Mission Fulfillment Committee

June 2018

June 7, 2018
1:30 p.m. - 4:45 p.m.

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   Revised Policy - Page 4

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4. Supporting Students in Gateway Courses
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Mission Fulfillment

AGENDA ITEM: Board of Regents Policy: *Equity, Diversity, Equal Opportunity, and Affirmative Action*

☐ Review ☐ Review + Action ☒ Action ☐ Discussion

☐ This is a report required by Board policy.

PRESENTERS: Julie Showers, Associate Vice President for Equity and Diversity

PURPOSE & KEY POINTS

The purpose of this item is action on proposed amendments to Board of Regents Policy: *Equity, Diversity, Equal Opportunity, and Affirmative Action*. The amendments will bring the University into compliance with the Minnesota Human Rights Act.

The following are proposed amendments to Section II (a):

- Addition of “familial status” to the list of protected classes.
- Addition of “membership or activity in a local commission created for the purpose of dealing with discrimination” to the list of protected classes.

The committee reviewed the amendments at its May 2018 meeting. No additional changes have been made since that review.

BACKGROUND INFORMATION


PRESIDENT'S RECOMMENDATION

The President recommends approval of the proposed amendments to Board of Regents Policy: *Equity, Diversity, Equal Opportunity, and Affirmative Action*. 
SECTION I. GUIDING PRINCIPLES.

The following principles shall guide the commitment of the University of Minnesota (University) to equity, diversity, equal opportunity, and affirmative action:

(a) Consistent with its academic mission and standards, the University is committed to achieving excellence through equity and diversity.

(b) A diverse student body enhances the academic and social environment for all students and prepares students to thrive in an increasingly diverse workforce and society.

(c) Equal educational access is critical to preparing students for the responsibilities of citizenship and civic leadership in a heterogeneous society.

(d) As a community of faculty, staff, and students engaged in research, scholarship, artistic activity, teaching and learning, or the activities that support them, the University seeks to foster an environment that is diverse, humane, and hospitable.

(e) In partnership with community groups, the University is committed to serving the state, the nation, and the world through its outreach and public service.

SECTION II. IMPLEMENTATION.

The University shall:

(a) provide equal access to and opportunity in its programs, facilities, and employment without regard to race, color, creed, religion, national origin, gender, age, marital status, familial status, disability, public assistance status, membership or activity in a local commission created for the purpose of dealing with discrimination, veteran status, sexual orientation, gender identity, or gender expression;

(b) advocate and practice affirmative action consistent with law, including the use of recruiting and search processes to enhance participation of racial minorities, women, persons with disabilities, and protected veterans;

(c) establish and nurture an environment for faculty, staff, students, and visitors that actively acknowledges and values equity and diversity and is free from racism, sexism, ageism, homophobia, and other forms of prejudice, intolerance, or harassment;

(d) provide equal educational access to members of underrepresented groups and develop affirmative action admissions programs, where appropriate, to achieve the University’s educational mission; and

(e) promote and support equity and diversity through its academic programs, its employment policies and practices, its delivery of services, and purchase of goods, materials, and services for its programs and facilities from businesses of the diverse communities it serves.
SECTION III. MONITORING.

The president or delegate shall set performance goals consistent with this policy and law; remedy any discriminatory practice that deviates from this policy; and assess and reward the performance of individuals and units using the University's critical measures for the equity and diversity performance goals as part of the University's planning and budget process.

Mission Fulfillment

AGENDA ITEM:  Board of Regents Policy: *International Education and Engagement*

- [ ] Review
- [ ] Review + Action
- [x] Action
- [ ] Discussion

- This is a report required by Board policy.

PRESENTERS:  Karen Hanson, Executive Vice President and Provost

PURPOSE & KEY POINTS

The purpose of this item is action on the proposed amendments to Board of Regents Policy: *International Education and Engagement*. The changes reflect items identified during the comprehensive review process and include:

- The addition of research to the scope of the policy.
- Updated language that reflects current terminology.

The committee reviewed the proposed amendments at its May 2018 meeting. No additional changes have been made since that review.

BACKGROUND INFORMATION


PRESIDENT’S RECOMMENDATION

The President recommends approval of the proposed amendments to Board of Regents Policy: *International Education and Engagement*. 
INTERNATIONAL EDUCATION, RESEARCH, AND ENGAGEMENT OUTREACH

SECTION I. SCOPE.

This policy governs all international education, research, and outreach activities of the students, faculty, and staff, and programs of the University of Minnesota (University).

SECTION II. GUIDING PRINCIPLES.

This policy affirms the commitment of the Board of Regents (Board) to foster international education, research, and outreach and engagement throughout the University community. The following principles shall guide international education, research, and outreach and engagement at the University:

(a) In an interdependent world, the welfare of the state and the well-being of its citizens are linked to the welfare of all humankind.

(b) Through international education, research, or outreach and engagement, a great university the University builds and extends its scholarly standing, its potential for research, and its contributions to economies, and the education and skills of students and citizens of the state, the nation, and the world.

(c) The University has a responsibility to incorporate into its educational programs community and curriculum international opportunities that provide students, faculty, and staff the understanding, skills, and knowledge necessary to be creative and useful globally competent citizens of the state, the nation, and the world.

(d) The University has a responsibility to ensure to the extent possible, respectful and ethical engagement with people, places, and ideas around the globe.

SECTION III. ADMINISTRATION IMPLEMENTATION.

The president or delegate shall administer policies that, in compliance with all applicable laws and regulations, effectively promote and encourage a comprehensive program of approach to international education, research, and engagement outreach that includes the following elements:

(a) International Experience for Students. The University will encourage the participation of University students in international educational, research, and outreach experiences and provide opportunities that afford participating students the guidance and assistance necessary to integrate these experiences into University degree curricula.

(b) Enrollment and Inclusion of International Students. The University will recruit and enroll students from abroad other countries in its undergraduate, professional, and graduate colleges programs in such numbers and with such geographic origins as to advance the University's educational goals meet the guiding principles stated in this policy.
(c) **Faculty and Staff Teaching and Research, and Outreach.** The University will encourage international education and engagement in the teaching, research, and service outreach of its faculty and staff through the exchange interaction of persons, people, and ideas, and materials with other countries.

(d) **Collaboration with International Institutions.** The University will build strategic international partnerships with universities, institutions, and organizations worldwide, expand international scholarly exchanges, and internationalize the University community and curriculum.
AGENDA ITEM: Progress Update from the Systemwide Enrollment Planning Taskforce

☐ Review  ☐ Review + Action  ☐ Action  ☒ Discussion

☐ This is a report required by Board policy.

PRESENTERS: Karen Hanson, Executive Vice President and Provost
            Barbara Keinath, Vice Chancellor for Academic and Student Affairs, UMC
            Robert McMaster, Vice Provost and Dean of Undergraduate Education, UMTC

PURPOSE & KEY POINTS

The purpose of this item is to discuss the work of the Systemwide Enrollment Planning Taskforce. The discussion will highlight the development and current status of a system enrollment plan to maximize system undergraduate enrollment, optimize enrollment at each of the five campuses, and meet University Progress Card goals for enrollment and enhancing diversity. The discussion will also address the scope and purpose of the enrollment plan, the timeline for completion, and future steps.

BACKGROUND INFORMATION

The Board discussed this topic at the following meetings:

- February 2018: Update on the Twin Cities 5-Year Enrollment Plan, Mission Fulfillment
- February 2018: Systemwide Enrollment Planning: Crookston Campus, Mission Fulfillment
- December 2017: Systemwide Enrollment Planning: Morris Campus, Mission Fulfillment
- December 2017: Diversity in Twin Cities Undergraduate Education, Mission Fulfillment
- September 2017: Systemwide Enrollment Planning, Mission Fulfillment Committee
- June 2017: Diversity in Undergraduate Enrollment, Board of Regents work session
- May 2017: Diversity in Undergraduate Enrollment at the Twin Cities Campus: Aligning Outcomes with Aspirations, Board of Regents work session
- February 2017: Update on Enrollment Management Plan, Academic and Student Affairs
In June 2017, the Board of Regents adopted the University of Minnesota Systemwide Strategic Framework (SWSF) which called for the development of a systemwide recruitment, admissions, and retention plan within Strategic Intention I: Leaders and Learners. Stemming from the SWSF, a taskforce developed seven recommendations toward that goal, the first being the creation of an overarching framing document on system enrollment management that would develop system targets and goals for enrollment, and strategies to improve linkages in enrollment planning, marketing, and support among campuses.

Over the past year, the Executive Vice President and Provost convened regular meetings of the taskforce, which comprised the campus Vice Chancellors, admission directors, and the Twin Cities campus Vice Provost and Dean of Undergraduate Education. The taskforce identified and reviewed system- and campus-specific enrollment, admission, and recruitment data in order to develop system goals, targets, and strategies. While enrollment management at the University of Minnesota historically has been largely based on separate campus planning, a system enrollment plan establishes a new process of system-based thinking and cross-campus collaboration to achieve common goals and targets.

The plan, currently in the final phase of development, sets forth the following five goals to be met by 2024:

1. Increase system enrollment by approximately 3,000 students.
2. Optimize student enrollment (in-person or online) at each of the five system campuses.
3. Increase the number of Minnesota residents enrolled in the system by 2,000 students.
4. Implement systemwide enrollment planning and cross-campus collaboration that leverages distinct strengths of each campus.
5. Increase attentiveness to ethnic, social, economic, and racial diversity demographics of Minnesota high school students in enrollment activities.

The goals above are based on analysis of each campus’ enrollment capacity and ideal enrollment size and profile. Specific targets for new incoming freshman and new transfer students also call for modest enrollment growth and continued increases in the number of Pell-eligible and first-generation students, contributing to the maintenance of historical access for Minnesota students.

The taskforce has identified, and is currently finalizing, the following seven strategies that will be linked to specific actions steps tied to achieve enrollment goals and targets:

**Enrollment Strategy 1:** Decrease migration flow of Minnesota students to four-year institutional competitors.
**Enrollment Strategy 2:** Recruit applicants to other system campuses when not admitted to campus of first choice.

**Enrollment Strategy 3:** Develop and improve academic pathway programs.

**Enrollment Strategy 4:** Develop systemwide financial aid strategy and improve messaging around net costs, pricing, and value proposition of University of Minnesota brand.

**Enrollment Strategy 5:** Develop and brand a one-stop portal to online courses and programs across the University of Minnesota system.

**Enrollment Strategy 6:** Improve support for system-campus model to strengthen culture of system coordination.

**Enrollment Strategy 7:** Emphasize benefits of the University of Minnesota brand and build awareness of distinctiveness of each campus. Communicate brand collectively.

While each individual campus faces unique challenges in meeting enrollment goals and targets, the taskforce reviewed the related environmental trends about system competitors, migration patterns of Minnesota students, tuition and aid, and other factors related to enrollment to identify the most salient issues. These key factors shaping the enrollment environment were used to refine the enrollment goals and associated strategies listed above. The six most significant factors shaping the enrollment environment are:

1. Shifting geo-demographics of Minnesota and incoming student population.
2. Intense recruitment environment resulting in increased migration of Minnesota students to midwest competitor institutions.
3. Perceptions around higher education financing, discounting, and tuition cost vs. price.
4. Attending to dynamic workforce needs and employer expectations. Conveying value of a higher education degree.
5. University of Minnesota value proposition and brand recognition.
6. Opportunity for improved campus connectedness and system coordination.

The taskforce anticipates completion of the System Enrollment Plan by fall. The taskforce will provide future updates and iterations of the plan, and the plan will guide future enrollment work and collaborations.
Progress Update from Systemwide Enrollment Planning Taskforce

Board of Regents
Mission Fulfillment Committee
June 7, 2018

Karen Hanson
Executive Vice President and Provost

Barbara Keinath
Vice Chancellor for Academic and Student Affairs, University of Minnesota-Crookston

Robert McMaster
Vice Provost and Dean of Undergraduate Education, University of Minnesota-Twin Cities
Overview

• Convened by Executive Vice President and Provost Hanson
• Connected to Systemwide Strategic Plan
• System scope, focused on undergraduate enrollment
• System-level targets, goals, and strategies by 2024
• Ongoing process
• System Enrollment Council
Progress to Date

• Factors
• Enrollment targets
• System-level goals and strategies
• Development of actions
Factors

• Identified six major factors shaping enrollment environment.
• Used to develop strategies in System Enrollment Management (SEM) Plan.
• Reviewed information, data, and met with groups and individuals doing the work.
Factor 1:
Shifting geo-demographics of Minnesota and incoming student population.
Projected Percentage Change in High School Graduates 2018 to 2023

Source: WICHE Knocking on the College Door 2016
Over the next six years of projected total growth in Minnesota, more than two-thirds of the increase is expected to be among Students of Color.
Factor 2: Intense recruitment environment resulting in increased migration of Minnesota students to midwest competitor institutions.
Migration of New Freshmen Entering Four-Year Public Universities in the Upper Midwest: Fall Semester 2016

5-State Total
Into Minnesota: 2,610
Out of Minnesota: 7,443
Ratio: 2.85:1

Source: IPEDS
Migration of New Freshmen Entering Major Public Universities in the Upper Midwest: Fall Semester 2016

6-State Total
Into Minnesota: 1,307
Out of Minnesota: 4,729
Ratio: 3.62:1

Source: IPEDS
Factor 3: Perceptions around higher education financing, discounting, and tuition cost vs. price.
Average Net Cost of Attendance Price at Competitor Institutions

Source: IPEDS
Average Net Price for Fall 2016 Full-Time, First-Time Degree-Seeking Undergraduates Awarded Title IV Aid by Income Level

Source: IPEDS
Loan Debt (for those with debt)
2016-17 Bachelor’s Degree Recipients, by Campus

<table>
<thead>
<tr>
<th>Year of Graduation</th>
<th>Twin Cities</th>
<th>Morris</th>
<th>Crookston</th>
<th>Duluth</th>
<th>Rochester</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Graduates</td>
<td>7,594</td>
<td>367</td>
<td>418</td>
<td>1,812</td>
<td>117</td>
<td>10,307</td>
</tr>
<tr>
<td>% with NO Debt</td>
<td>43%</td>
<td>35%</td>
<td>31%</td>
<td>27%</td>
<td>25%</td>
<td>39%</td>
</tr>
</tbody>
</table>

**Student Loan Debt (excluding PLUS parent loans)**

<table>
<thead>
<tr>
<th></th>
<th>Twin Cities</th>
<th>Morris</th>
<th>Crookston</th>
<th>Duluth</th>
<th>Rochester</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average – for students with debt</td>
<td>$25,994</td>
<td>$24,025</td>
<td>$24,432</td>
<td>$29,770</td>
<td>$28,385</td>
<td>$26,675</td>
</tr>
<tr>
<td>Median – for students with debt</td>
<td>$23,009</td>
<td>$20,933</td>
<td>$22,649</td>
<td>$26,716</td>
<td>$26,718</td>
<td>$24,268</td>
</tr>
</tbody>
</table>
Factor 4:
Attending to dynamic workforce needs and employer expectations. Conveying value of a higher education degree.
• Rapid scientific and technological innovations are changing the workplace.
• Demand for greater numbers of educated workers.
• Today’s students have between 10-14 jobs by age 38.
• Need for workers to have foundational knowledge and adaptable skills.
• Consistent expectations across industries for college graduates emphasize core competencies (critical thinking, problem solving, communication, integrity, intercultural skills, capacity for continued learning).

Factor 5:
University of Minnesota value proposition and brand recognition.
• Land-grant mission: teaching, research, outreach
• Distinctiveness of each campus
• Top 10 Research University as flagship
Factor 6: Opportunity for improved campus connectedness and system coordination.
System Enrollment Goals by 2024

1. Increase system enrollment by approximately 3,000 students.
2. Optimize student enrollment (in-person or online) at each of the five system campuses.
3. Increase the number of Minnesota residents enrolled in the system by 2,000 students.
4. Implement systemwide enrollment planning and cross-campus collaboration that leverages distinct strengths of each campus.
5. Increase attentiveness to ethnic, social, economic, and racial diversity demographics of Minnesota high school students in enrollment activities.
# System Enrollment Targets

<table>
<thead>
<tr>
<th>Undergrad Degree Seeking Total</th>
<th>Current Aggregate Fall 2017</th>
<th>Target Aggregate 2024</th>
</tr>
</thead>
<tbody>
<tr>
<td>UMN-Crookston</td>
<td>1,797</td>
<td>2,600</td>
</tr>
<tr>
<td>UMN-Duluth</td>
<td>9,199</td>
<td>9,920</td>
</tr>
<tr>
<td>UMN-Morris</td>
<td>1,554</td>
<td>1,800</td>
</tr>
<tr>
<td>UMN-Rochester</td>
<td>459</td>
<td>800</td>
</tr>
<tr>
<td>UMN-Twin Cities</td>
<td>31,535</td>
<td>32,500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>44,544</strong></td>
<td><strong>47,620</strong></td>
</tr>
</tbody>
</table>

*System Enrollment Targeted Increase*

*Enrollment figures for this table are defined as undergraduate, degree-seeking and inclusive of all teaching and learning delivery modalities (e.g. in-person, online, hybrid).*
### University of Minnesota System

#### Enrollment Management: Recruitment

<table>
<thead>
<tr>
<th></th>
<th>New Freshman (NHS)</th>
<th>New External Transfer (NAS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall 2017</td>
<td>Target Fall 2024</td>
</tr>
<tr>
<td>Degree Seeking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In State</td>
<td>9,220</td>
<td>Modest Growth</td>
</tr>
<tr>
<td></td>
<td>6,396</td>
<td>Maintain historical access</td>
</tr>
<tr>
<td>Pell Grant Recipients</td>
<td>1,901</td>
<td>Modest increase</td>
</tr>
<tr>
<td></td>
<td>20.6%</td>
<td></td>
</tr>
<tr>
<td>First-Generation</td>
<td>2,339</td>
<td>Modest increase</td>
</tr>
<tr>
<td></td>
<td>25.4%</td>
<td></td>
</tr>
<tr>
<td>International</td>
<td>415</td>
<td>Maintain</td>
</tr>
<tr>
<td></td>
<td>4.5%</td>
<td></td>
</tr>
<tr>
<td>Non-Degree</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

|                     |                    |                            |
|                     | Total Undergraduate Headcount |
|                     | Fall 2017          | Target Fall 2024 |
| Degree Seeking      | 44,544             | 47,620          |
| In State            | 31,441             | Modest increase |
|                     | 70.6%              |                |
| Pell Grant Recipients| 10,014             | Modest increase |
|                     | 22.5%              |                |
| First-Generation    | 12,981             | Modest increase |
|                     | 29.1%              |                |
| International       | 3,231              | Modest increase |
|                     | 7.3%               |                |
| Non-Degree          | 5,940              | Modest increase |

### Academic Profile: Maintain academic rigor and selectivity profile on each campus.

### Students of Color: Increase enrollment of students of color throughout system to reflect current and changing state demographic profile.

### Online Education: Increase online education or hybrid offerings throughout system to attract and retain a more diverse student body and contribute to enrollment growth.

### Retention and Graduation: Increase rates on each campus as they relate to transfer retention, first-year retention, and 4-year/6-year graduation.
Strategies & Actions

Enrollment Strategy 1:
Decrease migration flow of MN students to four-year institutional competitors.

Example Actions:
- Target messaging and marketing to describe benefits of University of Minnesota.
- Perform competitive analysis of student college choice.
- Analyze reciprocity agreements.
Strategies & Actions

Enrollment Strategy 2:
Recruit applicants to other system campuses when not admitted to campus of first choice.

Example Actions:
• Create application language and soft decline letter inclusive of information about other system campuses, importance of “fit,” and benefits of University of Minnesota brand.
• Continue to nurture Share My App.
• Share deny lists and wait lists earlier across the system.
Strategies & Actions

Enrollment Strategy 3:
Develop and improve academic pathway programs.

Example Actions:
- Grow partnerships with Minnesota high schools and other state partners with particular emphasis on students of color and growing populations.
- Increase collaboration with Minnesota State two-year programs.
- Increase development of undergraduate to professional programs.
- Increase focus on diversity pathways across the system into graduate programs.
Strategies & Actions

Enrollment Strategy 4: Develop systemwide financial aid strategy and improve messaging around net costs, pricing, and value proposition of UMN Brand.

Example Actions:

- Expand land-grant legacy and student experience scholarship programs such as President’s Emerging Scholarship Program systemwide.
- Promote scholarship opportunities through the Capital Campaign.
- Improve messaging about affordability and University of Minnesota as lowest cost option.
Enrollment Strategy 5:
Develop and brand a one-stop portal to online courses and programs across the University of Minnesota system.

Example Actions:
- Market and clearly brand single entity/portal for online education at University of Minnesota.
- Target populations for growth.
Strategies & Actions

Enrollment Strategy 6:
Improve support for system-campus model to strengthen culture of system coordination.

Example Actions:
• Establish permanent System Enrollment Council.
• Formalize systemwide admissions functions and responsibilities.
• Continue regular meetings and sharing among admissions directors.
• Continue developing strategy for common application and other shared platforms.
Strategies & Actions

**Enrollment Strategy 7:**
Emphasize benefits of UMN Brand and build awareness of distinctiveness of each campus. Communicate brand collectively.

**Example Actions:**
- Create system undergraduate admissions Web landing page.
- Emphasize value of breadth and depth (T-shaped) curriculum.
- Coordinate with existing University Relations systemwide branding and marketing messaging (e.g. Systemwide Identity Guide, promotional materials).
<table>
<thead>
<tr>
<th>Enrollment Strategy 1</th>
<th>Decrease migration flow of MN students to four-year institutional competitors.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrollment Strategy 2</td>
<td>Recruit applicants to other system campuses when not admitted to campus of first choice.</td>
</tr>
<tr>
<td>Enrollment Strategy 3</td>
<td>Develop and improve academic pathway programs.</td>
</tr>
<tr>
<td>Enrollment Strategy 4</td>
<td>Develop systemwide financial aid strategy and improve messaging around net costs, pricing, and value proposition of UMN Brand.</td>
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<td>Enrollment Strategy 5</td>
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</tbody>
</table>
Mission Fulfillment

AGENDA ITEM: Supporting Students in Gateway Courses

☐ Review  ☐ Review + Action  ☐ Action  ☒ Discussion

☐ This is a report required by Board policy.

PRESENTERS: Robert McMaster, Vice Provost and Dean of Undergraduate Education, UMTC
LeeAnn Melin, Associate Vice Provost for Student Success, UMTC
Andrea Schokker, Interim Dean, Swenson College of Science & Engineering, UMD

PURPOSE & KEY POINTS

The purpose of this item is to discuss the University’s efforts to ensure the success of students in gateway courses. The item will define gateway courses and provide examples. The item also will highlight the SMART Learning Commons on the Twin Cities campus and the Securian Math Learning Lab on the Duluth campus.
Supporting Students in Gateway Courses

Board of Regents
Mission Fulfillment Committee
June 7, 2018

Robert McMaster
Vice Provost and Dean of Undergraduate Education, Twin Cities

LeeAnn Melin
Associate Vice Provost for Student Success, Twin Cities

Andrea Schokker
Interim Dean, Swenson College of Science & Engineering, Duluth
The “Gateway” Courses

“college credit–bearing and/or developmental education courses that enroll large numbers of students and have high rates of Ds, Fs, withdrawals, and incompletes”

“high-enrollment courses that have historically resulted in high rates of Ds, Fs, Withdrawals, and Incompletes especially for low-income, first-generation and historically underrepresented students”

John Gardner Institute, “Improving Teaching, Learning, Equity, and Success in Gateway Courses”
Gateway Courses

Gateway courses are defined by Koch and Rodier (2014) as any courses that are:

• **Foundational** – These courses may be non-credit-bearing developmental education courses, which often serve as initial paths to the gateway courses, and/or college credit-bearing, generally lower-division courses.

• **High-risk** – Such courses are identified by the rates at which D, F, W (for any form of withdrawal on the transcript) and I (for incomplete) grades are earned across sections of the course(s).

• **High-enrollment** – These courses are identified by the number of students enrolled within and/or across course sections.
Gateway Courses

Gateway courses are used to:

1. Fulfill Liberal (general) Education Requirements.
2. Serve as prerequisites for more advanced coursework.
UMTC Liberal Education Requirements

Students will take one course in each of the following:

1. Arts and Humanities
2. Biological Sciences
3. Historical Perspectives
4. Literature
5. Mathematical Thinking
6. Physical Sciences
7. Social Sciences
UMTC Liberal Education Requirements

Students will complete one course that meets four of the five themes:

1. Civic Life and Ethics
2. Diversity and Social Justice in the U.S.
3. Environment
4. Global Perspectives
5. Technology and Society
Using analytics to improve in-progress alerts

• Exploring how to use the learning management system to generate alerts automatically
• Pilot began with volunteer instructors using Moodle, continued with instructors piloting Canvas learning management system
• System looks for engagement with class materials in the learning management system or grades on multiple assignments that are very low relative to others in the class
• When these scores are low for multiple classes, a notification is created in the APLUS advising support system to inform advisers
<table>
<thead>
<tr>
<th>Academic Plan (Major)</th>
<th>#</th>
<th>Academic Plan (Major)</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology</td>
<td>1,256</td>
<td>Communication Studies</td>
<td>394</td>
</tr>
<tr>
<td>Economics</td>
<td>967</td>
<td>Nursing</td>
<td>389</td>
</tr>
<tr>
<td>Computer Science</td>
<td>822</td>
<td>English</td>
<td>370</td>
</tr>
<tr>
<td>Biology</td>
<td>677</td>
<td>Marketing</td>
<td>365</td>
</tr>
<tr>
<td>Journalism</td>
<td>574</td>
<td>Biology, Society, and Environment</td>
<td>360</td>
</tr>
<tr>
<td>Finance</td>
<td>570</td>
<td>Kinesiology</td>
<td>355</td>
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<tr>
<td>Political Science</td>
<td>545</td>
<td>Biochemistry</td>
<td>346</td>
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<tr>
<td>Mathematics</td>
<td>542</td>
<td>Business and Marketing Education</td>
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<td>Mechanical Engineering</td>
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<td>Environmental Sciences Policy and Management</td>
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<td>Animal Science</td>
<td>427</td>
<td>Neuroscience</td>
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DFW Rates of Highest Enrollment Twin Cities Campus
Introductory Courses – 2013-14 to 2017-18

- WRIT 1301 University Writing (15,503 enrl) 4.85%
- CHEM 1065 Chem Prin I Lab (11,119 enrl) 10.57%
- CHEM 1061 Chem Prin I (10,623 enrl) 21.28%
- ECON 1101 Principles of Microeconomics (10,564 enrl) 8.75%
- PSY 1001 Intro Psych (9,595 enrl) 8.56%
- MATH 1271 Calculus I (9,021 enrl) 13.25%
- CHEM 1062 Chem Prin II (7,668 enrl) 18.47%
- CHEM 1066 Chem Prin II Lab (7,549 enrl) 25.50%
- CHEM 2301 Org Chem I (7,507 enrl) 19.09%
- ACCT 2050 Intr Financial Rptg (7,337 enrl) 10.85%
- COMM 1101 Public Speaking (7,230 enrl) 4.29%
- CHEM 1015 Intro Chem (6,740 enrl) 10.57%
- PHAR 1002 Medical Terminology (6,371 enrl) 1.59%
- BIOL 1009 General Biology (6,290 enrl) 14.05%
- AST 1001 Explore Universe (5,617 enrl) 13.25%
- ECON 1102 Principles Macro (5,338 enrl) 8.58%
- PHYS 1301W Phys for Sci and Engr I (4,965 enrl) 8.56%
- MATH 1272 Calculus II (4,944 enrl) 27.99%
- JOUR 1001 Intro to Mass Comm (4,837 enrl) 5.62%
- SOC 1001 Introduction to Sociology (4,841 enrl) 5.83%
Large Enrollment Twin Cities Campus Introductory Courses with Highest DFW Rates – 2013-14 to 2017-18

- CHEM-1015 Intro Chem (6,740 enrl) – 30.76%
- PHIL-1001 Intro to Logic (1,179 enrl) – 30.28%
- CSCI-1133 Intro to Programming Concepts (3,022 enrl) – 29.65%
- MATH-1272 Calculus II (4,944 enrl) – 27.99%
- MATH-1031 College Alg & Prob (2,652 enrl) – 26.32%
- MATH-1271 Calculus I (9,021 enrl) – 25.50%
- MATH-2243 Lin Alg & Diff Eqs (3,190 enrl) – 25.00%
- MATH-1142 Short Calculus (3,059 enrl) – 24.89%
- CSCI-1933 Intro Algs & Data Str. (1,767 enrl) – 22.56%
- CSCI-2021 Mach Arch and Org (2,303 enrl) – 21.73%
- CHEM-1061 Chem Prin I (10,623 enrl) – 21.49%
- CSCI-1113 Intro to C/C++ (3,860 enrl) – 21.28%
- CHEM-2301 Org Chem I (7,507 enrl) – 20.31%
- CHEM-1062 Chem Prin II (7,668 enrl) – 19.99%
- CHEM-2302 Org Chem II (4,528 enrl) – 18.47%
- SPAN-1022 Alt Second-Sem Span (3,144 enrl) – 18.09%
- CSCI-2041 Adv. Programming Principles (1,889 enrl) – 17.95%
- PHIL-1001 Intro to Logic (1,179 enrl) – 17.68%
- FREN-1001 Beginning French (1,328 enrl) – 17.36%
- MATH-2263 Multivariable Calc (3,745 enrl) – 17.32%
- MATH-1051 Precalculus I (1,850 enrl) – 16.98%
- MATH-1051 Precalculus I (1,850 enrl) – 16.92%
<table>
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<th>Title</th>
<th>Enrl</th>
<th>DFW%</th>
<th>Course</th>
<th>Title</th>
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<td>COMM 1101</td>
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<td>Chemistry Principles I</td>
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<td>ACCT 2050</td>
<td>Intro Financial Reporting</td>
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<td>Intro Psychology</td>
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<td>SPAN 1004</td>
<td>Intermediate Spanish</td>
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<td>19.0%</td>
<td>PHYS 1201W</td>
<td>Intro Phys for Bio/Pre-Med I</td>
<td>1,965</td>
<td>7.1%</td>
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<td>CHEM 1066</td>
<td>Chemistry Principles II Lab</td>
<td>2,972</td>
<td>7.7%</td>
<td>CHEM 2302</td>
<td>Org Chem II</td>
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<td>PHAR 1002</td>
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<td>SOC 1001</td>
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<td>1,817</td>
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<td>ECON 1101</td>
<td>Principles of Microeconomics</td>
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<td>8.1%</td>
<td>MATH 1272</td>
<td>Calculus II</td>
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<td>General Biology</td>
<td>2,566</td>
<td>13.5%</td>
<td>CSCI 1113</td>
<td>Intro to C/C++</td>
<td>1,731</td>
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## Enrollments and DFW Rates for Common Twin Cities Campus
### Required Courses: 2013-14 to 2017-18

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<tr>
<th>Course</th>
<th>Title</th>
<th>Enrl</th>
<th>DFW%</th>
<th>Course</th>
<th>Title</th>
<th>Enrl</th>
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<td>ACCT-2050</td>
<td>Intro Financial Reporting</td>
<td>7,337</td>
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<td>MATH-1151</td>
<td>Precalculus II</td>
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<td>BIOL-1009</td>
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<td>6,290</td>
<td>14.1%</td>
<td>MATH-1271</td>
<td>Calculus I</td>
<td>9,021</td>
<td>25.5%</td>
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<td>CHEM-1015</td>
<td>Intro Chem</td>
<td>6,740</td>
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<td>CSE Calc I</td>
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<td>18.5%</td>
<td>MATH-1372</td>
<td>CSE Calc II</td>
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<td>Intro College Phys I</td>
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<td>CHEM-2301</td>
<td>Org Chem I</td>
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<td>PHYS-1201W</td>
<td>Intro Phys Biol &amp; Pre-med I</td>
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<td>Public Speaking</td>
<td>7,230</td>
<td>4.3%</td>
<td>PHYS-1301W</td>
<td>Phys for Sci and Engr I</td>
<td>4,965</td>
<td>8.6%</td>
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<td>CSCI-1113</td>
<td>Intro to C/C++</td>
<td>3,860</td>
<td>20.3%</td>
<td>PSY-1001</td>
<td>Intro Psych</td>
<td>9,595</td>
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<td>CSCI-1133</td>
<td>Intro to Prog Concepts</td>
<td>3,022</td>
<td>29.7%</td>
<td>STAT-3011</td>
<td>Into Statistical Analysis</td>
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<td>Data Analysis</td>
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<td>ECON-1102</td>
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<td>8.6%</td>
<td>WRIT-1301</td>
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<td>15,503</td>
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<td>MATH-1142</td>
<td>Short Calculus</td>
<td>3,059</td>
<td>22.6%</td>
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</tbody>
</table>
Supporting Students in Gateway Courses

- Mid-Term Alerts
- Learning Support
- Teaching Innovation
- Referrals
- Placement Testing
- Data Analytics

Student Success
Mid-term alerts: University Policy

Administrative policy on “Providing In-progress Notifications on Academic Performance: Twin Cities, Crookston, Morris, Rochester”

1. Instructors are required to provide in-progress notifications for all 1-XXX courses to students who, on the basis of performance to date in the course, appear to be in danger of receiving a grade of D, F, or N. Such notification will be provided to students within a timeframe to allow them to improve their academic performance or to withdraw by the withdrawal deadline. In-progress notifications will not be recorded on transcripts.

2. Instructors are encouraged to provide in-progress notifications for all courses and all students.

3. The provision of in-progress notifications is a courtesy to the student. Failure to receive an in-progress notification or a decline in a student's academic performance after a notification has been issued does not create the right for a student to contest a grade in a course.
Mid-term alerts in practice

• To provide useful mid-term alerts, courses must be arranged so that assignments are provided and graded early in the term, so instructors can evaluate whether students are likely to earn a passing grade
• Although rosters are distributed to instructors electronically, submitting the alerts still requires some additional effort from instructors, leading to low participation rates
• Among departments with high failure rate courses, participation rates are highest in Psychology (75.0%), Biology (48.1%), and Math (43.2%)
Peer tutors across campus receive extensive training which has been certified through the International Tutor Training Certification Program (ITTCP) of the College Reading and Learning Association.
Most popular classes for tutoring:

- MATH 1271
- PHYS 1301W
- MATH 1272
- MATH 1142
- PHYS 1302W
- PHYS 1201W
- MATH 2263
- MATH 1372
- MATH 1031
- MATH 2243

Students who visited SMART Tutors at least once in Fall 2017 for one of our Top 5 most-visited courses were less likely to receive a D, F, or W grade:

MATH1271
- D/F/W % for Visited: 5.6%
- D/F/W % for Non-Visited: 6.1%

PHYS1301W
- D/F/W % for Students Who Visited: 2.0%
- D/F/W % for Non-Visited: 2.4%

MATH1272
- D/F/W % for Visited: 1.9%
- D/F/W % for Non-Visited: 7.8%

MATH1142
- D/F/W % for Visited: 4.9%
- D/F/W % for Non-Visited: 5.8%

PHYS1201W
- D/F/W % for Visited: 0.0%
- D/F/W % for Non-Visited: 3.3%
Facilitated Group Study Sessions
(Peer assisted learning (PAL) sessions)

Students who attended 10+ PAL sessions earned a half to full letter grade higher over their peers.

“Teamwork helps me learn other strategies to solve problems.”

“He did not give me the answer to my math problem, but gave me a strategy to solve many problems.”

“The ability to organize my research, highlight, and take notes right on the article really helped lower my anxiety as I was able to organize my thoughts into writing my research paper.”

“He also explained what he was doing, why he was doing it, and why he was taking steps in that order. This really helped me to connect it to more problems on my own.”

“I’m actually doing the problems myself, and verifying my knowledge on the topics of the week.”

“He made things into a manageable, tackle-able project rather than a vague and frightening research monolith.”
Additional Learning Support

Student Academic Success Services
- Promotes academic success in skill development
- 396 students in academic skills courses
- Provided 470 academic skills coaching sessions to 252 students
- Participated in 58 outreach events to ~1650 people

Lindahl Academic Center for Student Athletes
- Tutoring and academic support for student athletes
- AY 17-18:
  - Mentor Tutoring Sessions: 8,174
  - Subject Tutoring Sessions: 23,923

Multicultural Center for Academic Excellence Instructional Center
- Offers peer tutoring in physics, math, chemistry, writing, languages, and many other subjects
- Walk-in sessions and online sessions by appointment.
- Boasts 90% "excellent" or "very good" satisfaction rates from students
University of Minnesota Duluth
Case Study: Securian Mathematics Lab

Andrea Schokker
Interim Dean of the Swenson College of Science and Engineering
Professor of Civil Engineering
UMD Gateway Courses Overview

• Enhanced Learning
• Bridge summer courses
• Learning Commons
• Case Study: Securian Mathematics Lab
Enhanced Learning

• Major SCSE initiative
  – College committee
  – Faculty cohorts / book groups
  – Regular workshops
  – Peer mentoring
Enhanced Learning: Chemistry and Physics
Summer Math Bridge Program

- Online summer prep course
  - Basic Math, Intro Algebra, Algebra, Precalculus
- Optional 1 week camp at UMD
- Under-represented groups and first generation students
- Outstanding first year retention rates
Learning Commons

- Tutoring Center
- Writer’s Workshop
- Supportive Services Program
- Securian Math Learning Lab
Securian Math Lab

- Math problems without frustration
- Some lectures replaced with lab
  - Instructional software
    - Interactive tutorials
    - Practice problems
  - On demand personal assistance
Securian Math Lab

• Staffing
  – Faculty, GTAs, UTAs, peer tutors
• Self-paced
• Combination of individual and group work
  – Helps self-efficiency
  – Combination of required and outside of class hours
• Space conducive to active learning
Mission Fulfillment

June 7, 2018

AGENDA ITEM: 21st Century Outreach Mission, Part III: A Vision for the University’s Outreach Mission

☐ Review  ☐ Review + Action  ☐ Action  ☒ Discussion

This is a report required by Board policy.

PRESENTERS: Karen Hanson, Executive Vice President and Provost
Allen Levine, Vice President for Research
Matt Kramer, Vice President for University and Government Relations

PURPOSE & KEY POINTS

The purpose of this item is to continue the discussion of the University’s 21st century outreach mission. The item will build on past conversations that have examined the University’s statewide outreach and engagement efforts.

The item will include a discussion of the definition of outreach and a systemwide plan of action that:

1. Identifies the University’s outreach goals for the near- and longer-term future;
2. Proposes principles that can guide future investments of resources in outreach work; and
3. Articulates action steps to optimize the University’s delivery of high quality outreach that maximizes the University’s impact across the state.

BACKGROUND INFORMATION

This item will bring together elements of the following previous discussions:

- February 2018: Systemwide Strategic Plan: Academic Investment Strategy Principles and Direction, Mission Fulfillment Committee
- February 2018: Systemwide Strategic Plan: Outreach & Public Service, Board of Regents
- December 2017: 2017 University Plan, Performance, and Accountability Report – Review, Board of Regents
- December 2017: 21st Century Outreach Mission, Part II: Statewide Public Engagement, Mission Fulfillment Committee
- October 2017: 21st Century Outreach Mission, Part I: Extension and Research Outreach Centers, Mission Fulfillment Committee
I. University Outreach Defined

Conceptualizing University outreach in two categories—either mission delivery or support—is useful in order to advance conversations related to outreach prioritization and investment.

Outreach and Public Service defined by the University Mission:
The first category of outreach includes activities tied specifically to the University’s mission statement, carried out on multiple campuses and throughout the state. Our mission is threefold: Research and Discovery, Teaching and Learning, and Outreach and Public Service. Within that mission, the aim of outreach and public service is described as follows:

To extend, apply, and exchange knowledge between the University and society by applying scholarly expertise to community problems, by helping organizations and individuals respond to their changing environments, and by making the knowledge and resources created and preserved at the University accessible to the citizens of the state, the nation, and the world.

The University’s mission thus includes having a significant, positive impact on the state and beyond. Outreach and public service efforts fulfill one part of the University’s mission directly, but they also, by integrating University’s partnerships with external entities into the institution’s research and teaching agendas, address the other elements of the three-fold mission. The October 2018 presentation (21st Century Outreach Mission, Part I: Extension and Research Outreach Centers) and the December 2018 presentation (21st Century Outreach Mission, Part II: Statewide Public Engagement), at the Mission Fulfillment Committee, discussed outreach and public service in this context, as elements of the university mission. They highlighted the outreach agendas of units whose primary focus is to conduct outreach and public service (University Extension and the Research Outreach Centers) and the outreach and engagement activities and initiatives among units (e.g., academic departments, colleges) and individuals (faculty, students) whose primary work focuses on research and teaching.

Our vision for the University’s Outreach mission in the 21st-century calls for elevating the importance and strengthening the impact of the University’s outreach efforts, including elevating the role of outreach and public service across the institution and helping more of the University’s faculty, students and academic units connect their work with the needs of our communities and the broader society. This vision responds to new expectations for research, changing student demographics, and a growing demand for the University to play an ever-larger role in addressing societal challenges and statewide needs.

The interplay of the three elements of the mission is what differentiates the University of Minnesota outreach and engagement from that of other institutions in the state. The small sample of publicly engaged research, teaching, and outreach included in the Appendix A was taken from the University’s
2017 Plan, Performance, and Accountability Report and shows the myriad ways that the three elements of the University mission intersect to address state and societal issues. This first category of outreach and public service is often referred to as the University's “public engagement” agenda. The term “public engagement” is used to align with shifts in national higher education landscape. Specifically, to enhance the University's contributions to society, the 21st Century outreach paradigm for outreach and public service includes not only promoting university “outreach” and service (which has traditionally involved bringing University expertise “to” communities or working “in” communities), but also “engagement” (which focuses on working “with” communities, in reciprocal partnerships).

**Outreach as Effective Messaging:**
A second category of outreach involves recognition that every contact that constituents have with the University can be understood as a form of outreach. This aspect of outreach involves a communication or marketing framework that recognizes the many venues through which individuals form relationships with the University, learn about its work, or begin to access the wealth of resources available to them. Activities in this category support the University mission.

The February 2018 presentation to the Board of Regents addressed outreach in this sense and was titled, *Outreach and Public Service Strategic Work Plan and Systemwide Communication Framework*. That presentation included a stakeholder-centric approach that identified four strategic constituencies: (1) alumni, parents, elected officials, interested third parties; (2) media; (3) youth; and (4) affinity groups (organizations or groups of individuals particularly concerned with, e.g., water, agriculture, healthcare, sports, etc.). Audiences in these four categories are reached through mechanisms such as:

- Direct communications to local and national media
- Youth programs, including summer camps and child care
- Campus experiences and venues for entertainment or enrichment, such as campus museums or Division I, II, and III Athletics.
- Fundraising and donor relations
- Alumni and other community relations
- Admissions marketing

**University’s Land-Grant Legacy:**
The three elements of the University mission are embedded deeply in the University’s history, in its founding as a land-grant institution. The land-grant legacy, in combination with the University’s distinction as Minnesota’s sole research university, shapes the institution’s opportunities and responsibilities. America’s land-grant story began in 1862, with the U.S. Congress’s passage of the Morrill Act, which represented a radical idea: public education is fundamental to the nation’s economic development. The spirit of the land-grant origin of the University of Minnesota has evolved into an expectation that this University has the capacity – and responsibility – to improve lives and drive the state, the nation, and the world forward through advanced education, knowledge discovery, and collaborative problem-solving. Appendix B includes a list of select examples from the dozens of legislative acts that have shaped the legacy of America’s land-grant universities.

As a result of these legislative acts, and in concert with the long history of higher education, state, and civic leadership, the legacy of land-grant universities has evolved to encompass the following:

- Advancement of knowledge through research and teaching.
- Ensuring that knowledge is broadly accessible.
• Educating people of the region, from all walks of life, for the workforce, for citizenship, and for improvement in the conditions of life—so as to contribute to the collective prosperity of the state and the nation.

As a statewide system of five campuses, each with distinct strengths and specialties, the University recognizes its unparalleled opportunities to advance collaborations addressing the most urgent problems of the state and world; to foster innovation and economic growth; to engage students in community-based learning, workplace, and service experiences; and to enhance quality of life. This is emphasized in the systemwide strategic planning framework, Building Our Collective Future, as well as in the TC campus strategic plan, Driving Tomorrow.

II. Prioritizing Outreach Activity and Guiding Resource Allocation and Investment

The two categories of outreach defined above are useful tools for guiding decisions about University outreach.

The second category described above is a necessary business and political components of all universities. The activities within this category are necessary for the successful administration of a complex organization. Activities within this category include outreach and communication to legislators and government offices to secure institutional funding or contracts; connections with our alumni; and outreach to external audiences to enhance their engagement with the University through participation in athletics events, musical performances, and other University-sponsored activities.

The first category of outreach described above is relevant to the impact to the state and beyond that is facilitated by the University’s academic units and academic support units. The activities grouped into this category include community-focused research conducted within and across academic disciplines and research centers, publicly-engaged teaching in which students come to address community needs through internships and service-learning, as well as the direct service efforts that Extension, health and dental clinics, research and outreach centers, and other entities provide to communities across the state.

Principles for Outreach Investment:
As underscored during the Board of Regents February 2018 presentation (System-Wide Strategic Plan: Academic Investment Strategy Principles and Direction, Mission Fulfillment Committee), system-wide strategic planning should of course shape the University’s academic investments.

A foundational framework for academic investment planning has long guided annual budget discussions, capital planning, review of academic program proposals, and the development of campus strategic plans. The framework provides a coherent set of guiding principles, foregrounding quality; centrality to mission; comparative advantage; enhancement of academic synergies; attention to issues of resources and demand; efficiency and effectiveness; and development and leveraging of resources. In 2017, the Twin Cities, Rochester, and Morris campuses also established strategic action plans for public engagement that articulate key steps for advancing this dimension of their outreach agendas; Crookston and Duluth intend to develop similar plans in the near future.

Translating the foundational planning framework specifically for outreach and public service, we propose for discussion the following draft set of principles for investment:
1. **Community need**: University outreach and public service should target critical societal issues in Minnesota communities and beyond.

2. **Potential for impact**: University outreach and public service should focus on activities that can lead to improved lives, the elimination or mitigation of problems, and the enhancement of the common good.

3. **Capacity for service**: University outreach and public service efforts should be channeled in directions where resources are adequate to have impact or where there is real potential to leverage internal and external resources and expand the resource base.

4. **University expertise**: University outreach and public service activities should center on issues and circumstances when faculty, staff, and students are qualified to make a positive difference or have capacity for ameliorative interventions.

5. **Unique ability**: University outreach and public service should address issues where we can bring to bear exceptional strength in a particular area of field, compared to other programs in Minnesota or at peer institutions.

6. **Identifiable impact**: University outreach and public service work should be measureable.

7. **Academic synergy**: University outreach and public service should target opportunities to intersect with the Research/Discovery and Teaching/Learning elements of the University mission and facilitate synergies across and among academic and programmatic units.

**Measurement and Assessment of Impact**

As noted in the December 2017 presentation (21st Century Outreach Mission, Part II: Statewide Public Engagement, Mission Fulfillment Committee), University units that conduct outreach and publicly engaged work measure and assess their work. There is evidence that publicly engaged research, teaching and outreach efforts are meeting external stakeholders’ needs across the state and beyond, and are have a beneficial impact on our communities.

Data and narratives are documented on unit and University websites and through print publications and reports. The depth, scope, and breadth of activities is illustrated by the following few examples:

- Keeping rural roads drift-free (statewide, 4,000 sites);
- Creation of 1000+ jobs for low income residents (North Minneapolis);
- Improvement of the health of turkeys (Willmar);
- Improvement in conditions of pregnant, incarcerated women and their babies through new state legislation (Twin Cities metro);
- Expanded renewable energy options for low-income residents (Backus);
- Improvement of sales for struggling retailers (Twin Cities);
- Integration of immigrants into the Minnesota workforce (St. Cloud, Rochester, Worthington, and statewide)
- Etc.
Strengthening units’ capacity to account systematically for the scale and community impact of their outreach efforts and streamlining unit data into a University-wide system continues to be a priority for the University. The institutional challenge is to gather systematically and align data from thousands of individual, discrete outreach activities undertaken each year in multiple units, so that the University can make valid and meaningful statements about the overall impact of the University’s work on particular stakeholders, communities, or issues.

Two system-wide Public Engagement Metric Task Forces have sought to identify ways to strengthen assessment of the University’s publicly engaged research, teaching, and outreach activities. A key recommendation of the first task force was to avoid the pitfall that other institutions have encountered. Specifically, the task force recommended avoiding the temptation to develop institution-wide data collection systems focused exclusively on capturing outreach and engagement data. Complaints of survey fatigue, data overload, and mismatched data sets that cannot be aggregated at an institution-wide level tend to plague such an approach. Instead, the task force recommended that efforts be made to embed public engagement-related items into the University’s existing institutional metrics systems.

Following this recommendation, the University implemented several public engagement metrics into existing systems. This effort enabled the capture of key institutional data that previously were not available, including from the University’s Sponsored Projects Proposal Routing form, the WORKS faculty activity reporting system, the SERU survey’s expanded civic and community engagement module, and from courses that include a community-engaged learning component. The University’s Public Engagement Council, which serves under the Executive Vice President and Provost as a systemwide consultative body for public engagement policy, has played an important and influential role in securing institution-wide implementation of these various public engagement metrics.

The work of the Systemwide Strategic Plan for University Outreach and Public Service will further advance the University’s work in this area, aiming at maximum impact and the promotion and pursuit of our mission. Strategic initiatives underway that are led by the Office of University Relations include: facilitating the accessibility of knowledge and resources created at the University to the citizens of the state and beyond; increasing use of targeted content for specific stakeholders, based on user-designated interest; and encouraging emphasis on “why this matters” to reinforce statewide connections.

III. Governance Questions

The December 2018 presentation (21st Century Outreach Mission, Part II: Statewide Public Engagement, Mission Fulfillment Committee) identified three issues concerning the next phase of 21st-century public engagement and invited Regents to consider the following questions:

- How does the University demonstrating the University’s value and impact on Society?
- How does the University expand the role of public engagement in advancing student success?
- How does the University best address or respond to changing criteria for research funding?
Appendix A: Sample of publicly engaged research, teaching, and outreach

- Extension’s Center for Community Vitality delivers over 165 applied research reports to Minnesota communities that help local leaders make critical decisions about investments.
- University of Minnesota Extension, the Minnesota Aquatic Invasive Species Research Center, and the Minnesota Department of Natural Resources partner to certify 125 Minnesota citizens in identifying and fighting aquatic invasive species in their communities.
- The City of Brooklyn Park works with Master of Urban and Regional Planning students from the Humphrey School for Public Affairs to document changes in the community and propose solutions to issues such as economic development, housing, and school mobility.
- The Immigrant Stories project, coordinated by the Immigration History Research Center, has collects stories representing more than 50 different communities from recent Minnesota immigrants and refugees.
- Three University-community research teams were awarded pilot grants in health disparities research to encourage community initiated research and foster sustainable long-term collaborations between community-based organizations and academic researchers on projects focused on reducing and eliminating health disparities.
- The student-led initiative, Engineers Without Borders partners with three communities in Bolivia, Guatemala, and Uganda to design and implement water access solutions such as harvesting rainwater and ensuring potable water reaches communities.
- Extension’s Regional Sustainable Development Partnerships connect 364 partners with 127 community-driven sustainability projects across Minnesota working on issues ranging from water quality to local foods to economic development.
- Extension’s natural resources team recruits, trains, and supports over 1,300 Minnesotans who volunteer for statewide citizen science projects including the Minnesota Bee Atlas, where volunteer observers help create a statewide list of native bees found in Minnesota, and the Minnesota Master Naturalist program, which promotes stewardship of Minnesota’s natural environment.
- The Robert J. Jones Urban Research and Outreach Engagement Center (UROC) partners with North Minneapolis community and other urban communities to advance learning, improve quality of life, and discover breakthrough solutions to urban-based critical problems.
- Rochester campus students participate in the Community Collaboratory (CoLab) with projects designed to improve the quality of life in Southeastern Minnesota, including partnerships with 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 work to fund a laptop program.
- The Duluth campus’s Center for Regional and Tribal Child Welfare Studies leverages a federal grant from the U.S. Department of Health and Human Services to create a better delivery system for the Indian Child Welfare Act, a federal law that seeks to keep American Indian children with American Indian families.
- Duluth campus students employed at Glensheen grow and harvest produce for people around the country as part of a collaborative involving Glensheen, Second Harvest Northern Lakes Food Bank, and Extension.
- The Institute on the Environment partners with the Natural Capital Project and the University of Vermont to build a mobile app that helps farmers and gardeners share and explore best practices for bee pollination.
• Extension’s Center for Agriculture, Food, and Natural Resources delivers eight Nitrogen Smart training programs to 274 farmers to minimize nitrogen losses. As a result, twelve percent of attendees stopped using fall urea, a fertilizer that can affect nitrogen loss, which led to an estimated 12,512 acres of land that reduced nitrogen loss by 150,240 lbs.

• Extension Master Gardeners address statewide critical concerns through the “Water Wisely” curriculum that addresses water waste in lawns and gardens and the “Pollinators and Native Plants” teaching package that educates the public on the issue of habitat preservation and protection for pollinators, which pollinate more than 70 percent of Minnesota’s fruit and vegetables.

• The Community-University Health Care Center (CUHCC) is one of the largest urban health clinical training sites for nearly 300 health professional students and residents and provides primary medical, behavioral health, and dental care services to the Phillips and surrounding communities of south Minneapolis, including patients from over twelve different racial and ethnic groups spanning five continents.

• Leaders and staff from community organizations participate in the Community Research Institute 2.0, an eight-week workshop from the Program in Health Disparities Research and the Office for Business & Community Economic Development designed to enhance the capacity of community organizational leaders and staff to develop and conduct grant-fundable research projects.

• The Morris campus’s Office of Community Engagement hosts monthly community meals at Legacy Living, Morris Senior Center, and Faith Lutheran Church to foster conversation between students and elders.

• Ramp-Up to Readiness partners with middle and high schools to establish programs designed to help prepare students for postsecondary success.

• Path to Reading Excellence in School Sites (PRESS)—a framework for data-driven decision-making and interventions in elementary reading—provides professional learning workshops to over 3,000 educators at districts across Minnesota, Wisconsin, and Iowa.

• The White Earth Tribal and Community College and the Crookston campus offer an undergraduate program in early childhood education and elementary education in a customized learning environment.

• Extension’s Family Development and 4-H Youth Development Centers partner to teach low income youth, and their families, residing in West and South St. Paul about nutrition and physical activity choices to improve their health and prevent obesity. The Youth Teaching Youth program utilizes a cross-age teaching model where high school students deliver lessons on healthy living topics to younger youth.

• The Center for Urban and Regional Affairs’ Hennepin-University Partnership recruited 400 University student volunteers to help Hennepin County process an estimated 120,000 absentee ballots during the week prior to the 2016 presidential election day.

• Now in its 13th year, the Carlson School of Management’s MN Cup is a startup competition and hub to connect Minnesota’s entrepreneurial ecosystem. In 2017, 520 teams and 1,280 people participated in the competition.

• Duluth’s Center for Economic Development (CED) provides 1,400 small business and entrepreneurs with one-on-one consulting on issues such as finances, marketing, business start-up and loan packaging. In addition, the CED partners 195 students with 35 businesses to work on business projects through the Student to Business Initiative program.

• Government and Community Relations connects University units and faculty with the Cedar Riverside Opportunity Center for educational, workforce, and career pathway services that lead to well-paying jobs in the Cedar Riverside neighborhood.
## Appendix B: Legislative acts that shaped America’s land grant universities

<table>
<thead>
<tr>
<th>Act</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homestead Act (1862)</td>
<td>Established the U.S. Department of Agriculture</td>
</tr>
<tr>
<td>Morrill Act (1862)</td>
<td>Provided for land on which each state could establish and maintain at least one college to teach (without excluding other scientific and classical studies and including military tactics) courses related to agriculture and mechanical arts in order to promote the liberal and practical education of the industrial classes.</td>
</tr>
<tr>
<td>Hatch Act (1887)</td>
<td>Established under direction of land grant colleges experiment stations to conduct original research or verify experiments bearing directly on the agricultural industry of the United States.</td>
</tr>
<tr>
<td>Second Morrill Act (1890)</td>
<td>Provided for direct annual appropriations to each state to further support land grant colleges.</td>
</tr>
<tr>
<td>Adams Act (1906)</td>
<td>Provided additional federal funding for conducting original research and experiments.</td>
</tr>
<tr>
<td>Smith-Lever Act (1914)</td>
<td>Established the Extension Service as cooperative between land grant colleges and USDA to deliver research-based education to aid in disseminating to the public useful and practical information about subjects relating to agriculture and home economics and to encourage its application.</td>
</tr>
<tr>
<td>Smith-Hughes Vocational Education Act (1917)</td>
<td>Made federal grants to stimulate vocational education in agriculture, home economics, and industrial arts.</td>
</tr>
<tr>
<td>Purnell Act (1925)</td>
<td>Made available additional federal funding for research</td>
</tr>
<tr>
<td>Bankhead-Jones Act (1935)</td>
<td>State Experiment Stations and USDA could receive additional funding for research into basic problems of agriculture and research relating to conservation, development, and recreational use of land and water.</td>
</tr>
<tr>
<td>Research and Marketing Act (1946)</td>
<td>Additional funding for State Experiment Stations and USDA for marketing and utilization research and for regional research involving two or more states involved in finding a solution to a regional problem.</td>
</tr>
<tr>
<td>McIntire-Stennis Forestry Research Act (1962)</td>
<td>Made funding available to SAESs, land grant colleges, and forestry schools for forestry research</td>
</tr>
<tr>
<td>Research Facilities Act (1965)</td>
<td>Funds for the construction, acquisition, and remodeling of buildings, laboratories, and other capital facilities.</td>
</tr>
<tr>
<td>Public Law 89-106 (1965)</td>
<td>Established Special Grants Program to address specific problems of constituent concern or multistate problems.</td>
</tr>
<tr>
<td>National Sea Grant Program (1966)</td>
<td>Established funds for federal partnership with 33 universities in coastal and Great Lakes states to better understand, conserve and utilize the Nation’s coastal resources.</td>
</tr>
<tr>
<td>Passage of the Resource Extension Act (1978)</td>
<td>Authorized funding for extension programs in forestry and other renewable national resources.</td>
</tr>
</tbody>
</table>

Adapted from Chronology of Major Legislation Affecting the Land Grant Colleges, The National Academies Press, The National Academy of Sciences, Engineering, Medicine, accessed at https://www.nap.edu/read/4980/chapter/2
21st Century Outreach Mission: Part III – A Vision for the University’s Outreach Mission in the 21st Century

Karen Hanson
Executive Vice President and Provost

Allen Levine
Vice President for Research

Matt Kramer
Vice President for University and Government Relations
University of Minnesota Mission

Outreach and Public Service
To extend, apply, and exchange knowledge between the University and society by applying scholarly expertise to community problems, by helping organizations and individuals respond to their changing environments, and by making the knowledge and resources created and preserved at the University accessible to the citizens of the state, the nation, and the world.
UMN Land Grant Foundation

• Enduring foundation for UMN mission as one of the country’s original land grant institutions:

  *Morrill Act connected public higher ed with economic development of states and society*

• Evolved into 21st-century land-grant mission:

  UMN has capacity and responsibility to improve lives and drive the state, nation, and world forward through advanced education, knowledge discovery, and collaborative problem-solving
UMN Public Engagement Agenda

- Aligned with shifts in higher ed landscape
- Integrated with UMN research and teaching
- Emphasis on working *in reciprocal partnership with communities* (not only on bringing UMN expertise “to” communities or working “in” communities)
Proposed Principles for Outreach Investment

1. Community Need
2. University Expertise
3. Capacity for Service
4. Potential for Impact
5. Academic Synergy
University of Minnesota Mission

Outreach as Effective Messaging and Systemwide Communication Strategies in support of University Mission
Connecting Research and Outreach

Allen S. Levine
Vice President for Research
Fulfilling the Mission
May 10, 2018
Connecting Research and Outreach

- Connected Faculty, Researchers
- Connected Centers and Councils
- Connected Ideas and Talent
- Connected Spaces and Resources
Connecting Research and Outreach

• Connected Faculty, Researchers
  – Speaking Science Conference
  – D2D: The Driven to Discover Research Facility

• Connected Centers and Councils

• Connected Ideas and Talent

• Connected Spaces and Resources
Speaking Science Conference, January 11, 2018
Speaking Science Conference Breakout Session with journalists
D2D: The Driven to Discover Research Facility
Bringing University Research to the Minnesota State Fair

- Launched in 2014
- 60,000 visitors at 2017 State Fair
- 31 research teams
  - 4-6 teams active at any time

2,400 Sq. Ft. facility opened in 2017 with support from OVPR, Academic Health Center, College of Education and Human development, School of Public Health and University Libraries
Connecting Research and Outreach

• Connected Faculty, Researchers
• Connected Centers and Councils
  – Center for Transportation Studies
  – Community Oversight Board
• Connected Ideas and Talent
• Connected Spaces and Resources
Center for Transportation Studies
Convenes diverse communities to move innovative transportation solutions from research to reality.

Consortium on Law and Values in Health, Environment & the Life Sciences
Joins centers across the University to support interdisciplinary research at the intersection of life sciences, law, and policy.

Hormel Institute, University of Minnesota
Located in Austin, MN, contributes to the development of new prevention and treatment therapies for cancer and other chronic diseases.

Institute on the Environment
Tackles Earth’s most pressing environmental problems by conducting transformative research and building world-changing partnerships.

Minnesota Population Center
Is an interdisciplinary cooperative for demographic research, serving faculty members and scientists from eight colleges and institutes.

Minnesota Supercomputing Institute
Provides supercomputing resources and user support to faculty and students at the University.

University of Minnesota Informatics Institute
Fosters data-intensive research in several fields and aims to identify education and research infrastructure needs. It also houses U-Spatial, a resource for geographic information systems (GIS), remote sensing, and spatial computing across the U of M.

University of Minnesota Press
Publishes groundbreaking work in social and cultural thought, critical theory, race and ethnic studies, urbanism, feminist criticism, and media studies.
Estimating accessibility to jobs by auto, transit in U.S. cities

Building partnerships with Tribal communities to improve safety

Greater MN motor-grader training by LTAP

Projects studying the applications of living snow fences in Minnesota

Center for Transportation Studies projects
Community Oversight Board

- Created to help ensure that University of Minnesota research participants are treated with care and respect.
- Made up of volunteers with a range of backgrounds, experiences, and home communities.
- Works to protect community interests and ensure community benefit from U of M research.

For information about the Community Oversight Board: z.umn.edu/communityoversightboard
Connecting Research and Outreach

• Connected Faculty, Researchers
• Connected Centers and Councils
• Connected Ideas and Talent
  – Technology Commercialization
  – MnDRIVE
• Connected Spaces and Resources
Technology Commercialization

#4 Tech Transfer Office in Executing License Deals

#6 Public University Tech Transfer Office

120+ Companies Launched Since 2006
MnDRIVE: MEASURED PERFORMANCE

$18M annual state investment + $4M annually for cancer trials initiative

767 people hired, including 31 new faculty

1,070 researchers

100+ departments, 3 campuses

60 trainees now employed with Boston Scientific, Ecolab, Sundial, REG Life Sciences and others

$44M in external funding (January – December 2017)

70 inventions disclosed (January – December 2017)

New cancer trials initiative to offer clinical trials at 15 sites serving 47 MN counties
Minnesota Cancer Clinical Trials Network (MNCCTN)
Connecting Research and Outreach

• Connected Faculty, Researchers
• Connected Centers and Councils
• Connected Ideas and Talent
• Connected Spaces and Resources
  – Discovery Nexus
  – Shared Solutions Summit
Rep. Tom Emmer at the Shared Solutions Addiction Summit:
Addressing the Opioid Addiction Epidemic through Collaboration (April 6, 2018)
Connecting Research and Outreach

• Connected Faculty, Researchers
• Connected Centers and Councils
• Connected Ideas and Talent
• Connected Spaces and Resources
Governance Questions

1. How should the University focus outreach and public service in the 21st Century?

2. Does the breadth and character of University outreach and public service need re-definition or re-clarification in the 21st Century?
AGENDA ITEM: Consent Report

☐ Review  ☑ Review + Action  ☐ Action  ☐ Discussion

☐ This is a report required by Board policy.

PRESENTERS: Karen Hanson, Executive Vice President and Provost

PURPOSE & KEY POINTS

To seek Board approval of new academic programs and program additions, program deletions and discontinuations, and/or program changes, as outlined below.

I. Request for Approval of New Academic Programs
   • Medical School (Twin Cities campus)—Create fellowship in Orthopaedic Sports Medicine
   • College of Liberal Arts (Twin Cities campus)—Create M.A. degree in Asian Studies
   • College of Liberal Arts (Twin Cities campus)—Create M.S. degree in Cognitive Science
   • College of Food, Agricultural, and Natural Resource Sciences, the College of Veterinary Medicine, and the School of Public Health (Twin Cities campus)—Create post-baccalaureate certificate in Integrated Food Systems Leadership
   • College of Liberal Arts and the College of Science and Engineering (Twin Cities campus)—Create graduate minor in Translational Sensory Sciences
   • College of Education and Human Development (Twin Cities campus)—Create undergraduate minor in Learning Technologies
   • College of Liberal Arts (Duluth campus)—Create graduate minor in American Indian Studies

II. Request for Approval of Changed Academic Programs
   • College of Food, Agricultural, and Natural Resource Sciences (Twin Cities campus)—Create sub-plan in Molecular Plant Pathology within the Ph.D. degree in Plant Pathology
   • College of Education and Human Development (Twin Cities campus)—Create sub-plan in Foundations of Special Education for Schools and Society within the B.S. degree in Special Education
   • College of Liberal Arts (Duluth campus)—Create sub-plan in Leadership Development within the B.A. degree in Cultural Entrepreneurship
   • College of Liberal Arts (Duluth campus)—Change the B.A. degree in Geographic Information Science to a B.S. degree
   • College of Education and Human Development (Twin Cities campus)—Change the name of the undergraduate certificate and minor in Coaching to Sports Coaching
III. Request for Approval of Discontinued Academic Programs
   - College of Continuing and Professional Studies (Twin Cities campus)—Discontinue post-baccalaureate certificate in Transportation Studies

IV. Request for Conferral of Tenure for Outside Hires
   - Matt Carlson, Associate professor with tenure, School of Journalism and Mass Communication, College of Liberal Arts
   - Mariacristina De Nardi, Professor with tenure, Economics, College of Liberal Arts
   - William Hedgcock, Associate professor with tenure, Marketing, Carlson School of Management
   - Richard Landers, Associate professor with tenure, Psychology, College of Liberal Arts
   - Xiaoji Lin, Associate professor with tenure, Finance, Carlson School of Management
   - Martin Manalansan, Associate professor with tenure, American Studies, College of Liberal Arts
   - Anant Mishra, Associate professor with tenure, Supply Chain and Operations, Carlson School of Management
   - Laura Niedernhofer, Professor with tenure, Biochemistry, Molecular Biology and Biophysics, Medical School
   - Jean-Phillipe Richard, Professor with tenure, Industrial and Systems Engineering, College of Science and Engineering
   - Paul Robbins, Professor with tenure, Biochemistry, Molecular Biology and Biophysics, Medical School
   - Sophia Vinogradov, Professor with tenure, Psychiatry, Medical School
   - Matthew Weber, Associate professor with tenure, School of Journalism and Mass Communication, College of Liberal Arts
   - Haiwen (Helen) Zhang, Associate professor with tenure, Accounting, Carlson School of Management
   - Lucy Vulchanova, Associate Professor with tenure, Neuroscience, Medical School

BACKGROUND INFORMATION

Board of Regents Policy: *Reservation and Delegation of Authority* calls for items, such as tenure and/or promotion recommendations, the establishment, naming, and changes of colleges, academic institutes, programs, and courses of study, to be brought before the Board of Regents for action.

PRESIDENT’S RECOMMENDATION

The President recommends approval of the consent report.
I. Request for Approval of New Academic Programs

- **Medical School (Twin Cities campus)—Create fellowship in Orthopaedic Sports Medicine**
  
The Medical School on the Twin Cities campus requests approval to create a fellowship in Orthopaedic Sports Medicine, effective summer 2018. The program will offer clinical, surgical, and research opportunities for fellows, while providing excellent care for both elite and recreational athletes. The program currently exists in partnership with the TRIA Orthopaedic Center as sponsor, and this agreement will transfer responsibility for administration to the University of Minnesota. TRIA will remain a financial partner. The proposed program makes use of existing courses and resources.

- **College of Liberal Arts (Twin Cities campus)—Create M.A. degree in Asian Studies**
  
The College of Liberal Arts on the Twin Cities campus requests approval to create a new Master of Arts (M.A.) degree in Asian Studies, effective fall 2018. The proposed program provides advanced training in Asian studies with an emphasis on the development of strong language proficiency and relevant cultural knowledge. The program is designed for students with careers in governmental, non-profit, and industry agencies, as well as those engaged in fields such as education, translation and interpretation, and library or archival work. The program also prepares students for further graduate study in the field. The proposed program makes use of existing courses and resources.

- **College of Liberal Arts (Twin Cities campus)—Create M.S. degree in Cognitive Science**
  
The College of Liberal Arts on the Twin Cities campus requests approval to create a new Master of Science (M.S.) degree in Cognitive Science, effective fall 2018. The proposed program is intended primarily to serve as a terminal degree option for students enrolled in the Doctor of Philosophy (Ph.D.) program in Cognitive Sciences. As such, it introduces no new courses and enrolls no new students.

- **College of Food, Agricultural, and Natural Resource Sciences, the College of Veterinary Medicine, and the School of Public Health (Twin Cities campus)—Create post-baccalaureate certificate in Integrated Food Systems Leadership**
  
The College of Food, Agricultural, and Natural Resource Sciences, the College of Veterinary Medicine, and the School of Public Health on the Twin Cities campus request approval to create a post-baccalaureate certificate in Integrated Food Systems Leadership, effective spring 2019. The proposed program is an interdisciplinary approach to food systems leadership for early-to-mid-career professionals in industry, academia, government agencies, and intergovernmental organizations who are involved in producing safe, affordable, and secure food while protecting public, animal, and environmental health. The proposed program makes use of existing resources.
- **College of Liberal Arts and the College of Science and Engineering (Twin Cities campus)—Create graduate minor in Translational Sensory Sciences**

The College of Liberal Arts and the College of Science and Engineering on the Twin Cities campus request approval to create a graduate minor in Translational Sensory Sciences, effective fall 2018. The proposed program provides a focused, multidisciplinary educational background to address critical challenges in the development of assistive technologies. The program will provide the educational background and research training to support students in careers focused on developing technologies that can meaningfully improve the lives of people with sensory disabilities. The proposed program makes use of existing courses and resources.

- **College of Education and Human Development (Twin Cities campus)—Create undergraduate minor in Learning Technologies**

The College of Education and Human Development on the Twin Cities campus requests approval to create a undergraduate minor in Learning Technologies, effective fall 2018. The proposed program will provide a multi-disciplinary approach to the development, adoption, and diffusion of emerging online technologies to support education and learning in diverse contexts and professions. The program will provide a complementary academic experience that enhances the education of students in related fields. The proposed program makes use of existing courses and resources.

- **College of Liberal Arts (Duluth campus)—Create graduate minor in American Indian Studies**

The College of Liberal Arts on the Duluth campus requests approval to create a graduate minor in American Indian Studies, effective spring 2019. The proposed program gives students a background in indigenous cultures, as well as the historical and contemporary experiences of Native peoples and nations. The minor is intended to complement and enhance existing programs such as, but not limited to, literature, psychology, and education. The proposed program makes use of existing courses and resources.

II. **Request for Changes to Academic Programs**

- **College of Food, Agricultural, and Natural Resource Sciences (Twin Cities campus)—Create a sub-plan in Molecular Plant Pathology within the Ph.D. degree in Plant Pathology**

The College of Food, Agricultural, and Natural Resource Sciences on the Twin Cities campus requests approval to create a sub-plan in Molecular Plant Pathology within the Doctor of Philosophy (Ph.D.) degree in Plant Pathology, effective fall 2018. The proposed sub-plan emphasizes molecular approaches to investigating plant diseases and exploring emerging strategies for disease control. The proposed changes better reflect current curricular alignment and student demand.
- **College of Education and Human Development (Twin Cities campus)—Create sub-plan in Foundations of Special Education for Schools and Society within the B.S. degree in Special Education**

The College of Education and Human Development on the Twin Cities campus requests approval to create a sub-plan in Foundations of Special Education for Schools and Society within the Bachelor of Science (B.S.) degree in Special Education, effective fall 2018. The proposed sub-plan is for students interested in receiving expertise and experience in special education but who do not want to become licensed teachers. An additional track is available for students seeking licensure. The proposed changes better reflect current curricular alignment and student demand.

- **College of Liberal Arts (Duluth campus)—Create sub-plan in Leadership Development within the B.A. degree in Cultural Entrepreneurship**

The College of Liberal Arts on the Duluth campus requests approval to create a sub-plan in Leadership Development within the Bachelor of Arts (B.A.) degree in Cultural Entrepreneurship, effective fall 2018. The proposed sub-plan is for students interested in an emphasis in leadership development theory and practice. The proposed changes better reflect current curricular alignment and student demand.

- **College of Liberal Arts (Duluth campus)—Change the B.A. degree in Geographic Information Science to a B.S. degree**

The College of Liberal Arts on the Duluth campus requests approval to change the Geographic Information Science degree from a Bachelor of Arts (B.A.) to a Bachelor of Science (B.S.), effective fall 2018. The proposed change better reflects current curricular alignment and standards in the field.

- **College of Education and Human Development (Twin Cities campus)—Change the name of the undergraduate certificate and minor in Coaching to Sports Coaching**

The College of Education and Human Development on the Twin Cities campus requests approval to change the name of the undergraduate certificate and minor in Coaching to Sports Coaching, effective spring 2019. The proposed name changes reflect current curricular alignment, the standards in the field, and student demand.

### III. Request for Approval of Discontinued Academic Programs

- **College of Continuing and Professional Studies (Twin Cities campus)—Discontinue post-baccalaureate certificate in Transportation Studies**

The College of Continuing and Professional Studies on the Twin Cities campus requests approval to discontinue the post-baccalaureate certificate in Transportation Studies, effective fall 2018. There are no students currently enrolled in the program.
Tenured Outside Hires

The decision of the Board of Regents to confer tenure and rank for any individual faculty hire from outside the University of Minnesota becomes effective on the first day of that faculty member’s academic appointment at the University.

Tenured Hires for the June 2018 Board of Regents meeting – Twin Cities campus

Recommended by Executive Vice President and Provost Karen Hanson

Matt Carlson  
Associate professor with tenure  
School of Journalism and Mass Communication  
College of Liberal Arts

Professor Carlson earned his Ph.D. from the University of Pennsylvania in 2007. Drawing from journalism studies, media sociology, science and technological studies, and social epistemology, his research examines news as a contested form of public knowledge. He is currently an associate professor in the Department of Communication at Saint Louis University.

Mariacristina De Nardi  
Professor with tenure  
Economics  
College of Liberal Arts

Professor De Nardi’s research is focused on the intersection of macroeconomics and public economics, with special attention to saving behavior, wealth inequality, the risks that face households, and their interaction. She earned her Ph.D. in Economics from the University of Chicago in 1999. Dr. De Nardi is currently a senior economist and economic advisor at the Federal Reserve Bank of Chicago, as well as a professor of economics at University College London.

William Hedgcock  
Associate professor with tenure  
Marketing  
Carlson School of Management

Professor Hedgcock earned his Ph.D. in Business from the University of Minnesota in 2008. He is currently an associate professor at the University of Iowa. Dr. Hedgcock is best known for work in consumer neuroscience, which combines the classic area of judgment and decision making with the use of functional magnetic resonance imaging (fMRI) to understand the cognitive bases for consumer decision making.
**Richard Landers**

Associate professor with tenure  
Psychology  
College of Liberal Arts

Professor Landers’ research focuses on how new and innovative technologies can be used to improve industrial-organizational practices. He earned his Ph.D. in Industrial and Organizational Psychology from the University of Minnesota in 2009 and currently serves as an associate professor of psychology at Old Dominion University.

**Xiaoji Lin**

Associate professor with tenure  
Finance  
Carlson School of Management

Professor Lin earned his Ph.D. in Finance from the University of Minnesota in 2008. Currently he is an associate professor at The Ohio State University. Dr. Lin’s research focuses on the intersection of asset pricing and macroeconomics and can be grouped into three related topics: 1) implications of labor market frictions on expected stock returns; 2) the link between the heterogeneity of firms’ capital stock and its expected returns; 3) financial market frictions and expected returns.

**Martin Manalansan**

Associate professor with tenure  
American Studies  
College of Liberal Arts

Professor Manalansan is a leading scholar across the fields of American Studies, Asian American Studies, Filipino/a Studies, gender and sexuality studies, queer studies, and cultural anthropology. He earned his Ph.D. in Social Anthropology from the University of Rochester in 1997 and currently served as an associate professor at the University of Illinois at Urbana-Champaign.

**Anant Mishra**

Associate professor with tenure  
Supply Chain and Operations  
Carlson School of Management

Professor Mishra earned his Ph.D. in Business Administration from the University of Minnesota in 2009 and is currently an associate professor at George Mason University. Professor Mishra’s areas of research prominence are: project management, new product development, global supply chain management, and public sector operations.
Laura Niedernhofer  
Professor with tenure  
Biochemistry, Molecular Biology and Biophysics  
Medical School

Dr. Niedernhofer’s research is focused on aging, biomarkers of aging, cellular senescence, mouse molecular models of accelerated aging and the role of DNA damage in aging and age-related diseases. She earned a Ph.D. in Biochemistry and an M.D. from Vanderbilt University. Professor Niedernhofer is currently an associate professor at The Scripps Research Institute.

Jean-Phillipe Richard  
Professor with tenure  
Industrial and Systems Engineering  
College of Science and Engineering

Professor Richard earned his Ph.D. in Industrial and Systems Engineering from Georgia Institute of Technology in 2002 and is currently a professor at the University of Florida. Dr. Richard is a leading expert in the field of mixed integer linear/nonlinear optimization.

Paul Robbins  
Professor with tenure  
Biochemistry, Molecular Biology and Biophysics  
Medical School

Dr. Robbins’ extensive research experience lies in the use of biological approaches to regulate immune function for treatment of autoimmune diseases and cancer, and more recently on biological approaches to understand and treat age-related degenerative diseases. He earned his Ph.D. in Molecular Biology from the University of California, Berkeley. Professor Robbins is currently a professor at The Scripps Research Institute.

Sophia Vinogradov  
Professor with tenure  
Psychiatry  
Medical School

Dr. Vinogradov’s research focuses on understanding the neural basis of the cognitive deficits in schizophrenia, and their associated impact on patients’ functioning. She earned an M.D. from Wayne State University in 1983. Prior to joining the University of Minnesota, she was a Professor and Vice Chair of Psychiatry at the University of California, San Francisco.
Matthew Weber  
**Associate professor with tenure**  
School of Journalism and Mass Communication  
College of Liberal Arts

Professor Weber earned his Ph.D. in Communication from the University of Southern California in 2010. Currently, he is an associate professor at Rutgers University where he also serves as Co-Director of the Rutgers Network Science Lab. Dr. Weber’s research focuses on the transformation of journalism organizations and journalism practice in response to new information communication technology.

Haiwen (Helen) Zhang  
**Associate professor with tenure**  
Accounting  
Carlson School of Management

Professor Zhang earned her Ph.D. in Accounting from the University of Minnesota in 2007. She is currently an associate professor at The Ohio State University. Dr. Zhang’s research lies in three areas: 1) the impact of the SEC disclosure requirements and monitoring process on firms’ information environment; 2) the accounting rules issued by standard setters; 3) determinants and economic consequences of accounting quality and financial reporting irregularities.

Lucy Vulchanova  
**Associate Professor with tenure**  
Neuroscience  
Medical School

Dr. Vulchanova’s research primarily focuses on mechanisms of pain signaling, with the long-term objective of elucidating changes that underlie chronic pain. She received her Ph.D. in 1998 from the University of Minnesota where she currently serves as an assistant professor (clinical) in the Department of Neuroscience.
AGENDA ITEM:  Information Items

☐ Review  ☐ Review + Action  ☐ Action  ☒ Discussion

☐ This is a report required by Board policy.

PRESENTERS:  Karen Hanson, Executive Vice President and Provost

PURPOSE & KEY POINTS

Report of Student, Faculty, and Staff Activities and Awards

This report highlights select activities at the local, regional, national, and global level in the areas of teaching, research, outreach, and other academic achievements at the University.

Update on Research, Start-ups, and Technology Commercialization

This report provides an update on the University's technology commercialization enterprise.

BACKGROUND INFORMATION

This report appears as a regular item on the Mission Fulfillment Committee agenda.
This report highlights select activities at the local, regional, national, and global level in the areas of teaching, research, outreach, and other academic achievements at the University.

University Highlights
The Office for Technology Commercialization (OTC) is on the short list of nominees for the “Tech Transfer Unit of the Year” award, handed out annually by the London-based business publication Global University Venturing (GUV).

University of Minnesota Crookston’s online degree program in International Business is ranked the number one “Online Bachelor’s in International Business Programs” in the nation for 2018 by the online education resource the Top Business Schools and Degrees.

Faculty and Staff Activities and Awards
Michele Allen, medical school, is the recipient of the 2018 Innovation & Research Award by the Minnesota Academy of Family Physicians. The award is presented annually to an individual who has made a major contribution to the development of family medicine research at the state and/or national level.

Brian Buhr, dean, college of food, agricultural, and natural resource sciences, and Ben Broberg (’50, agricultural education) were inducted into the Minnesota Future Farmers of America (FFA) Alumni Association Hall of Fame Class of 2018.

Jason Chan, information and decision sciences, has been selected as one of Poets & Quants Best 40 under 40 Business Professors for 2018. Individuals selected for this honor represent the most inspiring young business professors in the world.

Patricia Gudmundson, music, University of Minnesota Duluth, is participating in the College Music Society - National Association of Music Merchants (CMS-NAMM) summer fellows program for music faculty in Nashville, Tenn. Gudmundson is one of nine music faculty members from across the country to be selected. The CMS-NAMM introduces music faculty to professionals in the music industry and helps them prepare their students for careers as musicians.
Lori Helman, curriculum and instruction and director of the Minnesota Center for Reading Research, was part of a team of 28 literacy experts that helped write *Standards for the Preparation of Literacy Professionals 2017 (Standards 2017)* - the first-ever set of national standards guiding the preparation of literacy professionals, published by the International Literacy Association (ILA).

Mary Hockenberry Meyer, horticultural science, has been named the 2018 recipient of the American Horticultural Society Teaching Award. This award is given to an individual whose ability to share their horticultural knowledge with others has contributed to a better public understanding of the plant world and its important influence on society.

The American Association of Law Libraries (AALL) has inducted Joan Howland, law school, into its Hall of Fame, in recognition of her significant, substantial, and long-standing contributions to the profession of legal information management.

Erika Lee, history, has been named a 2018 Andrew Carnegie Fellowship by the Carnegie Corporation of New York. The Carnegie Fellowship provides support for scholarship that applies fresh perspectives from the humanities and social sciences to some of the most pressing issues of our time.

Laura Linderman, civil, environmental, and geo-engineering, received a National Science Foundation (NSF) CAREER Award. Her project, “CAREER: Multi-objective Optimization of Sensor Placement for Reliable Monitoring and Control of Structures,” will help to sustain the long-term performance of civil infrastructure by identifying the most effective measurement types and locations for monitoring and isolating structural response.

Soheil Mohajer, electrical and computer engineering, received the CAREER award from the National Science Foundation’s (NSF) Faculty Early Career Development (CAREER) Program.

Peter Reich, forest resources; and Mikhail Shifman, school of physics and astronomy, have been elected as members of the prestigious National Academy of Sciences (NAS) for their excellence in original scientific research.

Karen Seashore, organizational leadership, policy, and development, has received a 2018 Excellence in Research Award from the American Educational Research Association (AERA) Special Interest Group on Research Utilization.

Bethany Stadler, electrical and computer engineering, was named an MRS Fellow by the Materials Research Society for her pioneering work in magneto-photonics integration and magnetic nanowire devices, and her distinguished service to materials research.

Harold Tu, division of oral and maxillofacial surgery, has been appointed to the federal Pain Management Best Practices Inter-Agency Task Force. Formed by the U.S. Department of Health and Human Services, the task force is charged with proposing updates to best practices and recommending solutions to gaps or inconsistencies in managing chronic and acute pain.
**Student Activities and Awards**

Undergraduate students Aliza Beverage (physics and Astrophysics) and Elizabeth Zudock (chemical engineering and chemistry) were named 2018 Astronaut Scholars. Astronaut Scholars show initiative, creativity, and excellence in their chosen (STEM) field.

John Cossette, Ph.D. student, ecology, evolution and behavior, has won a prestigious Fulbright Scholarship for the upcoming academic year. Cossette will work with a research group at the Institute of Integrative Biology in Zurich, Switzerland.

Brittany Grady ’17 (English/German/medieval studies) and Autumn Carlson ’18 (Spanish and Latin American area studies), University of Minnesota Morris, have earned Fulbright U.S. Student Program awards. They both received English Teaching Assistant (ETA) awards, which will place them in classrooms abroad to provide assistance to local English teachers.

The Ramsey County Bar Foundation recently named first year law student Elvis Kim and second year law student Khansaa Nadeem as 2018 Diversity Scholarship recipients. Scholarships are awarded based on academic or professional achievement and leadership potential.

John Little, American history doctoral student, is a 2018 recipient of the distinguished Cobell Graduate Summer Research Fellowship. This highly competitive award is for American Indian and Alaska Native student researchers who might not otherwise have access to funds to conduct research and related activities during the summer months.

Noah Pilugin ’18, anthropology and art history, University of Minnesota Morris, earned a Boren Scholarship for Urdu language acquisition and Indian cultural study. The scholarship will support Pilugin as he completes a summer language program at the University of Wisconsin-Madison and a year of study in India.

The American Bar Association Forum on Affordable Housing and Community Development has recently named Derek Waller, Law School (’19) as the winner of its 2018 Law Student Writing Competition for his article “Leveraging State and Local Antidiscrimination Laws to Prohibit Discrimination Against Recipients of Federal Rental Assistance.”
Report on Technology Commercialization Enterprise and Opportunities in Student Entrepreneurship

The University of Minnesota is committed to accelerating the transfer of knowledge by creating opportunities for public-private partnerships that move ideas and innovations out of the University and into the world, where they can do the most good. The Office for Technology Commercialization (OTC) is a key part of the connection between the ideas and innovation created at the University and the companies, capital, and entrepreneurs who can bring them to the marketplace.

One of the leading technology transfer offices in the US, OTC runs a broad-based enterprise connecting University of Minnesota researchers and technologies with the commercial world. OTC helps move UMN research beyond the lab and into the marketplace to benefit the public good, foster economic growth, and generate revenue to support the University’s research and education goals. Among the services OTC provides are intellectual property protection strategies, marketing technologies to identify license prospects, negotiating license deals that bring royalties back to the University, and helping researchers create startup companies based on their technologies.

The University’s entrepreneurial faculty and researchers continue to drive innovation across a wide range of industries, with companies marketing technologies in agriculture, energy, engineering, biopharma, and medical devices sectors.

Technology Commercialization

National and international recognition:

- Staff continue to reinforce OTC’s internationally recognized leadership in university technology transfer. OTC was ranked the sixth best public university technology transfer office in the country, and fourth among all U.S. universities in terms of license deals completed, according to a study by the Milken Institute
- OTC was the only external university invited to participate in strategy development meetings as part of the University of California’s UC Innovation Thinking Day.
- This spring, OTC was named as one of five finalist nominees from around the world for the 2018 Global University Venturing “Tech Transfer Unit of the Year” award.

Examples of innovations brought to market:

- The Minne Ties Agile MMF, a medical device designed to more safely and comfortably secure a broken jaw in place while it heals, became the first invention out of the Medical Devices Center’s Innovation Fellows Program to receive regulatory clearance from the Food and Drug Administration and reach the market. The device was licensed to St. Paul-based Summit Medical Inc. and will now be sold to surgeon’s offices, hospitals, and clinics across the country.
- The first commercial fruit of the new, early ripening “Rave” apple was produced. The apple, developed by U of M breeders, is licensed to Washington state grower Stemilt. It is also grown by Minnesota orchards under the name “First Kiss.” “Rave” builds on the international reputation the University has built around apple breeding, including such apples as Honeycrisp, SnowSweet®, Zestar!, and SweeTango®.

University startups:
The University experienced another record year in fiscal year 2017 with 18 startup companies launched by OTC’s Venture Center, the eighth consecutive year that the number of startups has increased. Three out of four startups are based in Minnesota.

The University has launched over 119 startups, with 78 percent still active as of the most recent OTC annual report, and has developed a strong startup pipeline of technologies with the potential to spin out into new companies.

A survey of University startup companies found that since the OTC-Venture Center was formed in 2006, these startups have raised approximately $400 million in outside investment capital.

University startup companies are also moving to the next stage of startup growth: business transitions, where startup companies scale up, go public, or are acquired. Towards the end of fiscal year 2017, several startup companies were positioning themselves for acquisition or initial public offering in early fiscal year 2018.

UMN startups Inntronics LLC and Minnepura Technologies were named among the 35 “Best University Startups 2016,” and Photonic Pharma LLC and ThermChem Inc. were named among the 40 “Best University Startups 2017” by the National Council of Entrepreneurial Tech Transfer.

Three University inventions received National Innovation Awards from TechConnect, a global innovation scouting company.

**Programs:**

- Minnesota Innovation Partnerships (MN-IP) is a series of programs designed to make it easier for industry to work with the University, both in sponsoring research and in licensing technology.
  - MN-IP Try and Buy is a low-risk, low-cost means for companies to test University technology, including pre-set, industry-friendly licensing terms, which was expanded in fiscal year 2017 to include 151 available technologies.
  - MN-IP Create is a program designed and updated in response to industry feedback that streamlines the process for industry-sponsored research and licensing of resultant IP. The menu of licensing options from which companies can choose includes fixed-fee and exclusive or nonexclusive licensing. Since its inception, MN-IP Create has led to 333 agreements with 190 unique companies (Progress Card Measure), with a value of $53.9 million in research sponsorship.

- The Discovery Capital investment program was launched in 2014 to help University startups overcome the high hurdle of early-stage financing. The program offers seed funding with a requirement that the investment be matched by external partners.
  - As of the FY 2017 annual report, seven promising University startup companies have been approved for funding consideration under Discovery Capital, three of which have been further approved for a second round of investment. The program has invested $2.2 million, attracting total matches of $17.9 million.

- The Discovery Nexus, which opened in McNamara Alumni Center in October, brings U faculty, staff, and students together with businesses, entrepreneurs, and economic development leaders to form collaborations, advance University innovations and promote economic development.
  - The space is a shared, collaborative area between the U of M Alumni Association, U of M Foundation, OTC, Office of University Economic Development, Educational Technology Innovations, and Technological Leadership Institute.
Encouraging Student Entrepreneurship

The University of Minnesota’s interdisciplinary efforts to support an entrepreneurial culture on campus continue to bear fruit. OTC’s Venture Center continues to launch startup companies in a wide range of technical fields. Coordinated efforts from OTC, the Carlson School of Management, individual colleges and programs such as MIN-Corps (National Science Foundation’s I-Corps program) and MN-REACH (National Institutes of Health’s Research Evaluation and Commercialization Hub) encourage an entrepreneurial culture and accelerates technology commercialization by providing researchers with business skills and coaching critical to identifying customer needs and market demand. In general, Regents policy allows students to own the intellectual property they create as part of their coursework, creating an incentive for them to commercialize their ideas.

The following examples of student entrepreneurship from the Twin Cities campus are meant as illustrative rather than comprehensive.

**MIN-Corps:**
- MIN-Corps is the University’s site for Innovation Corps, part of the National Science Foundation’s programming that focuses on expanding scientists’ skill set out of the laboratory to translate their discoveries into the commercial world. The program is a collaboration between the Carlson School of Management, College of Science and Engineering and OTC.
- University teams receive micro-grants to fund initial prototyping and customer research, part of a 14-week startup course in which students and faculty are paired with industry mentors to test their assumptions and search for a sustainable business model.
- Beyond the startup curriculum described above, MIN-Corps delivers training and information sessions to faculty and students to promote the University’s entrepreneurial culture.
- Over 450 faculty and students attended one or more MIN-Corps offerings throughout the year, representing 22 colleges from two U of M campuses.
- There are 12 science and technology-based startup currently operating as a result of MIN-Corps offerings.

**MN-REACH:**
- The University is one of only three institutions with a NIH Research Evaluation and Commercialization Hub (REACH) grant. MN-REACH has provided University-wide commercial expertise and resources to help develop and commercialize diagnostics, therapeutics, preventative medicine, and medical devices.
- As of the end of FY 2017, the program had provided coaching for more than 63 faculty teams; provided skills development offerings for more than 200 faculty, post-docs, and graduate students; and awarded grants totaling $2.95 million to 26 promising projects addressing 24 unique, unmet clinical needs.
- When combined with University matching funds, these grants made a total of $6 million available to selected teams over three years.

**MN Cup:**
- The Carlson School of Management’s MN Cup, a startup competition and hub to connect Minnesota’s entrepreneurial ecosystem, includes a division for student ventures.
In 2017, 1,280 people participated in the competition, including students. Out of the 520 teams in the competition, 29 percent were led by minorities and 37 percent by women.

Economic Development Fellows:

- With support from the Graduate School, University Economic Development launched the Economic Development Fellows (EDF) Consulting Program in January 2016. EDF connects regional companies with graduate students, professional students, and postdocs seeking opportunities to gain experience in business consulting.
- To date, over 180 students from 15 colleges have participated in the program.
- Forty companies from a variety of industries, including medical devices, biotechnology, pharmaceuticals, retail, food/ag and environmental technology, have participated in the EDF program since it launched.

Student Entrepreneurship Highlights:

- UMTC alumni’s startup Hidrate Inc., which offers a smart water bottle that tracks how much water you drink and sends reminders to your phone to drink, recently raised an equity round of more than $2.1 million, following an earlier Kickstarter that has raised more than $600,000.
  - Before launching the Minneapolis-based startup, the founders honed their entrepreneurship skills with mentorship opportunities and experiential learning at the U of M, taking classes from U entrepreneurship experts like Tobin Nord, professional director of the Ventures Enterprise, and John Stavig, professional director of the Gary S. Holmes Center for Entrepreneurship.
  - During her time in the Ventures Enterprise, the startup’s CEO, Nadya Nguyen (management information systems and finance, Carlson, 2014), worked with industry partners, including 3M, on applications ranging from education technology to pharmaceuticals.
  - The College of Design’s Barry Kudrowitz, Ph.D., professor of product design, helped two members of the Hidrate team learn important design concepts they would later use in the development of the smart water bottle.
  - The team’s idea first came together at a Google Startup Weekend event held at the U’s Carlson School of Management in 2014, just after they graduated. They went on to participate in the 2015 Sprint Mobile Health Accelerator.
- In the past year, Adam Choe, who received his master’s degree in Medical Device Innovation at the University of Minnesota, became director of the recently launched gBETA Medtech startup accelerator. gBETA Medtech is part of gener8tor, a midwest based startup accelerator.
  - As director, Choe works with medical device, healthcare-related software, biotechnology, and diagnostics startups looking to connect with mentors, grow their business, and attract investment.
  - Choe’s experience with entrepreneurship and the medical technology industry were fueled in part by his participation in the Medical Devices Center’s Innovation Fellows program and his role as a MnDRIVE Discoveries through Industry Partnerships Fellowship in Neuromodulation.
Potential Future Directions

As part of the System Wide Strategic Planning process, the Office of the Vice President for Research has put forward several potential ideas to boost technology transfer and entrepreneurship, including:

- Accelerate technology commercialization, increase student (graduate and undergraduate) and faculty participation and become more competitive with other leading research universities.
- Develop the plans and budget for implementation of accelerator/research parks in the Twin Cities & Duluth.
- Develop plans for engaging system campuses in Crookston and Morris with local Small Business Development Center or local business incubators.
- Improve the performance of technology commercialization and entrepreneurism at system campuses outside of the Twin Cities.
  - Deploy the “Creative Works” commercialization strategy developed at the Twin Cities campus at all systemwide campuses.
- Partner with the Holmes Center for Entrepreneurship, Technological Leadership Institute, and College of Science and Engineering to develop specific programming to support undergraduate student STEM startup initiatives to be deployed systemwide. Coordinate with undergraduate research programs at system research campuses.
- Develop a program, policies, and procedures to increase interactions with business by defining how companies can interact with, and co-locate on, system campuses. Pilot program with two companies starting on the Twin Cities campus.
- Expand Economic Development Fellows program systemwide. Work with students and local companies from each system campus region.