the community-University partnerships in these specific geographic regions.

In addition to University-wide policy and strategic initiatives, many colleges and departments emphasize community, civic, and public engagement in their research, teaching, and outreach priorities.

Addressing Societal Issues through Public Engagement

The University's publicly engaged research, teaching, and outreach activities address a broad range of societal issues across a diverse set of communities, settings, and regions. A small sample of the societal issues that are addressed through publicly engaged research, teaching, and/or outreach follows.

Economic Development

- The **Institute on the Environment**'s Acara program offers undergraduate students an intensive one-week course on how to turn an idea into a viable social business model. The goal of the class is to work on technologies, policies, interventions, or ideas that address a grand challenge in a self-sustaining manner. The students in the class are encouraged to focus on a specific community, whether local or global.

- The **Carlson School of Management's MN Cup** is a startup competition and hub to connect Minnesota's entrepreneurial ecosystem. MN Cup proactively works to recruit teams with a woman lead, minority lead, and veteran lead. In spring 2016, 79 startups competed in the MN Cup. In addition, the MN Cup attracted more than 70 sponsors, over 350 volunteers, and more than 1,500 participants.

- The **Metropolitan Design Center** (MDC), within the Twin Cities campus' College of Design, explores how an integrated urban design approach makes metropolitan communities more livable and sustainable. Using the Twin Cities area as a laboratory, the MDC's teaching, research, and outreach programs bring University faculty and graduate students together to participate in critical design and research investigations of issues that make livable and sustainable cities possible.

- The Robert J. Jones Urban Research and Outreach-Engagement Center's **Northside Job Creation Team** (NJCT) is more than halfway toward its goal of creating 1,000 sustainable wage jobs by 2019 in North Minneapolis through the recruitment of three new businesses—a food processor, a construction company, and a transportation company—to the area. The NJCT partners with business owners and community stakeholders to actively identify potential sites and facilities for start-up and relocation of businesses. The NJCT is a collaboration representing major stakeholders including the City of Minneapolis, the Governor's Urban Initiative Board, Minneapolis Public Schools, Minneapolis Urban League, Pillsbury United Communities, and the local business and faith communities. University partners include Carlson School of Management's

Carlson Consulting Enterprise, the Center for Urban and Regional Affairs, and Duluth's Natural Resources Research Institute.

- Duluth's **Center for Economic Development** works to strengthen the viability of the Duluth region as a recognized leader in small business development and assists local entrepreneurs and businesses to grow and succeed. In fall 2016, the Center recognized five regional businesses at the 24rd Annual Joel Labovitz Entrepreneurial Success Awards where over 350 business and community leaders convened.

- **University of Minnesota Extension** is using its Business Retention and Expansion model to assist Red Lake Nation's Entrepreneur Program. Crookston's **Economic Development Administration Center**, the Otto Bremer Foundation, and Red Lake Economic Development and Planning are also working to aid small businesses in the Red Lake community to promote economic growth.

- In addition, **University of Minnesota Extension** has targeted Farm Bill education to help farmers determine which insurance program is best for their operation. In two months, Extension delivered 73 meetings and reached nearly 15,500 people. Online courses were also developed, reaching over 2,300 individuals. With Extension guidance, Minnesota farmers received $600 million in payments in October 2015 and changed their choices in protection programs, helping Minnesota to become the number one state participating in the Dairy Margin Protection Program in the Midwest.

Environment and Sustainability

- Morris's **Office of Sustainability** and **Center for Small Towns** received the 2015 Environmental Initiative—Community Action Award to honor their work with the Jefferson Center and Institute for Agricultural Trade Policy, the city of Morris, the Morris Area High School Future Farmers of America, and Federated Church on a project called "Morris Engaged: Planning and Action for Climate Resilience." The project was developed to expand community-based efforts to address local climate and extreme weather impacts.

- Extension's **Water Resources Center** sponsored the annual Minnesota Water Resources Conference. This two-day conference attracted over 700 practitioners, researchers, policy makers, citizens, and students. Through formal presentations and posters, participants were able to interact and understand the latest research, implementation, and effective outreach and engagement strategies.

- The Knight Foundation Fund awarded a $47,000 grant to Duluth's **Department of Communication** to launch "One River, Many Stories," a collaborative community journalism project focusing on the stories of the St. Louis River and its neighboring communities. The project tests ways media collaboration can inspire innovation and nurture engagement among professional journalists, educators, and citizen storytellers in the Duluth area.

- Extension's **Regional Sustainable Development Partnerships** (RSDP) served Greater Minnesota with 145 active sustainable development projects across the state. RSDP contributed to regional vitality with 20 or more active projects in each of RSDP's five regions of Greater Minnesota. More than 230 community organizations and more than 55 University units, departments, and centers were engaged by RSDP.

- **Clean Energy Resource Teams** (CERTs) awarded 39 Seed Grants to organizations in seven Minnesota CERT regions. Each region was awarded $20,000 to catalyze energy efficiency and renewable energy strategies. CERTs are a statewide partnership to connect individuals and their communities to resources needed to identify and implement community-based clean energy projects. CERTs has awarded over $1 million in Seed Grants to 269 projects since 2006.

- The **Sea Grant College Program** engages citizens in using science-based understanding of the environment to address issues concerning Lake Superior and Minnesota's aquatic resources and related economies. Focused on four areas— healthy coastal ecosystems; sustainable coastal development; safe and sustainable seafood supply; and coastal community resilience—the program facilitates interactions among the public

and scientists to enhance communities, the environment, and economies along Lake Superior and Minnesota's inland waters by identifying information needs, fostering research, and communicating results.

- Extension's **Master Naturalists** program trains community members who, in turn, agree to offer 40 hours per year for natural resource projects in their communities. The program has educated over 250 instructors and reached more than 1,700 active users. In September 2015, Extension hosted 319 volunteers with 1,577 hours of service to fit 26,000 trees with bud caps, collect native seeds, and remove invasive species. During the 2015–2016 academic year, Extension conducted 61 invasive species removal projects, with an impact on about one million acres.

- As a student-led initiative, the **Engineers Without Borders** program develops students as humanitarians, engineers, and leaders. Working primarily on issues of water access, the program has partnered with three communities in Bolivia, Guatemala, and Uganda to design and implement important water access solutions such as harvesting rainwater and ensuring potable water reaches communities.

Equity and Diversity

- Over 150 people participated in the Indigenous Women and Women of Color Student Summit organized by the **Women's Center**. The conference summit provided opportunities for attendees to examine issues in the context of leadership, confidence, and cultural strength. The summit is by and for indigenous women of color students to learn from each other, network, and explore leadership, personal, and professional development.

- The **Gender and Sexuality Center for Queer and Trans Life** partnered with Minneapolis and St. Paul Public Schools' LGBTQIA (Lesbian, Gay, Bisexual, Transgender, Queer, Insex, and Asexual) programs to host six students at the University to experience what life is like on a college campus as a LGBTQIA student. The center also partnered with the two school districts via Q-Qwest, the largest LGBTQIA conference for middle and

high school students in the Twin Cities. The 2015 conference attracted over 400 students and will be held at Coffman Union in fall 2016.

- The **Center for Urban and Regional Affairs** (CURA) provided local communities with technical and analytical assistance to foster a partnership between neighborhoods, nonprofits, and governmental organizations that improves education, economic equality, and sustainability in the area. In spring 2016, CURA worked with the Corcoran Neighborhood Organization in Minneapolis to develop a tenant-advocacy campaign that calls for fair apportionment of utilities and more accountability of landlords.

Food and Agriculture

- **Healthy Foods, Healthy Lives Institute** and **Extension** partnered with a variety of community and state organizations to convene the 2015 Food Access Summit in Duluth. Over 500 participants from agriculture, anti-hunger, tribal, community development, education, retail, health, and philanthropy sectors gathered for two days to build upon existing partnerships, collaborations, and alliances that create an equitable food system for all, from the producer to the consumer.

- The Healthy Foods, Healthy Lives Institute was named the organizational host for the **Minnesota Food Charter Network**, a shared roadmap, developed by thousands of Minnesotans, that describes 99 policy and system change that can increase access to healthy food for all Minnesotans. As the host, the Health Foods, Healthy Live Institute is partnering with people and groups across the state to provide administrative, convening, strategy, communications, measurement, and fundraising support to all aspects of the network. Partners include the Minnesota Department of Health's Statewide Health Improvement Program, which secured a grant from the Centers for Disease and Prevention, and the Center for Prevention at Blue Cross and Blue Shield of Minnesota, among others.

- Morris's **Office of Community Engagement** celebrated the completion of one of its largest service-learning projects to date, the Pomme de

Terre Food Co-op Mural, where 14 first-year students in a Mural Painting and Public Art course learned about the role of public art in society while contributing to a real-life public mural in downtown Morris.

- The **Center for Urban and Regional Affairs** (CURA) partnered with the Urban Farm and Garden Alliance to research the effects of urban agriculture as a source of food production and positive community engagement. Called the "Peace Garden," community leaders are resurrecting the community practice of growing food and addressing racial equity. CURA has connected researchers to the garden so that the impact can be studied, quantified, and appreciated.

- Since 2002, "Classes without Quizzes" has provided **College of Food, Agricultural, and Natural Resource Sciences** researchers with an engaging, informal platform to share new research with the general public. The 2016 program included a keynote presentation on soil and included breakout sessions on grocers in rural Minnesota, cows and technology, recreation on the North Shore, and Midwestern hops.

- **Extension** helped communities manage the avian flu epidemic affecting Minnesota's $3 billion turkey industry through developing early communication channels with partners, educating poultry producers on the new biosecurity methods and information policy makers. Seventy percent of the farmers affected by the virus adopted the new biosecurity methods recommended and demonstrated by Extension. Extension's economic impact analysis is now incorporated into the federal record to inform lawmakers.

Health, Medicine, and Well-Being

- The Clinical and Translational Science Institute's **Office of Engagement to Advance Research and Community Health** fostered new community partnerships that are improving the patient experience, improving the health of the populations, and reducing the cost of care. In fall 2015, CTSI awarded over $300,000 to five University-community research partnerships through the Community Health Collaborative Grants. In addition, eight research collaborations

between University researchers and Minnesota-based community organizations received funding through CTSI's Dissemination and Implementation Awards program. The 2015–2016 academic year also marked the unveiling of the Community Research Van, a new mobile health lab designed to help University research teams conduct health studies in the community.

- The Robert Wood Johnson Foundation selected the **School of Public Health**, in collaboration with several external partners, to serve as the national center for the Foundation's new Interdisciplinary Research Leaders (IRL) program. The IRL is a major initiative to develop diverse teams of interdisciplinary research leaders across the country to advance the vision of building a culture of health. Through this effort, the University will design and run the IRL in collaboration with Allina Health, AcademyHealth, community organizations, ISAIAH, the Twin Cities' Local Initiatives Support Corporation, and the Minnesota Department of Health.

- The **Pathways to Research Program** provides an opportunity for undergraduate students from underrepresented populations with knowledge, skills, and experience in translational science and health equity research through a structured core curriculum including a mentored research project, weekly research seminars, small group discussions, and a poster presentation at the annual Clinical and Translational Science Institute's Poster Session and Reception. The 2015–2016 program included ten students.

- The **Minnesota LEND (Leadership Education in Neurodevelopmental and Related Disabilities)** program named 17 fellows in 2015–2016 for their outstanding skills and commitment to improving the quality of life for children with neurodevelopmental disabilities and their families. The LEND Fellows include both graduate or postgraduate students and community members. The Minnesota LEND program is an interdisciplinary leadership training program spanning 16 disciplines across the University.

- Four University-community research teams were awarded pilot grants in health disparities research in fall 2015. Run by the **Program in Health**

Disparities, the grants encourage community-initiated research and foster sustainable long-term collaborations between community-based organizations and academic researchers on research projects focused on reducing and eliminating health disparities.

- **Extension** programs in nutrition education and behavior reached more than 8,500 individuals in the 2015–2016 academic year, including 2,751 youth, 363 teens, and nearly 1,974 adults. These programs use research-based information from Extension to improve the participants' intake of healthful food and engagement in physical activity. Program evaluations showed participants changed their eating behaviors, consuming more fruits and vegetables after the courses. Their physical activities were also improved with more time devoted for physical exercise.

- Four student teams from the Rochester campus competed in the **Innovative Minds Partnering to Advance Curative Therapies** (IMPACT) program, sponsored by Regenerative Medicine Minnesota and the Mayo Clinic's Office of Applied Scholarship and Education Science, to encourage creative solutions to critical health questions through a collaboration between University students and the Mayo Clinic.

- A department within the University's Academic Health Center, the **Community-University Health Care Center** (CUHCC) serves as a clinical training ground for nearly 300 health science students and medical residents. As the largest urban primary care center in Minnesota, CUHCC served nearly 11,000 patients last year with over 55,000 visits. The population the clinic serves comes from over twelve different racial and ethnic groups from five continents.

- The Clinical and Translational Science Institute's Office of Engagement to Advance Research and Community Health piloted the **Community Engagement Studio** model. This tool aims to engage community members to help inform research conducted at the University. The pilot studio invited feedback from laryngeal cancer patients about how cancer treatment types are determined, how patients perceive that process, and how patients feel about their treatment

outcomes. The Community Engagement Studio will be available to researchers across the Academic Health Center in 2017.

Interdisciplinary Public Engagement

- Juniors and seniors on the Rochester campus participate in the **Community Collaboratory** (CoLab), through which students take part in a project to improve the quality of life in Southeastern Minnesota and contribute to meaningful partnerships between the Rochester campus and the surrounding community. Through ongoing projects the campus has developed strong ties with local public, private, and nonprofit organizations, including the YMCA, where students are helping develop programs to fight childhood obesity; the Boys and Girls Club, where students help children learn about college and career options; and the Hawthorne Education Center, where they are working to fund a laptop program.

- The student-founded and -run group **Statistics in the Community** (STATCOM) provided free consulting services for community groups looking for help with statistical analysis. Working with a range of clients—from the Nice Ride Minnesota bike sharing service to Compassionate Action for Animals advocacy groups—STATCOM volunteers helped nonprofits advance their work.

- A new interdisciplinary online journal, ***Open Rivers: Rethinking the Mississippi***, was launched in fall 2015 as a space for timely and critical conversations about people, community, water, and place. The journal includes work from multiple perspectives, sources, and knowledge bases, including academic scholarship and community-based knowledge. The journal has now released three issues, with the latest titled *Water, Art, and Ecology*.

- Six awards totaling $41,000 were awarded to graduate and professional students through the **Consortium on Law and Values in Health, Environment, and the Life Sciences**' research awards. Students from the Law School, College of Education and Human Development, and the College of Veterinary Medicine worked on intramural projects related to the societal

implications of problems in health, environment, and the life sciences.

- The **Faculty Interaction Research Program**, facilitated by the Center for Urban and Regional Affairs, encouraged faculty to carry out research projects that involve significant issues of public policy for the state and that include interaction with community groups, agencies, or organizations in Minnesota. In fall 2015, four projects were funded that included research in the areas of environment and energy, public policy, arts and culture, economic development, education, and underrepresented populations.

- The Humphrey School of Public Affair's **Policy Fellows Program** is one of the country's most respected public affairs leadership programs for emerging and mid-career professionals. The nine-month program is unmatched in its diversity, interaction with public officials, leadership training, and opportunity to undertake important projects that benefit the wider community. Thirty-nine fellows were named in spring 2016 and represented fields ranging from community-based organizations to statewide initiatives and K–12 education to large multi-national corporations.

- During 2015–2016, the **Robert J. Jones Urban Research and Outreach-Engagement Center**'s (UROC) research projects involved more than 200 University researchers and graduate students from ten colleges and two interdisciplinary centers. Located in North Minneapolis, UROC links the University in vital partnerships with urban communities to advance learning, improve quality of life, and discover breakthrough solutions to critical problems.

- In March 2016, the University of Minnesota Alumni Association launched **Minnesota Sparks**, a series of outreach events to bring University researchers into conversations with communities across Greater Minnesota. Three conversations were held in spring 2016 in Red Wing, the Brainerd Lakes area, and Mountain Iron to give leading University researchers the opportunity to connect with Minnesotans on topics that are relevant and specific to particular communities.

- The **Interdisciplinary Journal of Partnership Studies** is a peer-reviewed, open-access, electronic journal co-sponsored by the Center for Partnership Studies, the School of Nursing, and the University of Minnesota Libraries. The journal includes contributions from scholars and practitioners worldwide that explore and promote the partnership paradigm of mutual respect, social and economic justice, and gender and environmental balance, through research, innovation, and community-based applications.

- **Extension** delivered direct programming to over 927,000 Minnesotans and mobilized volunteers across Minnesota, giving them the capacity to serve and protect Minnesota's land, water, children, families, and communities. Extension volunteers provided at least 1.2 million hours of service in fiscal year 2016 through 4-H programs, the Master Gardener program, the Master Naturalist program, the Regional Sustainable Development Partnerships, and other Extension programs. According to the Independent Sector, this volunteer service is valued at more than $30 million.

- The Crookston campus continued its "**Meet Crookston Through Service**" program where, as part of new student orientation, incoming students complete community engagement and service projects throughout the Crookston community. Before classes begin, students help prepare elementary school classrooms, clear cross-country ski trails, trim trees at local parks, work with animals at the humane society, assist with building Habitat Houses, make apple pies with residents of an assisted living center, prepare playground surfaces, pack boxes at the food bank, assist with work at historical museums, and many other projects. Community partners share in a dinner celebration and students learn about many community opportunities.

Youth and Education

- To narrow the education gap by promoting youth engagement, **Participatory Action Research Initiatives** have awarded four grants to the Twin Cities and Rochester campuses. Faculty worked with the Youth Action Committee of Saint Paul Neighborhoods to explore the impact of youth media on young people's career trajectories; partnered with the Native Youth Worker Coalition

to examine school climate for Native American youth and its impact on educational disparities; researched how high school and undergraduate Latina/o youth connect on issues of Latina/o identity, ethnic studies, and heritage languages through a partnership with Minneapolis Public School; and identified barriers to health-related career paths for students of color, low-income, and first generation students.

- Students in the Carlson School of Management's **Entrepreneurship in Action** program were instrumental in the development of the Nesel Pack, a backpack designed to improve the comfort and success of youth with autism. With the company's CEO, the students developed a Kickstarter campaign that raised more than $35,000. The backpack features straps that mimic the pressure of hugging, and contains pouches and clips for sensory tools that some autistic youth need.

- Six University researchers from medicine, social work, education, and other fields have been named **Generation Next/UROC Faculty Fellows** to work in partnership with Generation Next, a nonprofit whose mission is to dramatically accelerate educational achievement of all children through an aligned partnership of community stakeholders. The researchers zero in on disparities and the structural roots of the achievement gap to create a scholarly roadmap that works in tandem with other University and Generation Next-based efforts.

- Nearly 200 middle and high schools across Minnesota have implemented **Ramp-Up to Readiness**, a school-wide program designed to help prepare all students for post-secondary success. The program, run by the University's College Readiness Consortium, leads students through a research-based sequence of activities and workshops that prepares them for postsecondary success.

- Over 700 educators attended programs provided by the **Minnesota Writing Project** (MWP) in the 2015–2016 academic year. In addition,

13 K–college educators participated in the 26th MWP Invitational Summer Institute, a three-week professional development opportunity where attendees participated in writing groups, formed reflective practice groups, and presented teaching demonstrations.

- In the past year, **Path to Reading Excellence in School Sites** (PRESS)—a framework for data-driven decision making and interventions in elementary reading—provided professional learning workshops to over 2,300 educators at districts across Minnesota, Wisconsin, and Iowa. In addition, over 200 educators attended PRESS workshops at the University to learn and implement the framework.

- The **Cedar Creek Ecosystem Science Reserve** hosted 28 students and teachers during the Gidakiimanaaniwigamig (Gida) STEM Camp. The camp offered Native American students the opportunity to gain research experience and learn about ecology in a context that respects their own traditions. In addition to the Gida camp, young students from Cedar Creek and participants from Leech Lake Tribal College came together to share ideas for integrating Western and indigenous approaches to science at the Weaving Communities Indigenous Research Symposium.

- The **College of Continuing Education** has two dual enrollment programs that allow students to earn college credit while they are still in high school: College in the Schools and Post-Secondary Enrollment Options. The college partners with more than 130 high schools in Minnesota and serves over 8,500 students, of which over 20 percent are students of color. The program resulted in more than 13,000 course registrations with more than 52,000 college credits earned.

For a more complete list of the societal issue areas the University addresses through research, teaching, and outreach, visit engagement.umn.edu.

Operational Excellence: Faculty and Staff

Employing world-class faculty and staff who are innovative, energetic, and dedicated to the highest standards of excellence.

Introduction

The University of Minnesota's success in achieving its mission and solving the grand challenges of a diverse and changing world can only be accomplished through its exceptional faculty and staff. With more than 26,000 employees system-wide, and with faculty and staff accounting for about 62 percent of the University's total spending, people are by far the institution's most important resource. As a knowledge-based organization, the University's research and discoveries, teaching, community outreach, and public service depend on recruiting, retaining, and sustaining the highest caliber of talent.

The University is committed to providing its faculty and staff with competitive compensation, benefits, development opportunities, and a supportive work environment to foster employee engagement and wellbeing so they can achieve the University's goals. This is reflected in the University's employee value proposition: "You're driven to change the world. We're here to support you."

A Highly Engaged Faculty and Staff

Creating a culture in which employees are fully engaged in their work benefits both the organization and the individual employee. University leaders see employee engagement as key to attracting and retaining top talent, while also aligning faculty and staff efforts in support of the mission.

A highly engaged workplace fosters collaboration and innovation, removes barriers to employees completing their work, and supports resilience, wellbeing, and high performance. The University's employee engagement goal is to increase productivity, satisfaction, and the quality of service across all colleges, units, and campuses by developing effective work environments.

The University launched a research-based program in 2013 to measure faculty and staff engagement. The program, now in its fourth year, includes an annual employee engagement survey. Administered to over 18,000 faculty and staff on all five campuses, the survey measures two drivers of engagement: 1) commitment and dedication, and 2) effective

environment. The results of each survey are shared with leaders and managers in every unit and department, and action plans are developed to improve areas of opportunity.

The third-annual survey was conducted in fall 2015, with 67 percent of faculty and staff responding—the highest response rate ever for a University employee survey. Participation in the Employee Engagement Survey is a University Progress Card gold measure, and the response rate for both staff and faculty continues to grow. Staff participation rose from 68 to 70 percent, while faculty responses increased from 53 to 56 percent compared to the previous year (Figure 7-A).

Results for 2015 show the University continues to have very high levels of faculty and staff commitment and dedication. Employees continue to feel motivated to go beyond their day-to-day job responsibilities. Faculty and staff experience the University as a respectful and empowering environment, according to survey results. They also report high levels of pride in working for the University.

The survey data isn't just collected—it is acted on. Departments receive results specific to their units, showing how their employees responded to dozens of detailed questions. Managers are encouraged to focus on areas to improve and to share their most effective ideas for increasing engagement. Colleges and units have appointed engagement leads who participate in an ongoing community of practice where they gather insights and ideas from colleagues across the University.

These efforts can have a major effect on improving the work environment at the University. Figure 7-B shows that colleges and departments that have

Figure 7-A. Faculty and staff engagement response rates, University of Minnesota, 2013–2015
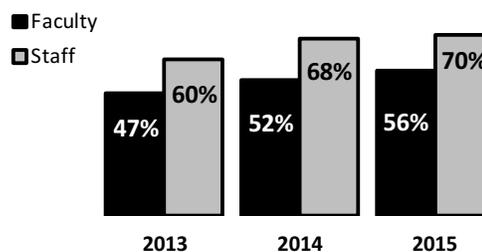
Source: Office of Human Resources, University of Minnesota

Figure 7-B. Percent of faculty who rated favorably their trust and confidence in their college's leadership team, 2013–2015
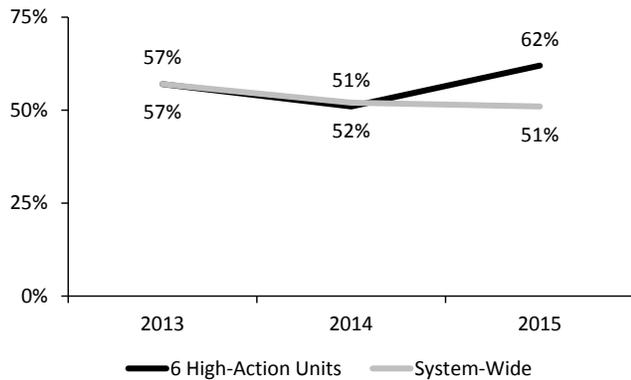
Source: Office of Human Resources, University of Minnesota

taken significant actions steps have shown more improvement in their employee engagement scores.

Academic leaders met in spring 2016 to discuss how engagement data is used for leadership and team development. A similar panel of administrative leaders met in August to discuss how they use their employee engagement data to take action to improve engagement and integrate actions into everyday employee engagement. Leadership and Talent Development consultants also work intensively with specific departments on employee engagement. Leaders now have three years of data to review, and 2016–17 will be focused on action planning. The next Employee Engagement Survey will be administered in fall 2017.

The University's engagement program is one of the most robust among U.S. higher education. The University's processes and results have been presented nationally and internationally to human resource academics and practitioners from other colleges and universities.

Faculty Satisfaction

In fall 2013 and winter 2014, the University participated in Harvard University's Collaborative on Academic Careers in Higher Education (COACHE) survey. The survey—which was administered on the Twin Cities campus and covered responses to questions about perceptions of tenure, institutional climate, culture and collegiality, institutional policies and practices, and global satisfaction—has produced

benchmark data that will inform faculty development work aimed at fostering a culture of support and success.

The results of the survey include comparisons with other peer universities and thus provide helpful data about faculty satisfaction levels at other institutions. The University compares favorably in a number of areas, including those associated with promotion and tenure and facilities. Moreover, overall satisfaction is high (69 percent of faculty responded they would select the University of Minnesota again, peers 67 percent); the University compares well as a place of work (72 percent, peers 65.2 percent) and in terms of satisfaction with benefits (83 percent, peers 69.3 percent). The survey also provides valuable and actionable information about areas in which the University can improve, such as departmental climate and engagement.

National and International Faculty Recognition

The University actively promotes distinguished faculty as they compete for national and international research and teaching awards. In cooperation with distinguished faculty members, previous award winners, and senior leadership, efforts are being made to:

- understand and communicate the nomination procedures for the most prestigious national awards;

- form partnerships with deans and chairs to identify strong candidates, as well as potential nominators;

- identify a broad spectrum of prestigious academic awards and the faculty who have received them;

- analyze career trajectories of faculty members who may be poised for major awards;

- actively support nominators and candidates during the application processes; and

- advocate appropriately on behalf of University nominees.

The research, teaching, and service of University faculty are celebrated through research professorships, institutional teaching awards, and recognition of various types of institutional service. Faculty also continue to garner considerable recognition for their scholarly pursuits.

Since 2012, faculty have been recognized in many major academic award categories, including the prestigious American Academy of Arts and Sciences (six), Guggenheim Fellowships (four), the National Academy of Medicine (formerly the Institute of Medicine, two), the National Academy of Engineering (five), the National Academy of Public Administration (one), and the National Academy of Sciences (one).

In 2015, Reuben Harris (Biochemistry, Molecular Biology & Biophysics) was named a Howard Hughes Medical Institute Investigator, and Elizabeth Wilson (Public Affairs) received the new Carnegie Fellowship from the Carnegie Corporation.

In 2016, the Thurber Prize for American Humor was awarded to Julie Schumacher for her book, *Dear Committee Members: A Novel.* Also in 2016, professors Robert Nichols and Nancy Luxon (political science) and Jean O'Brien (history and American Indian studies) received an award from the Andrew W. Mellon Foundation funding a cross-disciplinary Sawyer Seminar planned for 2017–18, titled The Politics of Land: Colony, Property, Ecology.

An Emphasis on Diversity and Inclusion

The University has made a strong commitment to building a workforce that reflects the diversity of its community. Select efforts and accomplishments in the last year follow.

- The Office of Human Resources formed a new Diversity and Inclusion Recruiting Team. The group is composed of three diversity recruiters whose job is to help hiring managers build more diverse pools of applicants and to develop a broad network of community contacts that can bring more job candidates from underrepresented groups to the University.
- The Office for Equity and Diversity (OED) conducts implicit-bias workshops to help search committees understand inherent preconceptions and stereotypes and to prevent bias in the hiring process.
- OED's Institute for Diversity, Equity, and Advocacy (IDEA) convenes scholars in many disciplines from the University and around

the world to collaborate in innovative ways on issues of equity, diversity, and underrepresented populations.

- The Duluth campus designated a new cabinet level position, the Assistant to the Chancellor for Diversity and Inclusion, to oversee the Campus Climate Change Initiative. In addition, a half-time Faculty Fellow for Equity and Inclusion leads UMD's Intercultural Leadership Development initiative. This position also provides training about implicit bias in the search process and for the Equity and Diversity Certificate (a system-wide program through the Office of Equity and Diversity).
- The Twin Cities campus was recognized in 2015 by the Campus Pride Index as one of the 50 most LGBTQ-inclusive campuses in the nation. The index is an overall indicator of institutional commitment to LGBTQ-inclusive policy, program, and practice.

Effective Faculty and Staff Development

The University has created a new leadership development approach specifically designed to help the University achieve its strategic priorities, which includes personalized coaching at the college and department level to build core competencies, support cultural change, and develop leadership capacity throughout the University. Faculty and staff at all levels have a wide array of resources to develop their skills, set and follow a vision, engage others, collaborate, and be accountable for their actions.

Research shows that leaders learn and retain insights best when they apply their knowledge immediately. In keeping with this research, the University has shifted from offering only in-person training to a broader, experience-based approach that includes in-person learning, online self-paced learning, assessments, on-the-job experience, group projects, peer accountability, and coaching.

Programs include:

- A cohort program for mid-level leaders, in which several people from the same college or unit work on common challenges via small-group

discussions and activities, case studies, and individual assessments.

- Leadership Essentials, a four-day course for supervisors to strengthen core leadership skills.
- Supervisory Essentials, an in-person and online program on key University supervisory policies.

Faculty and Academic Leadership Development

Professional development opportunities and support for faculty throughout their careers are essential to fostering a workforce that is engaged, connected, thriving, and achieving. To that end, the University provides and encourages a number of programs and initiatives designed to ensure faculty and instructional staff have opportunities to learn, grow, and advance.

The **Center for Educational Innovation** is a system-wide center that supports effective delivery of instruction across the spectrum from face-to-face to massively online (MOOCs) at all levels of instruction offered at the University. The Center has three high-level goals: 1) a coordinated service model to ensure that instructional support resources support institutional priorities; 2) alignment of academic technology investments and academic priorities; and 3) clarification of the University's strategy for curricular innovation. Center staff work with faculty and academic units to advance curricular innovation through centrally and locally funded initiatives, workshops, and consultations with faculty.

Department chairs and heads also play a critical role in establishing and nurturing a productive working environment for their faculty and staff. The University offers a comprehensive, full-year **Provost's Leadership Program for Academic Chairs and Heads**, specifically targeting new chairs and heads and focused on mentoring faculty and staff, handling student issues, and addressing diversity and faculty life-course issues. **"Talking Heads"** is a leadership development initiative in which chairs and heads meet regularly to share best practices and learn about key leadership challenges across the University.

The University also holds workshops for chairs and heads on a wide variety of topics, including promotion and tenure, post-tenure review, and annual reviews of faculty to ensure that these leaders are knowledgeable about policies and procedures.

In addition, the University has greatly expanded its participation in the **Academic Leadership Program**, sponsored by the Big Ten Academic Alliance. Faculty participants in this program meet with a wide range of University leaders to discuss paths to leadership, roles of administrative offices, and decision-making. These meetings supplement three weekend seminars. The **Women's Faculty Cabinet** provides leadership to improve and enrich the academic and professional environments for women faculty on the Twin Cities campus. The cabinet recommends and responds to University policies affecting women faculty and promotes the University's efforts in recruiting, mentoring, and retaining women faculty.

An Employer of Choice

The University is committed to attracting and retaining talented faculty and staff with competitive salaries and benefits, challenging and rewarding work, clear paths for advancement, a comprehensive compensation package, and a strong emphasis on health and wellbeing. The University strives to maintain a compensation package that is competitive with peers and labor markets, as directed by the Board of Regents. Compensation must also be balanced with the University's overall need for cost containment and efficiency. The portion of the University's total budget spent on compensation has remained relatively stable (roughly 62 percent) since 2009.

Comprehensive, Affordable, and Competitive Health Benefits

The University's self-insured health program, UPlan, provides a full complement of medical and dental benefits, along with short-term and long-term disability coverage.

The University aggressively manages its health benefits costs by:

- self-insuring with UPlan;
- negotiating with vendors for cost savings and establishing performance guarantees;
- managing pharmacy costs through increased generic-drug usage;
- introducing restricted-network plan options such as using care system networks as base plans and promoting its Accountable Care Organization—a

low-cost, narrow-network plan emphasizing outcomes rather than fees for service; and

- promoting a strong wellness program.

For the 2016–17 year, UPlan's health care costs are projected to trend below the national average for the seventh year in a row. Over the years the University has also been very assertive in developing programs for controlling costs. In 2017, the ACO network of offerings with the addition of ACOs in greater Minnesota will be emphasized. After implementing an ACO model, the University has found the program is not only popular with participants but improves the quality of care while reducing cost, especially for high-risk members (see Figure 7-C and Figure 7-D). Last year 95 percent of ACO members retained their coverage from the previous year.

The University has also created a special pharmacy program to better manage prescription costs. Working in a unique collaboration with the College of Pharmacy, the program's strategies have included developing a Medication Therapy Management pharmacist network and health coaching for employees managing multiple medications and medical conditions. As a result, generic-drug use is now at 83 percent. The number of prescriptions per member has declined steadily since 2010 and is well

below the number for non-member employees. Drug trend costs have increased 8.9 percent compared to a national average of 13.1 percent.

Wellness Program

For more than ten years, the University has offered an extensive Wellness Program to increase the health, fitness, and wellbeing of its faculty and staff on all of its campuses. The program has been very well received by employees, and the University is continually looking for ways to enhance its offerings. By participating in University-sponsored wellness programs, employees can earn points that translate into $400 to $600 in savings on their insurance premiums. Wellness programs include health assessments, weight management, fitness, disease management, health coaching, and stress management.

Emphasizing the health, wellbeing, and quality of life of faculty and staff in turn leads them to be more fully engaged and productive in their jobs.

Committed to the Wellbeing of Faculty and Staff

The concept of wellbeing goes beyond health insurance and benefits. High-performing companies and institutions recognize that employees thrive and are more productive in a culture of health, wellness, happiness, and support. The University emphasizes a comprehensive approach to employee wellbeing, which includes:

- a total compensation package that includes salary, medical and dental benefits, disability and life

Figure 7-C. ACO data compared to broad network, 2014

Source: Office of Human Resources, University of Minnesota

Figure 7-D. ACO costs compared to University plan average, 2014–2015
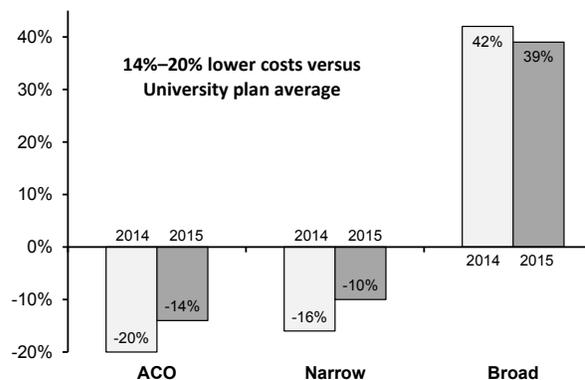
Source: Office of Human Resources, University of Minnesota

insurance, flexible spending accounts, long-term care insurance, and retirement;

- an award-winning Wellness Program;

- Boynton Health Service, with programs that include primary and dental care, a mental health clinic, physical therapy, a women's clinic, urgent care, and more;

- a state-of-the-art recreation center;

- the Center for Spirituality & Healing, which offers innovative, multidisciplinary programs for whole-body care, as well as workshops and lectures on wellbeing, Mindfulness-based Stress Reduction, and other topics;

- the Employee Assistance Program, which provides confidential consulting and referrals for any personal or work concern affecting wellbeing, from relationships to substance abuse to stress;

- financial counseling that offers employees and family members up to six free sessions a year; and

- a farmers market on the Twin Cities campus, which invites local farmers to sell their fresh vegetables, berries, and flowers from July to October. The weekly market is sponsored by a dozen University units, including Boynton Health Service, Cornercopia Student Organic Farm, and the Bicycle Commuter Program.

Community Fund Drive

University employees believe in giving back to their community. The annual Community Fund Drive, an employee-run campaign to raise funds for local nonprofit organizations, has been a University tradition since 1931. In 2015, Twin Cities campus employees raised $1.2 million through the drive. In the last 20 years, the University has raised more than $20 million for worthy causes in Minnesota. The campaign works with seven nonprofit federations representing nearly 500 organizations: the Greater Twin Cities United Way, Community Health Charities of Minnesota, Open Your Heart to the Hungry and Homeless, United Negro College Fund, Minnesota Environmental Fund, Community Shares Minnesota, and the University of Minnesota Foundation. Giving back is itself a component of wellbeing. Recent research has found that the simple act of donating money or volunteering enhances personal wellbeing and can lead to improved psychological and physical health.

Operational Excellence: Organization

Stewarding an outstanding organization that is responsible with resources,

dedicated to measuring and improving performance, and aligned to support

the University's core missions of teaching, research, and outreach.

Introduction

The University's mission is delivered through its people and its space. Exceptional faculty and staff are free to do their best work when the campus is safe, the facilities are optimized, and operational efficiencies maximize resources available for direct mission. Stewarding the investments made by generations of students and their families—as well as state lawmakers, citizens, and donors—is a responsibility University leaders take very seriously.

A Productive, Efficient Organization

Enterprise Asset Management

Maintaining and supporting physical assets is the University's second largest cost after compensation. Good information and workflow management are key to the optimal management of space allocation and utilization, capital planning and project management, leases and real estate, maintenance, and custodial work. The University is therefore launching an Enterprise Asset Management (EAM) system, which will replace dozens of unique and disconnected systems to better provide integrated and complete data to support meaningful decision making about the lifecycle of physical assets (land, space, facilities, and equipment). Following a market analysis, a review of best practices, and a request for proposals, the University has selected a platform that is expected to advance these goals for the next ten years.

Network Upgrade

The University will begin upgrading its data network infrastructure at the end of 2016. This project will span three fiscal years and is estimated to cost around $70 million. The new data network is expected to provide a base service of one gigabit to all locations, and the new wifi system will be designed to stay ahead of the forecasted 20 percent annual growth in devices and number of connections. Academically, the University's network must be able to support interactive and technology-rich classrooms and provide consistent student access. Research traffic must integrate with the Gopher Science Network to efficiently move large datasets and manage data-

collection points. Demand is increasing more broadly for the management of simple devices, known as the "Internet Of Things," that are tools for the educational mission and system automation. The new network's projected life-span is expected to be ten years or more. This meets the longevity expectation set by the current network, which was installed in 2004.

Ensuring a Safe University

Maintaining safety is a 24/7 job, and students, faculty, staff, and visitors continue to experience a safe environment on the University's campuses. In fact, the Crookston campus was cited as one of USA Today's "Ten Safest College Campuses in the Nation" in 2015. There is a system-wide focus on working with public safety partners on and off campus to help develop better safety and crime reduction strategies while improving communication and effectiveness. Community and student engagement has become a priority for building strong connections and communicating safety strategies. On the Twin Cities campus, crime totals account for less than 0.3 percent of the violent crime in the City of Minneapolis—even with over 80,000 people coming to campus on any given day. Police and safety personnel engaged the campus community by hosting various community orientated policing events, an open house, and a student safety summit. While managing many sporting, entertainment, and cultural events, Public Safety staff trained on emergency response tactics and collaborated with safety partners to improve services. The UMPD is the first agency in the state to have all its sworn officers certified in crisis intervention, which is a major component of police work on a college campus.

eProcurement

In 2012, the President's Operational Excellence committee endorsed a recommendation to implement a robust eProcurement tool now known as UMarket, which went live July 1, 2013. Overall UMarket sales activity has grown from $21 million to over $47 million in the first three years. Based on third-year activity, UMarket has saved University departments an estimated $2.7 million in procurement costs. UMarket's ongoing success can be attributed to the addition of new suppliers and increased product offerings. Through a partnership with University

Bookstores this past year, Apple computers and accessories became available through UMarket at educational pricing. Integrated with eProcurement, UMarket continues to advance centralized logistics services on the Twin Cities campus, reducing vehicles and increasing pedestrian safety.

Twin Cities Campus Development Framework

In 2016, the Board of Regents discussed land use and a development framework that articulates a vision for the Minneapolis campus. The development framework guides decision making about campus evolution over time. It indicates appropriate places for buildings, uses, and movement/connections, and identifies locations for significant campus growth and change. The development framework was created to provide a way to understand, reinforce, and acknowledge the various characteristics and needs of distinct campus districts when planning for the future. It supports future infrastructure and will be important to future campus planning decisions, within the University community and in concert with partners at the city and neighborhood level.

Thirty-Year Vision for the Southeast Gateway on the Twin Cities Campus

Planning for the future of the southeast gateway area of the Twin Cities campus was completed in 2016. This work, an element of the broader development framework, incorporates the investments identified in the Governor's Blue Ribbon Commission report approved by the Legislature in 2014 (specifically, investments in health sciences education and clinical research facilities). The vision included potential sites for a replacement hospital as well as locating student housing along the riverfront in the long-term. The southeast gateway vision was adopted by the Board of Regents in July 2016. The plan identifies buildings that will be renovated, new building sites, and demolition sites. It directly informs the University's 2016 Six-Year Capital Plan, which outlines a series of three investments in the future of the Academic Health Center. Among these investments is a plan to demolish the Mayo Building. This 850,000 square foot facility represents just over 10 percent of the total amount of poor and critical space systemwide, and would make significant progress on one of the Progress Card maroon measures.

Housing Strategy

Following nearly two years of staff work and Board discussion, Housing and Residential Life launched a multi-pronged effort to provide University-managed housing for 90 percent of first-year students, 25 percent of students who return for a second year, and 10 percent of incoming transfer students. The first component is the protection of current residence hall capacity to provide enough beds for all first-year students who apply by the May 1 deadline. This is achieved through ongoing reinvestment in the University's 5,700 residence hall rooms and a complete renovation of historic Pioneer Hall, slated to begin construction in spring 2017 and consistent with the 30-year vision for the southeast gateway. A second piece involves master leasing privately built apartment facilities in desirable locations. Approximately 1,000 new beds will come into University inventory in fall 2017 at both Keeler Apartments (across from 17th Avenue residence hall and dining center) and Radius on 15th (across from the under-construction Athletes' Village.) These apartments will supplement the 400 beds at University Village leased by the University for many years. Finally, the University's first 29 undergraduate housing scholarships were awarded in fall 2016. Funded by philanthropic giving, these awards provide for 50 percent room and board to eligible students who typically would not be able to have an on-campus residence hall experience.

A Building-By-Building Strategy

The University's capital strategy group guides planning and vision for the future of capital assets system-wide. The primary tool for outlining capital investment priorities is the Six-Year Capital Improvement Plan. Its objectives are to:

- advance strategic priorities;
- enhance the campus-based experience;
- align projects with available revenue sources;
- increase utilization and functionality of physical assets;
- complete capital investment sequences; and
- reduce poor and critical space.

To support the Capital Strategy Group in this effort, a building-by-building strategy continues to be

developed. Under this initiative, University Services is working to identify needs in each of the system's 916 buildings, and to classify them as "catch up / keep up," "sustain," or "do not invest" based on a combination of factors including facility condition, historic consideration, programmatic relevance, and adaptability. With this information, the University and its colleges and departments can plan investments and prioritize projects accordingly. In addition, the University has used these data to realign HEAPR and R&R investments to increase investment into "catch up / keep up" buildings by diverting it from "do not invest buildings." The 2016 Six-Year Plan includes priorities that if funded, would reduce poor and critical space by three million square feet.

Lab and Research Safety

The Lab and Research Safety Program has completed several cycles of laboratory audits. The program is maintaining a cycle of audits based on risk bands with only high-risk laboratories visited every year. In addition, the program has taken significant steps to coordinate lab visits with other University regulatory bodies to minimize burden to researchers. Research safety staff are working with safety committees and department safety officers to improve the culture of safety, and are now engaged with student groups such as the model rocketry club to guide them toward adequate written risk assessment and an enhanced culture of safety. Management of regulated waste has improved this past year with a focus on assigned roles and improving customer experience. A software system has been implemented that will allow greatly simplified procedures for users. Additional chemical inventory software will support University operations, facilitate emergency response, and assist with regulatory compliance. The system integrates with the University's hazardous waste disposal system and helps to categorize waste for disposal.

Reducing Greenhouse Gas Emissions

Since the adoption of Board of Regents Policy: *Sustainability in Energy Efficiency* in 2004, efforts have been made to advance this issue on the teaching, research, and operational fronts. One specific area of focus is the reduction of the University's greenhouse gas emissions. Included as a maroon measure on the Progress Card, the current target is a 50 percent

reduction in emissions by 2020 (with 2008 levels as a baseline). Ongoing initiatives include building commissioning and recommissioning, the Smart Labs program, lighting conversion, renewable energy procurement, and transportation demand management.

This year the University entered a long-term subscription for power from a solar farm in Dakota County, expected to provide 2 mW of renewable power for 25 years. On the Twin Cities campus, a combined heat and power plant is nearing completion. When operational, this facility will generate both electricity to power the campus and steam to provide heat or drive chillers, netting two uses for each unit of fuel. In addition to an expected $2 million per year cost savings, this plant will significantly reduce the campus carbon footprint.

A Multipurpose U Card

The University and the Metropolitan Council reached an agreement this past year for the issuance of dual technology cards, which will allow the University community to use their U Card for Metro Transit fare validation. The U Card Office began issuing hybrid cards with two smart chips (one for University building access, one for Metro Transit farebox validation) to incoming staff and students on the Twin Cities campus in summer 2016. This hybrid card will eliminate the need to carry two cards, reduces costs, and is expected to increase ridership and customer satisfaction for both the University and Metro Transit. Students, faculty, and staff who have this new U Card and a transit contract can ride Metro Transit buses, trains, and light rail by simply touching their U Card to the validator.

Facilities Role Consolidation

University Services units (Facilities Management, Capital Planning and Project Management, University Health and Safety, Public Safety) have had multiple points of contact for any given college or administrative unit regarding security, construction, space management, and facilities. While some roles have had formal responsibilities, others were more loosely defined and unevenly applied across campus. An initiative to streamline roles led to a simplified structure, with three new roles created out of seven disparate ones to ensure single points of contact and enhanced authority and accountability levels:

- RRC Facilities Lead (represents each academic and administrative unit);
- Department Facilities Representative (represents each department); and
- Primary Building Contact (represents each building).

Under this simplified structure, the University has 47 RRC Facilities Leads and over 500 Department Facilities Representatives. Online forms and reports with role contact information have been consolidated into a special portal for employees in these roles to begin streamlining several work processes. Early successes include improved building security through a continually updated list of authorized requestors and more timely updated building emergency plans due to every building having an employee coordinating the needed information.

Financial Effectiveness

The desired financial outcome for the University of Minnesota is support for the vision of the University through the generation and allocation of resources; the control of costs; and the conscientious management of tuition and fees. The University must meet current and future financial needs, while remaining financially solvent and viable. One measure of financial effectiveness is the set of ratios used by Moody's Investors Services for the purpose of assigning a debt rating to the University. These ratios, compared to Moody's Aa1 median, paint a picture of the University's financial health (Table 8-1).

Based on these ratios, and a variety of other financial considerations, such as the University's strength of management, the demand for University mission activities (instruction, research, and public service), and the predicted state support for the University, Moody's has consistently assigned a debt rating of Aa1, one notch below AAA, the top rating possible.

A second measure of financial effectiveness is the ability of the University to produce an operating budget on an annual basis that appropriately balances planned expenditures within available resources, addresses the existing or emerging financial challenges in specific units, invests in priority initiatives, holds costs down for students, and is ultimately approved by the Board of Regents. The University has continued to achieve this goal by developing an annual budget process that holds all units accountable for the financial activities that occur within them, and yet allows leadership to make decisions that advance University priorities and address significant financial needs. The financial model requires transparency in decision making by academic leadership and a concentrated effort on the part of all support and administrative units to provide value-added, excellent service. It promotes incentives for sound fiscal management and continuous improvement, as all units benefit from lowering costs and maximizing revenues. Under this model, the University has consistently produced a balanced budget while improving quality, growing revenues, and increasing the demand for its programs and services. Since 2012, the University

Table 8-1. Moody's Investor Service ratios

1. Total Financial Resources to Direct Debt University 6/30/15 = 2.74 Median = 2.33	Measures the ability of the University to cover its direct obligations with all its financial resources: divide total financial resources (all net assets, except capital assets) by direct debt. The higher the ratio, the stronger the financial condition of the institution.
2. Expendable Financial Resources to Direct Debt University 6/30/15 = 1.80 Median = 1.77	Similar to the first ratio, but this one includes only "expendable" resources, those available for immediate expenditure, divided by direct debt. If expendable funds = long term debt, the ratio would be 1.0. Again, the higher the ratio, the stronger the financial condition of the institution.
3. Actual Debt Service to Operations University 6/30/15 = 3.6% Median = 3.3	Measures the debt service burden on the annual operating budget: debt service (principal plus interest) divided by total operating expenses. A high ratio indicates a greater burden on the budget, which could compromise the ability of the institution to meet its goal of supporting the vision of the University.
4. Expendable Financial Resources to Operations University 6/30/15 = .77 Median = .73	Measures the relative time the University could operate without new additional revenue: "expendable resources" divided by the total operating expenses for the year. A ratio of .5 would mean the institution could operate for six months without additional resources. The higher the ratio, the better the financial outlook.

Source: Office of Budget and Finance, University of Minnesota

has also benchmarked its expenditures on leadership and oversight as a percentage of spending on mission and mission-support activities to facilitate mission-centered investments and to limit spending where possible on oversight and overhead (Progress Card measure).

Financial/Budget Efficiency

Over the last ten years, the global economic downturn resulted in budget challenges at the state level and for the University. From 2008 to 2012, the state appropriation to the University dropped by almost $140 million. This drop in revenue, coupled with the need to maintain quality and cover regular and unavoidable increases in operating costs, led the University to implement moderate tuition increases in the early years, while extensive expense reductions and internal reallocation of resources has continued throughout the period. The annual budget process has required every unit to review its operations and make decisions that would increase revenues where possible and reduce expenses throughout. In the 2014–2017 academic years, the University strategically chose to implement historically low increases in the undergraduate resident tuition rates (see below), so even with a slight uptick in state appropriations for the current and last biennia (an incremental $31 million in fiscal year 2014, $14 million in fiscal year 2015, $26.6 million in fiscal year 2016, and $900,000 in fiscal year 2017), the University has continued to increase efficiency; to produce more and better outcomes with less waste and financial burden on students. Two bold efforts demonstrate this continued commitment:

- **Administrative Reductions:** Following discussions with the state legislature during the 2013 legislative session, President Kaler announced that he would meet and exceed their expectations for administrative reduction at the University. He committed the University to implementing $90 million of strategic reductions in administrative costs over a six-year period (fiscal years 2014–19). Through the annual budget process, every unit is asked to propose actions that will result in identifiable expense cuts to activities outside of direct mission (instruction, research, and public service). In the first two fiscal years of this plan (2014 and 2015), $38.4 million of such reductions were implemented, and the approved

budget for fiscal years 2016 and 2017 include an additional planned reduction of $32.1 million. After four years, the University has achieved or specifically planned $70.5 million toward the $90 million goal.

- **Tuition Relief:** For the last two biennium, the University's request to the state included a renewed partnership related to tuition. If the state would commit to supporting the University with an incremental increase in appropriations of $14.2 million in both fiscal years 2014 and 2015, the University would commit to holding the resident undergraduate tuition rate at the 2012–13 academic year level for both years of the biennium. The first proposal was successful: both the state and the University made and honored that commitment. For the current biennium, the University again proposed a tuition freeze: if the state would commit to supporting the University with an incremental increase in appropriations of $21.5 million in fiscal year 2016 and $22.2 million in fiscal year 2017, the University would commit to holding the resident undergraduate, graduate, and professional tuition rates at the 2014–15 academic year level (resulting in a four-year freeze for resident undergraduate students). The state supported this request in part with an appropriation increase of $11.1 million in fiscal year 2016. In response, the University followed through that year with tuition rate increases that reflect the appropriation change: an increase of 1.5 percent on the resident undergraduate rate and an average increase of 2.5 percent on the resident graduate and professional rates. In addition, the University budgets during this time frame have included historically low increases in other required fees and room and board costs, with total increases of 2.2 percent or less on all campuses. In the current year (2016–2017), even with no increase in state appropriation to address unavoidable cost increases, the University held the resident undergraduate tuition rates flat on each of the system campuses and implemented only a 2.5 percent increase for the resident undergraduate rate on the Twin Cities campus, with the increase in graduate and professional tuition rates ranging from 0 to 2.5 percent on average.

APPENDIX A:
KEY DATA SOURCES
AND WEB LINKS

Key Data Sources

Association of American Universities Data Exchange	aaude.org
Association of American Universities	www.aau.edu
Association of Research Libraries	www.arl.org
Institute of International Education	www.iie.org
National Center for Education Statistics	nces.ed.gov/ipeds
National Institutes of Health	www.nih.gov
National Research Council	www.nationalacademies.org/nrc
National Science Foundation	www.nsf.gov

University of Minnesota Links

Twin Cities Campus	www.umn.edu
Strategic Plan	strategic-planning.umn.edu
Duluth Campus	www.d.umn.edu
Strategic Plan	www.d.umn.edu/chancellor/planning
Morris Campus	www.morris.umn.edu
Strategic Plan	digitalcommons.morris.umn.edu/camp_doc/11
Crookston Campus	www.crk.umn.edu
Strategic Plan	www.crk.umn.edu/strategic-planning
Rochester Campus	www.r.umn.edu
University of Minnesota Extension	www.extension.umn.edu
Research and Outreach Centers	
North Central Center at Grand Rapids	ncroc.cfans.umn.edu
Northwest Center at Crookston	www.nwroc.umn.edu
Southern Center at Waseca	sroc.cfans.umn.edu
Southwest Center at Lamberton	swroc.cfans.umn.edu
UMore Park at Rosemount	www.umorepark.umn.edu
Urban Research and Outreach-Engagement	uroc.umn.edu
West Central Center at Morris	wcroc.cfans.umn.edu

University of Minnesota Links, Continued

Academic Health Center	www.health.umn.edu
Board of Regents	www.regents.umn.edu
Controller's Office	www.controller.umn.edu
Global Programs & Strategy Alliance	www.global.umn.edu
Office for Equity and Diversity	diversity.umn.edu
Office for Public Engagement	www.engagement.umn.edu
Office for Student Affairs	www.osa.umn.edu
Office of Budget and Finance	www.budget.umn.edu
Office of the Executive Vice President and Provost	www.academic.umn.edu/provost
Office of Institutional Research	www.oir.umn.edu
Office of the President	www.umn.edu/president
Office of University Relations	university-relations.umn.edu
Office of Vice President for Research	www.research.umn.edu
University Libraries	www.lib.umn.edu
University of Minnesota Alumni Association	www.umnalumni.org
University of Minnesota Foundation	www.giving.umn.edu/foundation

APPENDIX B: BOARD OF REGENTS

Honorable Dean Johnson, Chair
At-Large Representative
Elected in 2007, 2013
Term expires in 2019

Honorable David McMillan, Vice Chair
Congressional District 8
Elected in 2011
Term expires in 2017

Honorable Thomas Anderson
Congressional District 7
Elected in 2015
Term expires in 2021

Honorable Richard Beeson
Congressional District 4
Elected in 2009, 2015
Term expires in 2021

Honorable Laura Brod
At-Large Representative
Elected in 2011
Term expires in 2017

Honorable Linda Cohen
At-Large Representative
Elected in 2007, 2013
Term expires in 2019

Honorable Thomas Devine
Congressional District 2
Elected in 2012
Term expires in 2017

Honorable Michael Hsu
Congressional District 6
Elected in 2015
Term expires in 2021

Honorable Peggy Lucas
Congressional District 5
Elected in 2013
Term expires in 2019

Honorable Abdul Omari
At-Large Representative
Elected in 2013
Term expires in 2019

Honorable Darrin Rosha
Congressional District 3
Elected in 1989, 2015
Term Expires in 2017

Honorable Patricia Simmons
Congressional District 1
Elected in 2003, 2009, 2015
Term Expires in 2021

Brian Steeves
Executive Director and Corporate Secretary
600 McNamara Alumni Center
200 Oak Street S.E.
University of Minnesota
Minneapolis, MN 55455

APPENDIX C:
Senior Leadership

Eric W. Kaler	President
Karen Hanson	Executive Vice President and Provost
Ann Aronson	Chief Marketing Officer and Deputy Chief of Staff to the President
Mike Berthelsen	Interim Vice President for University Services
Kathryn Brown	Vice President for Human Resources
Brian Burnett	Senior Vice President for Finance and Operations
JD Burton	Interim Special Assistant to the President for Government and Community Relations
Mark Coyle	Athletic Director
Bernard Gulachek	Interim Vice President and Chief Information Officer
Brian Herman	Vice President for Research
Brooks Jackson	Vice President for Health Sciences and Dean of Medical School
Gail Klatt	Associate Vice President for Internal Audits
Lisa Lewis	President and CEO of the University of Minnesota Alumni Association
Doug Peterson	General Counsel
Amy Phenix	Chief of Staff to the President
Kathleen Schmidlkofer	President and CEO of the University of Minnesota Foundation
Chuck Tombarge	Chief Public Relations Officer and Deputy Chief of Staff to the President
Lendley Black	Chancellor, University of Minnesota Duluth
Jacqueline Johnson	Chancellor, University of Minnesota Morris
Michelle Behr	Chancellor, University of Minnesota Morris (effective February 6, 2017)
Stephen Lehmkuhle	Chancellor, University of Minnesota Rochester
Fred E. Wood	Chancellor, University of Minnesota Crookston
Barbara Keinath	Interim Chancellor, University of Minnesota Crookston (effective January 1, 2017)

APPENDIX D:
Tables and Figures

5 Research and Discovery

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APPENDIX E:
Progress Card Measures Definitions

GOLD MEASURES

Measure

4- and 6-year graduation rates, by campus

Definition/Discussion

The percentage of first-time, full-time new entering freshmen that graduated within four or six years. The University counts as a successful completion a student that first enrolls at any U of M campus and graduates from any U of M campus in the given timeframe. (For federally reported measures, a student must begin and graduate from the same campus to be counted as a successful completion for that institution.)

The four-year graduation rates reported in 2021 will be based on the 2017 entering cohorts, while the six-year graduation rates in 2021 will be based on the 2015 entering cohorts. The Provost on the Twin Cities campus and Chancellors on the system campuses were asked to set reasonable stretch goals for their individual campuses given incoming student characteristics, availability of degree programs, and peer comparisons.

Measure

4-year graduation rates of Pell-awarded students (system)

Definition/Discussion

The percentage of first-time, full-time new entering freshmen who received federal Pell grants their first year and graduated within four years.

This is a system-level measure of undergraduates at all campuses. Similar to overall four-year graduation rates, this measure takes an incoming cohort of students receiving Pell grants and examines their graduation levels four years later. Ideally financial need would not be a barrier to graduation, yet we know that Pell eligibility can also correlate with other graduation risk factors such as being a first-generation student.

The ultimate goal for these students would be to bring their graduation rate up to that of the student body as a whole. Although this may be unrealistic in a shorter time frame, the proposed goal grows the graduation rate of Pell-awarded students at twice the rate of the proposed growth rate for the student body overall.

Measure

Twin Cities entering freshman average ACT

Definition/Discussion

The composite score on the ACT exam for entering students. The ACT uses a 36-point scale on four multiple-choice testing areas: Math, English, Science, and Reading.

A long-time measure of the academic preparedness of the incoming class, the average ACT score of the freshmen class has been rising steadily, from 24.8 in 2003 to 28.2 in 2015. However, given state demographics, natural limits, and the desire to meet multiple goals for the incoming class (including access for students across Minnesota, students of color, and students from diverse socio-economic backgrounds), it is unlikely that the University will see or desire a significant increase in this measure in the near future.

The University has a goal of exceeding an average ACT of 28.0 while continuing to monitor student access to a University education.

Measure

Institutional gift aid (system)

Definition/Discussion

The total amount of student gift aid provided by the University across all campuses. Gift aid includes Promise scholarships, admissions scholarships, collegiate and department scholarships, athletic scholarships, Regents scholarships, and graduate assistant tuition benefits. This measure does not include state or federal grants, student employment, or loans.

While there is no "correct" level of institutional gift aid, the University has a long standing commitment to making education as affordable as possible for students, and increasing gift aid through fundraising and institutional resources is an important strategy in meeting that commitment. The goal represents a three-percent annual increase in institutional gift aid through 2021.

Measure

R&D expenditures

Definition/Discussion

The total dollar amount of research and development expenditures defined and collected annually by the National Science Foundation through the Higher Education Research & Development Survey. All institutions expending at least $150,000 on R&D in the fiscal year are surveyed, and the data is comprehensive of all sources of R&D expenditures. For FY 2014, UMTC had $877M in R&D expenditures; for the University system, R&D expenditures exceeded $900M.

Though this measure includes the many sources of an institution's R&D funding, the largest source continues to be federally sponsored funding. The federal investment in sponsored research projects has been flat for several years and is predicted to remain so for the foreseeable future. Despite this, the Office of the Vice President for Research has proposed a goal that would increase R&D expenditures by nearly five percent over the next few years.

Measure

Medical School ranking

Definition/Discussion

An annual ranking based on the total dollar amount of grants from the National Institute of Health to medical schools as analyzed by the Blue Ridge Institute for Medical Research.

Medical school rankings have traditionally been based on National Institute of Health (NIH) awards to U.S medical schools in a given year. In 2015, the University of Minnesota's medical school received nearly $128 million in NIH awards and ranked 32nd in the country. In 2015 the University of California–San Francisco Medical Center was the top-ranked school in the country, with $497 million in NIH awards. Minnesota ranked 4th in the Big 10, behind Michigan (12th), Northwestern (18th), and Wisconsin (23rd). The Mayo Clinic in Rochester was 19th in the country in 2015.

Senior Vice President and Dean of the Medical School Brooks Jackson has stated the desire to return to being a "Top 20" medical school. The 20th ranked school in 2015, the Baylor College of Medicine, had $206 million in NIH awards, so achieving that ranking is an ambitious goal over a relatively short time period.

Measure
Faculty awards

Definition/Discussion
The number of prestigious national awards received by faculty in the arts, humanities, sciences, engineering, and health fields and the institutional ranking based on those awards as measured annually by the Center for Measuring University Performance (MUP) at Arizona State University.

The MUP analyzes and ranks research universities in nine different areas, including the number of prestigious national faculty awards. The twenty-four awards included in their analysis range from the Guggenheim Fellowships, MacArthur Foundation Fellowships, and National Humanities Center Fellowships to the NSF CAREER awards.

This measure can be quite variable from year to year, but the University desires to maintain its place among the top 10 public research universities with regard to prestigious national awards. The ranking goal requires approximately 25-30 of these faculty awards annually, and the numeric goal of 35 or more faculty with annual awards aligns with the strategic emphasis on faculty excellence.

Measure
Participation in the employee engagement survey (system)

Definition/Discussion
The system-level survey response rate for faculty and staff on the annual Employee Engagement survey. Though employee engagement is a nebulous concept to attempt to measure at the all-University level, a private-sector standard is to measure participation in such a survey so that local-level units can receive as much rich and comprehensive data as possible. The University measures faculty and staff participation in this survey.

Although employee survey participation is already high compared to other higher education institutions, the University strives to increase participation by 2 percent with each administration of the survey.

Measure
Operational excellence

Definition/Discussion
The President has set as a goal a minimum of $90M in cost savings over a six-year period (FY14–FY19). The cost savings are identified annually in the budget process and must come from categories not directly related to mission activities of instruction, research, or public service.

The goal for this measure is $90M by FY19.

MAROON MEASURES

Measure

Twin Cities transfer student 3-year graduation rate

Definition/Discussion

The percentage of students who previously attended a postsecondary institution outside the University system and graduated within three years of transferring to the Twin Cities campus.

Though not generally reported on a nation-wide basis, the ability to graduate transfer students is an equally important and worthy goal to traditional freshman graduation rates. There is more variability in these cohorts, with some students entering with 30 credits or less, while a few bring in as many as 90 credits. The three-year graduation rate for transfer students would be comparable to the five-year traditional rate, understanding the additional variability among these students. Much like goals for increasing the traditional four- and six-year rates, the University believes it should also increase these graduation rates.

The University has a goal of exceeding a 65 percent graduation rate for transfer students.

Measure

Graduate and professional degrees awarded (system)

Definition/Discussion

The total number of master's, doctoral, and professional degrees awarded annually across the University.

The University is the primary generator of graduate and professional degree recipients for the State of Minnesota. The ongoing need for an educated workforce, both throughout the general population but also at the highest levels of education, requires the University to maintain its priorities in this area.

Graduate enrollments have predictably been falling as the economy has improved. However, the University has been opening new programs at the professional master's level, filling demand for new emerging areas in technology, business intelligence, international law, and other fields. The University will need new programs such as these to maintain current degree completions above 5,250 per year.

Measure

Median undergraduate debt at graduation (system)

Definition/Discussion

The median amount of student debt accumulated by undergraduates with student debt at the time of their graduation.

This measure can be heavily influenced by many factors, only some of which the University controls. Along with tuition and institutional aid policies, other factors that influence student debt include federal and state financial aid policies, program choice and time to degree, and student and parent behaviors and choices. Because this measure is relevant to all students in the U of MN system, we monitor this at the all-University level.

The University proposes a goal of limiting increases in the median amount of cumulative debt for undergraduates with debt to no greater than the consumer price index, with adjustments according to state and federal policy changes. Although a wide variety of factors will influence this measure, it is an important priority for the Board and administration to continue to monitor.

Measure

Students of color with a favorable sense of belonging on campus (SERU survey)

Definition/Discussion

Percentage of undergraduate students of color responding agree or strongly agree to the statement "I feel that I belong at this campus." Data is collected as part of the Student Experience in the Research University (SERU) survey, administered to all undergraduates on the Twin Cities campus.

The University's goal is to improve the campus climate and sense of campus belonging for all students. The goal for this measure would be to have the student of color favorable sense of belonging metric match the nonstudent of color response. The data source for this measure is the SERU survey, which will next be administered in 2017.

Measure

Percent of new entering (and all currently enrolled undergraduate) students who are Minnesota high school graduates

Definition/Discussion

Percent of the University's new entering students and the percent of all enrolled undergraduate students who identified Minnesota as their home location prior to enrollment. The source for this measure is the University's enrollment statistics. This measure analyzes fall enrollments to help assess access for Minnesota students throughout their academic careers. The percent of Minnesota high school students among both new entering and all undergraduate students throughout the University system wide has remained consistently high.

The goal for this measure is to maintain the historical access of Minnesota students to the University of Minnesota.

Measure

Percent of recent Minnesota high school graduates choosing a Minnesota college who enroll at the University

Definition/Discussion

The percent of Minnesota public high school students who graduate in the spring and enroll at a Minnesota postsecondary institution in the fall of that year who choose the University of Minnesota. The source for this measure is the Minnesota Office of Higher Education's Basic Data Series.

This measure focuses service to Minnesota students to those recent high school graduates who choose to continue their education in Minnesota. The University has traditionally been an attractive choice for Minnesota students seeking a bachelor's degree and has increased its share of the Minnesota college-bound students who graduate from a Minnesota high school. Approximately 1/5 of Minnesota high school graduates choose a postsecondary institution outside of Minnesota and 1/3 do not attend a postsecondary institution the following fall after graduation. Those students are not included in this measure.

The goal for this measure is to maintain the historical access of Minnesota high school graduates to the University of Minnesota.

Measure

Enrollment in health science specialties with shortages (Nursing, Pharmacy, Dentistry)

Definition/Discussion

The annual fall enrollments in health sciences fields identified by the Minnesota Department of Employment and Economic Development's Labor Market Information Office as leading to Occupations in Demand in Minnesota.

The University has a crucial role in meeting the need for growing the health care workforce across the state. In particular, the University recognizes its ability to meet the needs for health care professionals in high demand throughout the state, and has prioritized enrollments at all educational levels in the fields of nursing, dentistry, and pharmacy. The University proposes to increase enrollments to greater than 2,100 students in these fields.

Measure

Total enrollment in the AHC schools and Center for Allied Health

Definition/Discussion

The total combined fall enrollments in the Academic Health Center schools of Dentistry, Medicine, Nursing, Pharmacy, Public Health, and Veterinary Medicine, and the Center for Allied Health. This measure includes enrollments on the Twin Cities, Duluth, and Rochester campuses.

In keeping with the goals of the AHC's strategic plans and recommendations from the Governor's blue-ribbon committee on the medical school, expanding access to health education across the AHC is a key component in returning to national leadership in healthcare training, research, and care. In addition to the state-level demand for healthcare workers identified in the preceding measure, expanding enrollments across the AHC addresses the growing needs for doctors and other health professionals across a wide variety of in-demand specialties at the state and national levels. The University proposes to increase enrollments to above 6,350 students, an increase of over 156 students.

Measure

National public research university ranking

Definition/Discussion

The annual ranking by the National Science Foundation of public higher education institutions according to total annual research and development expenditures.

Reported annually by the Vice President for Research, the public research university rankings are compiled from the Higher Education Research & Development Survey completed by all institutions with at least $150,000 in dedicated R&D expenditures in a fiscal year. While the total R&D expenditures metric is our primary measure of research productivity, monitoring the ranking allows the administration and Board to evaluate the relative competitiveness of the University.

The University continues be among the top 10 public institutions on this measure and strives to stay at this high level understanding that there will be year-to-year variance.

Measure

Minnesota intellectual property agreements

Definition/Discussion

The total number of intellectual property agreements executed annually through the MN-IP Program.

Over the past few years, the University has prioritized making it easier for business to partner with the University to transform discoveries into innovative solutions. MN-IP is designed to improve access to University-developed

technology while reducing the risk and cost associated with licensing intellectual property (IP) and sponsoring research. Programs to help both create and license University IP have been developed, and increasing the number of agreements is an important policy direction.

With limited trend data for this emerging program, it is unclear what the optimal rate for increasing the annual number of MN-IP agreements should be. Currently, the University has a goal of increasing agreements 10 percent year-over-year, with updated information provided by the Vice President for Research as it becomes available.

Measure

Public service expenditures (system)

Definition/Discussion

The University's total annual expenditures on public service. The University records its mission-related expenditures into instruction, research, and public service categories.

There are no agreed-upon comprehensive measures of public service and outreach in higher education, in part because public service and outreach informs much of the work of a land-grant institution. The wide range of activities and expenditures included broadly under public service and outreach makes it difficult to identify a single measure of progress. While exploring and defining a more comprehensive measure, the University proposes to continue to monitor our overall expenditures.

The University has had a staunch commitment to public service and outreach as a core mission function and plans to keep its expenditures above $245 million annually.

Measure

Average citations per faculty member

Definition/Discussion

The number of times a recent faculty publication is cited by scholars during a five-year period as measured by Academic Analytics, a data analytics source provider. The total number of citations is averaged across all faculty at the institution and pertains to works published within that same five-year period.

There are several different services for faculty citation counts, none of which are comprehensive. The University proposes to further discussion of this measure by using currently available data from Academic Analytics, a national leader in academic scholarship data and analytics, while exploring data options for use across campus, including by the libraries and the Faculty and Academic Affairs office.

The specific goal of maintaining an average citation count per faculty above 125 annually may be updated with different data sources, but the goal's emphasis on faculty scholarship and excellence will continue.

Measure

National scholarship awards to students

Definition/Discussion

The number of prestigious national awards annually received by University undergraduates. The seven leading student awards included in this measure are the Beinecke, Churchill, Truman, Rhodes, Fulbright, Goldwater, and Astronaut awards.

These awards represent a wide variety of fields and expertise and are some of the most prestigious student awards

in the world. Any given year can be quite variable in the number of awards our students apply for and receive; additionally, many of these leading awards have limitations based on location of the students' institution or home residence.

As such, the measure examines awards in five-year blocks (2015-20) of awards, with a goal of exceeding the previous half-decade's achievement. The Board will also receive annual progress updates on this measure.

Measure

Spending on leadership & oversight vs. mission and mission support

Definition/Discussion

The percentage of University expenditures on leadership and oversight as determined by the University's internal cost benchmarking study, which has divided all University expenditures into mission, mission-support, and leadership and oversight categories since 2012.

One purpose of this study is to ensure that the University continues to make investments in mission-related activities, while limiting new investment where possible in oversight and overhead. The University now has three years of data, and has shown the ability to contain leadership and administrative costs. However, monitoring levels vs. setting an actual target is probably prudent, as many variables go into this metric.

The University proposes to maintain and continue to try to decrease the percentage of spend on leadership and oversight, understanding that there is a natural floor for this percentage of expenditures.

Measure

University square feet considered in "poor" or "critical" condition

Definition/Discussion

The number of gross square feet of University facilities system wide rated through the Facilities Condition Assessment as being in "poor" or "critical" condition.

The University has for a number of years completed a comprehensive facility condition assessment (FCA) on many of its buildings. Beginning in 2013 this was extended to all buildings system wide with an enhanced methodology.

The University proposes a goal of tracking the total number of gross square feet considered either "poor" or "critical" by this methodology and decreasing the total square footage in these categories over time.

Measure

Sustainability – Metric tons of greenhouse gasses

Definition/Discussion

The number of metrics tons of greenhouse gasses produced annually across the University system.

The Board of Regents policy on Sustainability and Energy Efficiency directs campus operations to reduce emissions to the environment. In addition, the institution has committed to regular greenhouse gas inventories as part of the American College and University Presidents' Climate Commitment, and the Minnesota state legislature has also established emission reduction requirements for buildings constructed with state funds.

In 2008, when we first began measuring greenhouse gas emissions, the University set as a goal a 50 percent reduction in emissions by 2021. With changes to the emission calculation methodology in 2016 to more accurately

reflect trend data in purchased electricity and campus steam plants, the base level of 703,311 metric tons yields a 50 percent reduction target of 351,656 metric tons by 2021.

Measure

University credit rating

Definition/Discussion

Moody's Investors Services routinely monitors the University's credit rating and takes into account several factors related to the University's overall financial health, student demand, financial statement analysis, state support, and analysis of the University's management strength. Moody's credit ratings range from a high of Aaa to C.

The University works to maintain its current credit rating per Board policy.

Measure

Athletics graduation success rate (GSR)

Definition/Discussion

The percentage of first-time, full-time undergraduates in Division I athletics who begin at the Twin Cities campus as freshmen or transfers, receive athletic aid their first year, and graduate within six years of their first term at any institution. The GSR excludes student athletes who leave the University in good academic standing with remaining athletic eligibility.

Though it functions much like a traditional graduation rate statistic, the GSR is a measure unique to intercollegiate athletics. The GSR holds colleges accountable for graduating those student athletes who transfer into the University and but also does not penalize an institution's graduation rate for student athletes that transfer or leave an institution with athletic eligibility and in good academic standing.

The University already ranks very highly in this measure and has the goal to maintain the significant gains of the past several years.

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.