UNIVERSITY OF MICHIGAN
ACCREDITATION 2010

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An Institution of Global Learning,
Knowledge and Engagement

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Report to the Higher Learning Commission
of the North Central Association of Colleges and Schools

A MESSAGE FROM
PRESIDENT MARY SUE COLEMAN

I am pleased to share with you the University of Michigan Reaccreditation Self-Study Report for 2010.

Every ten years, the reaccreditation process gives us an opportunity to envision the University of Michigan we want to build in the years ahead and to crystallize our thinking about how best to sustain our academic leadership in a dynamic world. This report embodies the extended reflection of University faculty, students and staff on our institution's lasting character, current circumstances and future directions, and I commend it for your consideration.

For some years now, the University has faced a challenging economic environment. Through the hard work of many members of our community, including numerous alumni and friends, we have done well in meeting the challenge, and we will continue to do so. In such demanding times, it is of the utmost importance that we also look forward with large aspiration and fitting confidence. We are the beneficiaries of such confident forward movement by previous generations at the University; the self-study is one manifestation of our own work to do the same.

Our opportunities are dazzling. The University of Michigan is a large and vibrant institution, with a strong culture of leadership, and we can take much pride in the breadth and depth of our research, scholarship, learning and engagement. It is not possible to capture all that the University is about, and the Report can only describe a subset of the many activities that make for the Michigan Difference and that are pertinent to reaccreditation.

However, it is abundantly clear that ours is an institution with strong momentum and great possibilities. The special emphasis study on internationalization herein is a case in point: Michigan is very much already a university of the world, and the report discusses only a sampling of our international engagement. Yet we can do much more, as the recommendations herein suggest: we can lead in defining and creating the public, international university of our time.

The report is only a beginning, and I invite you to engage with this and the other questions that it puts to us.

Sincerely,

Mary Sue Coleman

Mary Sue Coleman
President

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Information on institutional accreditation, the criteria and core components is available from the Higher Learning Commission: Overview and Handbook.

Commonly-used Abbreviations

	Full Name	Website
AAUDE	Association of American Universities Data Exchange	http://aaude.org/
B&F	Business & Finance	http://www.bf.umich.edu/index.html
CIC	Committee on Institutional Cooperation	http://www.cic.net/Home.aspx
CRLT	Center for Research on Learning and Teaching	http://www.crlt.umich.edu/index.php
DSA	Division of Student Affairs	http://www.umich.edu/~ovpsa/
E&E	Office of Evaluations and Examinations	http://www.umich.edu/~eande/about/about.htm
HLC	Higher Learning Commission	http://www.ncahlc.org/
IC	International Center	http://www.internationalcenter.umich.edu/
II	International Institute	http://www.ii.umich.edu/
ITS	Information Technology Services (MAIS, ITCS, ITSS)	http://www.itd.umich.edu/
LSA	College of Literature, Science, and the Arts	http://www.lsa.umich.edu/lsa
NCRC	North Campus Research Complex	http://med.umich.edu/umrg/index.html
OBP	Office of Budget and Planning	http://sitemaker.umich.edu/obpinfo/home
OVPR	Office of the Vice President for Research	http://research.umich.edu/
SACUA	Senate Advisory Committee on University Affairs	http://www.umich.edu/~sacua/sacmin/sacua.html
SPG	Standard Practice Guide	http://spg.umich.edu/
UHR	University Human Resources	http://hr.umich.edu/
U-M/UM	University of Michigan	http://www.umich.edu/
UROP	Undergraduate Research Opportunity Program	http://www.lsa.umich.edu/urop/

1. OVERVIEW

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1.1
A BRIEF HISTORY OF THE UNIVERSITY OF MICHIGAN

The University of Michigan was founded in 1817 as one of the first public universities in the nation. It was first established on 1,920 acres of land ceded by the Chippewa, Ottawa, and Potawatomi people "...for a college at Detroit." When the school moved from Detroit to Ann Arbor in 1837, Ann Arbor was only 13 years old. Established in 1824 by two Easterners, John Allen and Elisha Rumsey, the city had a booming population of 2,000, a courthouse and jail, a bank, four churches, and two mills. The two men named the town in honor of their wives, Mary Ann Rumsey and Ann Allen, and also because of the natural arbor created by the massive oaks in the area.

Legislative act of 1817 establishes the Catholepistemiad, or University of Michigania. (Bentley Image Bank, Bentley Historical Library)

It took four years to build the necessary facilities for the new campus in Ann Arbor. The buildings consisted of four faculty homes and one classroom-dormitory building. One of the homes is still standing and is now the President's House. Cows owned by the faculty grazed over much of campus. As late as 1845, much of the campus was covered in the summer with a crop of wheat, grown by a janitor as part of his compensation. Faculty families harvested peaches from the orchard of the old Rumsey farm, and a wooden fence ran along the edge of campus to keep University cows in and city cows out.

In its first year in Ann Arbor, the University had two professors and seven students, but even more regents (nineteen). The reorganized University did not have a president. Instead, the faculty members elected a presiding officer each year from among their ranks.

Freshmen entering in 1841 (women were not admitted to the University until 1870) took admissions examinations in mathematics, geography, Latin, Greek, and other subjects. They also had to furnish "satisfactory testimonials of good moral character." Students paid an initial admissions fee of ten dollars (equivalent to about $200 in 2008), but no tuition. In 1866, twenty-five years after the move to Ann Arbor, the University of Michigan became the largest university in the country, with 1,205 enrolled students. In 1867, enrollment reached an all-time high of 1,255 students. At that time, the University was comprised of the Medicine Department with 525 students, the Law Department with 395 students, and the Literary Department with 335 students. There were 33 faculty members. The Bentley Historical Library offers an historical tour of the Ann Arbor campus.

University of Michigan in Ann Arbor, by Jasper Cropsey (1855). (Bentley Historical Library)

Today, the University of Michigan-Ann Arbor is one of the most distinguished universities in the world and a leader in higher education. It consistently ranks among the nation's top universities, with over 41,000 students in the University's nineteen schools and colleges, and 6,000 faculty members. The University of Michigan has one of the largest health care complexes in the world and one of the most extensive university library systems in the country. Each term, more than 5,500 undergraduate students enroll in courses across more than 200 programs and in hundreds of majors. Undergraduate, graduate, and professional students have a choice of over 1,000 student organizations, thousands of concerts, recitals, speakers, symposia, films, readings and sports events, and a wealth of other experiences each year.

1.2
AN OVERVIEW OF TODAY'S UNIVERSITY OF MICHIGAN

The University of Michigan-Ann Arbor is located 40 miles west of Detroit, along the beautiful Huron River. It consists of five major areas--Central Campus, East Campus, North Campus, Medical Center, and South Campus--that total 3,070 acres, with 483 major buildings and 1,082 family and single graduate housing units. Interactive aerial views of today's University of Michigan are available through Google Map and Google Earth. University Housing is host to about 25% of the student body in 16 residence halls, 392 undergraduate apartments, and 1,082 family and single graduate units. Ninety-six percent of all first-year students and approximately 36% of all undergraduates live in University housing. In support of our teaching mission, which is at the heart of the University, the housing office supports ten residential academic programs known as Michigan Learning Communities. In these learning communities, as in all the University's academic programs, students learn and challenge themselves as they come into contact with people, cultures, and ideas from all over the world.

Aerial view of Central Campus. Google Map and Google Earth offer interactive views.

The University community has about 41,000 students in 19 schools and colleges, and more than 38,000 faculty and staff. The students at the University come from all 50 states and over 100 foreign countries, from Afghanistan to Zimbabwe. The University's faculty in both the instructional and research tracks similarly includes many internationals, and is considered among the best in the country.   Looking beyond the local borders of the campus community, more than 480,000 University of Michigan alumni live and work (and cheer) all over the world.

The University's research mission had expenditures in FY09 that exceeded $1 billion, which is one of the largest expenditure totals among U.S. universities. Federal agencies provided the largest portion of funds at 64% (led by the Department of Health and Human Services), with the remainder coming from University funds (24%) and non-federal sources that include industry and foundations.

Among the many resources that allow the University to meet its teaching and research goals are the libraries and museums. The University Library system has 19 libraries, which include the Harlan Hatcher Graduate Library, Health Sciences Libraries, Harold T. and Vivian B. Shapiro Undergraduate Library, Shapiro Science Library, and the Art, Architecture & Engineering Library. Together the libraries hold over 8 million volumes and over 70,000 serial titles. The University is a national leader in the development of digital library resources, having digitized over 2.5 million books to date. Museums that are open to the public are the Detroit Observatory, Exhibit Museum of Natural History (with a planetarium), Kelsey Museum of Archaeology, Museum of Art, Sindecuse Museum of Dentistry, and the Stearns Collection of Musical Instruments. Research museums that house extensive collections include the Museum of Anthropology, Museum of Paleontology, Museum of Zoology, and the University Herbarium.

The University of Michigan is dedicated to service in the larger world. Faculty and students conduct hands-on research on a range of critical issues, including health care, energy and the environment, social interventions, education reform and improvement, and many others. By sharing their fundamental knowledge and advancing innovations in technology, scientists and engineers at the University contribute to advances that are transforming life and that contribute to building the economy of the region, state, and the nation. For their part, students participate in hundreds of community-based service and learning projects and a wide range of other service activities. In collaboration with other universities, colleges, and K-12 schools, the University conducts research and provides other services for the benefit of a variety of state, national, and private agencies.

University contributions to the state are multifaceted, and include dollars that flow into the University, as well as local goods and services purchased by the University and by its employees, students, and visitors. The Ann Arbor campus has a total annual payroll and benefits expenditure of over $3.2 billion. During the past five years the University has helped to create thousands of new jobs, while research activity has resulted in more than 1,750 invention disclosures and dozens of new start-up companies. Retail spending, athletics, and cultural events generate hundreds of millions of dollars for the local economy each year and attract more than 350,000 people to the area.

The University of Michigan's size, complexity and academic strength, its array of resources and opportunities, and the quality of its faculty, students, and staff collectively contribute to a rich environment where members of the University community engage in research and creative work, teaching and learning, and service and engagement. Each of these primary areas of commitment and activity will be explored in this report.

Selected Indicators and Trends

The tables below show fall 2008 data and demographics of students, faculty, and staff, and of selected financial indicators. They also include comparison data for 2000 and 2004 that illustrate recent trends. Please note that financial indicators are not corrected for inflation[1]. Additional information is presented in the institutional snapshot and online.

Student enrollment and demographics (below) show that the University has enrolled more than 40,000 students in recent years, with a growing international population (non-Permanent Resident Alien).

Students	2000	2004	2008	change since 2000
Total Head Count	38,103	39,533	41,028	8%
U.S. & Permanent Resident Alien	33,720	34,900	36,038	7%
Non-Permanent Resident Alien	4,383	4,663	4,990	14%
Enrollment by Level				
Undergraduate	24,412	24,828	25,994	6%
U.S. & Permanent Resident Alien	23,354	23,600	24,626	5%
Non-Permanent Resident Alien	1,058	1,228	1,368	29%
Graduate	10,513	11,219	11,307	8%
U.S. & Permanent Resident Alien	7,301	7,926	7,859	8%
Non-Permanent Resident Alien	3,212	3,293	3,448	7%
First Professional	3,178	3,486	3,727	17%
U.S. & Permanent Resident Alien	3,065	3,374	3,553	16%
Non-Permanent Resident Alien	113	112	174	54%
Gender, Race/Ethnicity				
Men	20,068	20,457	21,341	6%
Women	18,035	19,076	19,687	9%
African American/Black	2,621	2,699	2,359	-10%
Hispanic American	1,431	1,706	1,673	17%
Native American	216	318	283	31%
Asian American	4,124	4,717	4,726	15%
European American/White	22,174	23,124	24,111	9%
Other	3,154	2,336	2,886	-8%
Degrees Awarded	9,729	10,740	11,079	14%
Bachelor	5,595	5,923	6,258	12%
Master	2,877	3,446	3,336	16%
Intermediate	6	6	2	-67%
Doctoral	651	660	753	16%
First Professional	600	705	730	22%
Undergraduate graduation rate (5yrs); %	81	85	88	9%
Cost				
Undergrad Resident Tuition & Fees (ac yr)	6,513	8,201	11,037	69%
Undergrad Non-resident Tuition & Fees (ac yr)	20,323	26,027	33,069	63%
Undergrad Resident Cost of Attendance (ac yr)	14,937	18,263	22,729	52%
Undergrad Non-resident Cost of Attendance (ac yr)	28,747	36,089	44,761	56%
Undergraduate Financial Aid (millions)	134	193	252	88%
% undergraduates receiving aid	58	66	73	15%

Source: Office of Budget and Planning

[1] See Inflation Calculator.

As mentioned in the introduction, the University is home to 19 schools and colleges that range in size from a few hundred students to more than 18,000, and faculty full-time equivalents (FTEs) from the teens into many hundreds. A comparison data set for schools and colleges for fall 2008 is below.

Schools and Colleges Profile

(Fall 2008)	Under-graduate	Graduate	First Professional	Gen Fund FTE	Degrees Granted
Architecture and Urban Planning	244	365	0	34.4	227
Art & Design	470	25	0	32.6	95
Business	1,060	1,882	0	91.9	1,159
Dentistry	101	110	442	37.7	155
Education	206	329	0	34.9	276
Engineering	5,217	2,603	0	256.1	2,163
Graduate Studies, Rackham	0	682	0	0.0	52
Information	0	391	0	21.2	127
Kinesiology	808	49	0	19.0	239
Law	0	12	1,206	32.2	429
Literature, Science, and the Arts	16,309	1,977	0	722.5	4,454
Medicine	0	410	1,832	95.6	274
Music, Theatre & Dance	777	261	0	102.8	295
Natural Resources & Environment	0	283	0	19.5	96
Nursing	647	259	0	28.2	243
Pharmacy	51	88	247	21.5	78
Public Health	0	866	0	59.3	308
Public Policy	104	161	0	14.1	81
Social Work	0	554	0	35.4	328
Total	25,994	11,307	3,727	1,658.8	11,079

Source: Office of Budget and Planning

Key financial Indicators that reflect the University's support of its mission and goals, as well as recent trends, are shown in the table below (data for 2000, 2004 and 2008). Additional details are available on the Financial Operations' Financial Reporting site.

Financial Indicators

Financial Indicators	2000	2004	2008	change since 2000
Total Operating Budget; TOB (millions)	3,321	4,239	4,980	50%
Specific Budgeted Revenues; SBR (millions)	1,142	1,403	1,772	55%
% SBR supported by state appropriations	34	27	21	-38%
% SBR supported by tuition	47	52	54	15%
% SBR supported by gifts and investment	11	11	16	45%
% SBR supported by indirect cost recovery and other	9	11	9	0%
Total Research Expenditures; TRE (millions)	545	753	876	61%
% TRE from U-M funds	16	16	18	13%
% TRE from federal sources	69	71	70	1%
% TRE from non-federal sources	16	13	12	-25%
Net Assets (millions)	6,834	7,730	10,755	57%

Source: Financial Operations

More complete information and further breakdowns of the various data sets are available on the Office of Budget & Planning website, on the University's College Portrait website, and posted as Snapshots of the University of Michigan under Resources.

1.3
THE 2000 REACCREDITATION REPORT

For the 2000 reaccreditation review, the University of Michigan included the topic of "Interdisciplinarity" for its self-study. An extensive report was produced, titled "New Opening for the Research University: Advancing Collaborative, Integrative, and Interdisciplinary Research and Learning," presenting key findings and recommendations from four working groups that contributed to this self-study: the Working Group on Faculty, the Working Group on Graduate and Professional Studies, the Working Group on Research, and the Working Group on Undergraduate Teaching and Learning. These groups made both major and minor recommendations, many of which the University has subsequently acted upon. The main recommendations from the 2000 self-study report (see Key Findings) are below.

Faculty
- Support faculty development with attention to career-stage specific issues affecting the climate for interdisciplinary activity.
- Enhance confidence among faculty members in interdisciplinary positions in the promotion and tenure review process.
- Support leadership training for chairs and directors with respect to the interdisciplinary interests of the faculty.

Graduate and professional studies
- Create better communication, coordination, and information in support of graduate and professional students interested in interdisciplinary work.
- Enhance the management of interdisciplinary and interdepartmental graduate and professional programs.
- Support faculty leadership in the development of interdisciplinary and interdepartmental programs.
- Take steps to encourage interdisciplinary and interdepartmental programs and training.

Research
- Support interdisciplinary faculty members in their pursuit of excellence and empower interdisciplinary research connections among them.
- Strengthen administrative coordination with regard to interdisciplinary research.

Undergraduate Teaching and Learning
- Address and remedy specific barriers to collaborative teaching.
- Develop ways to assess learning outcomes of interdisciplinary teaching.
- Create thematically-organized clusters of courses that allow students to explore different disciplines.
- Facilitate a system of internal fellowships for faculty for the purpose of developing new courses of study.

1.3.1
The Self-Study on Interdisciplinarity

The main recommendations and a summary of the Higher Learning Commission's evaluation team findings are described in their spring 2000 HLC report. A summary of the evaluation team recommendations focusing on interdisciplinarity is below.

Accreditation Evaluation Team Recommendations

The 2000 accreditation review team's list of findings and recommendations has been revised from the original report to specify the University's and the evaluation team's emphasis on interdisciplinary programs, on students in interdisciplinary programs or with interdisciplinary interests, on faculty in interdisciplinary appointments or with interdisciplinary interests, and on overall interdisciplinary coordination. They are:
- Work toward more uniform and transparent promotion and tenure procedures for interdisciplinary faculty members.
- Develop equitable ways to evaluate scholarship and teaching.
- Foster interdisciplinary faculty collaboration, and engage interdisciplinary faculty members in strategic planning.
- Improve mentoring of graduate students in interdisciplinary programs and junior faculty members in interdisciplinary appointments.
- Build infrastructure for interdisciplinary initiatives in undergraduate education.
- Periodically review all interdisciplinary programs and consider eliminating programs that underperform.
- Foster administrative coordination and equity (e.g., in sharing indirect costs between units).
- Collect more timely and accurate data (e.g., of graduate students) in comparison to students in single disciplines.

Interdisciplinary Enhancements and Initiatives since 2000

Out of an embedded institutional commitment to interdisciplinarity and in response to the University working group recommendations and the evaluation team comments, a host of activities have been undertaken at the University of Michigan since 2000. The main activities are below, the most relevant of which will be discussed in more detail in other sections of the 2010 reaccreditation report.

Faculty

- **Interdisciplinary Junior Faculty Initiative.** In 2007, President Coleman committed $30 million to the schools and colleges to hire 100 new junior faculty members in areas that advance interdisciplinary teaching and research as part of the Interdisciplinary Junior Faculty Initiative. Through these new faculty positions, the University is better able to recruit faculty with emerging research interests and to enhance interdisciplinary teaching by tenure track faculty.
- **Joint academic appointment guidelines and resources.** In 2004, the Office of the Provost published an online set of guidelines and resource documents for joint academic appointments to help the schools and colleges and the provost's office to make processes related to joint faculty appointments as clear and direct as those for faculty with appointments in a single school or college. The guidelines provide a set of principles for joint academic appointments; recommended practices for joint academic appointments with respect to initial appointments, appointment changes, and faculty review processes; practices for special cases; and a set of related resources.
- **Revision of faculty promotion guidelines with regard to interdisciplinary faculty.** In addition, the provost's office has recently modified in two ways its faculty promotion guidelines for faculty who hold interdisciplinary appointments. Starting with the 2008-09 academic year, the provost's office provides separate sample solicitation letters for faculty with non-interdisciplinary appointments and faculty with interdisciplinary appointments. Beginning with the 2009-10 academic year, with regard to units' documentation of a faculty member's teaching effectiveness and research for the promotion dossier, the guidelines remind the academic units to comment on the faculty member's contributions to interdisciplinary teaching and research.
- **Chair and Associate Dean Leadership Program.** To supplement the chair training efforts of the schools and colleges, the provost's office established an academic leadership program in 2007 that consists of separate orientation programs for new department chairs and associate deans. In addition, a set of roundtable sessions is offered over the course of each academic year for all department chairs and associate deans. Roundtable topics have included developing and carrying out a departmental vision, assessment of student learning, conflict resolution, faculty hiring and retention, and dealing with difficult people.

Graduate and professional studies

- **Interdisciplinary (and dual-degree) academic programs and certificates.** The Rackham Graduate School offers a wide range of interdisciplinary academic programs, including certificates and dual degree programs, many of them cross-unit. Since the 2000 reaccreditation review, Rackham has approved numerous additional certificates and programs. To name a few, these include certificates in Plasma Science and Engineering; International Health; Science, Technology & Society; as well as dual degree programs in nursing and public health, business and education, the medical school and public policy, and microbiology/immunology and epidemiology.
- **Rackham Interdisciplinary Workshops.** The Rackham School of Graduate Studies sponsors an ongoing program of interdisciplinary graduate student and faculty workshops. This program has two goals: to encourage exchange and collaboration among students and faculty who share intellectual interests but may not have an easily available forum because they have different academic affiliations, and to help advanced doctoral students to form working groups that support the development of research projects and dissertation writing. The groups must identify an interdisciplinary goal or end product, be participant-organized, have an ongoing core membership, and meet regularly throughout the academic year. A list of current workshops is available online.
- **Rackham Graduate School - Cantor Seminars.** To honor former University Provost Nancy Cantor, the Rackham Graduate School provided funds for a series of semester-long seminars, in each of which about a dozen doctoral students enrolled. The aim of the seminars was to focus on three of Cantor's main commitments: interdisciplinarity, diversity, and public goods. For example, a recent seminar, "Thinking About Culture," was taught by two faculty members in the Departments of English and History.
- **Provost's Seminar on Teaching.** As part of the annual Provost's Seminar on Teaching program, in 2004 the provost hosted a seminar on the topic, "Our Undergraduates' New Challenges: Navigating the Multidisciplinary University."

Research

- **Seed funds for research and scholarship.** The Office of the Vice President for Research (OVPR) offers support for research, scholarship, and creative activities in all fields, including funds to help seed inter-unit projects. OVPR invites proposals for specific areas of interdisciplinary research, among other purposes and research needs. These areas currently include Global Health Research and Funding, which encourages proposals from interdisciplinary research projects and teams, and the Collaborative Research in Energy Science, Technology, and Policy, which solicits project proposals to develop a better understanding of the interplay between the various parts of the energy system so that the Seventy Percent Solution (reducing the nation's production of greenhouse gas production by 70%) can be realized.
- **New interdisciplinary institutes.** Two examples of new interdisciplinary institutes that were established since 2000 are:
  - In the fall of 2005, the University announced the **Graham Environmental Sustainability Institute** (GESI). With joint sponsorship from the Graham Foundation and the University, GESI is a collaborative partnership of nine schools and colleges. The institute fosters cross-disciplinary collaboration to create and disseminate knowledge and to offer solutions related to complex environmental sustainability issues.
  - In the fall of 2006, the University announced the commitment of $9 million toward the creation of the **Michigan Memorial Phoenix Energy Institute** (MMPEI), with additional support from the College of Engineering, the College of Literature, Science, and the Arts and the Rackham Graduate School. With schools and colleges in business, medicine, law, public policy and engineering, the University of Michigan is in a strong position to host the MMPEI because of the interdisciplinary nature of energy research.

Undergraduate Teaching and Learning

- **Multidisciplinary Learning and Team-teaching Initiative.** In the fall of 2005, President Mary Sue Coleman committed $2.5 million to support new team-teaching efforts and develop interdisciplinary degree programs at the undergraduate level. Over four years, the Multidisciplinary Learning and Team-Teaching (MLTT) Steering Committee approved funding for numerous courses and programs that affect hundreds of students each term. Funded proposals include such offerings as Problem of the Day, Sustainable and Fossil Energy: Options and Consequences, Creative Processes, and Applied Complex Systems: Emergent Challenges. The MLTT initiative also helped to create a number of minors and programs, including an undergraduate concentration in Informatics and a multidisciplinary minor in Community Action and Social Change.
- **New interdisciplinary concentrations (majors) and minors.** Prior to the creation of the MLLT-supported programs mentioned above, a highly successful example of other interdisciplinary offerings is the Program in the Environment, which represents a fast-growing area of study, both at the University and around the world. The program offers a concentration (major), a minor and a cross-disciplinary range of courses for undergraduate students. Another example is the Global Change Minor, which offers a broad understanding of the societal challenges that humanity is facing and of the need to develop strategies toward a sustainable relationship with our planet and its resources.
- **Search feature in LSA course guide for interdisciplinary courses.** In its online student course guide, LSA now offers an interdisciplinary course search option, better enabling student to select interdisciplinary ("ID") courses that meet general education (distribution) requirements.
- **Assessment of interdisciplinary offerings.** With funding from the Multidisciplinary Learning and Team Teaching Initiative (MLTT), the Center for Research on Learning and Teaching (CRLT) is collaborating with departments and faculty teams to conduct longitudinal assessment to assess student learning and to help improve faculty pedagogy for interdisciplinary offerings. Results are just appearing, but seem to paint a very positive picture of the student experience.

1.4
THE 2010 REACCREDITATION PROCESS AND REPORT

In summer 2007, Professor Ben van der Pluijm was tasked by Provost and Executive Vice President for Academic Affairs Teresa Sullivan to lead the University's reaccreditation effort, joined by Assistant Vice Provost Glenda Haskell, who had helped the provost with preliminary preparations, and in 2008 by Research Associate Elias Samuels. Campus discussions prior to the start of the self-study led to a proposal to the Higher Learning Commission for a special-emphasis study (SES) on *Internationalization*, which the HLC formally approved in 2008. The findings and recommendations that resulted from this SES are included as the final chapter of the report.

1.4.1
Accreditation Working Groups

In support of the self-study and the internationalization special-emphasis study, the provost appointed five accreditation working groups (AWGs) to focus on the learning environment, the knowledge environment, the role of engagement and service, and internationalization. Descriptions of the charges of the AWGs, the memberships and chairs are posted here. The AWGs were charged to focus on the meaning and value of their respective topics for the University of Michigan.

Looking beyond the scope of the University's review for reaccreditation and in the spirit of continuous improvement, the AWGs were tasked to consider ways in which the institution might build on its current strengths. Each group was specifically asked to examine their respective topics from a faculty, student, and organizational perspective, with the aim to uncover the University's roles and commitment in these areas. The groups were encouraged to explore current practices, but especially to take a forward-looking approach in their deliberations. In response to the latter part of their charges, each group produced a set of recommendations, which are available in five AWG reports. These recommendations include such items as changes in administrative structures, ways to enhance and streamline communication, ideas for more sharing of good practices inside the University, ways to promote greater collaboration within and outside the University, and activities that could be undertaken if new or reallocated resources were to become available (e.g., more training and education, additional staff support, renovated or new facilities, improved or new technologies and information systems).

In creating these AWGs, the University had two primary goals in mind. The first was for the groups to discuss the conceptual framework of key topics that reflect the heart of the University's three-part mission and that link directly to several HLC criteria for accreditation: the student learning environment, the knowledge and creative environment, engagement, outreach and service, and internationalization. The discussions of these groups would lead to observations, concepts and framing that would be embedded into the University's reaccreditation report. Secondly, the groups would propose recommendation for the future that support the University's goals for continuous improvement.

Five AWG reports were produced whose content has been largely incorporated into this accreditation report (see Resources>Supporting Reports). Each group provided an examination of the intellectual underpinnings of its topic, mostly from a faculty and student perspective, and also offered recommendation for the future. The latter represents a combination of broad changes and specific suggestions for improvement. Although the AWGs were not asked to catalog the current activities at the University for each of the five HLC criteria and their core components, the relevant chapters in this report include examples drawn from the AWG discussions.

1.4.2
Outreach and Information Gathering

In addition to supporting the Accreditation Working Groups, the accreditation team undertook a variety of activities to reach out to units and other leader at the University and beyond, including discussions with deans and school/college executive or advisory committees, meetings with staff on campus, a survey of graduating seniors, a survey of two alumni cohorts, a series of provost's forums, and numerous discussions with internal and external constituency groups. Some are briefly described below.

- **Campus meetings.** Meetings were held with the executive committees or advisory groups in the schools and colleges, with senior staff across campus to discuss assessment of student learning--broadly defined to include traditional learning settings as well as co-curricular programs and activities, with student leaders, and with faculty or staff in key centers and programs.
- **Constituency group discussions.** A series of facilitated discussions was held with members of the University of Michigan Alumni Leadership Council; with major donors; with parents; with staff; and with local, state, and community leaders and representatives. The chairs of the accreditation working groups participated in several of these discussions to help inform the deliberations of their AWGs.
- **Institutional research.** In spring 2008 the University conducted a survey of all graduating seniors in collaboration with the American Association of Universities (AAU). A summary report from this survey is available on our website, including a link to the full report. In the spring of 2009, the University conducted a complementary survey of University alumni, again in collaboration with the AAU. The summary report of this survey is also available on our website. On both surveys, the University added questions designed to capture information on a range of topics related to our reaccreditation efforts, including international experiences.

- **Data Collection.** In preparation for the HLC review, a great deal of data and information about the University, both quantitative and qualitative, was collected. Many offices on campus responded to requests for information, particularly the Office of Budget and Planning in the provost's office, which was central to this effort. In addition, information about alumni benefitted from data and demographics produced by the University of Michigan Alumni Association in support of our self-study.
- **Provost's forums.** To complement campus outreach and the forward-looking approach of the University's preparations for its review for reaccreditation, the provost hosted a set of campus forums, each of which involved roughly 100 people from across the University. The speakers and participants at each forum examined a key topic related to the accreditation review, including the learning environment, internationalization, and the key findings and recommendations of the accreditation working groups. Details and streaming video of these presentations are posted (See Resources>Provost's Forums).

1.4.3
The 2010 Reaccreditation Report

The reaccreditation report is purposely organized around the University's activities linked to each of the five HLC criteria and the internationalization special-emphasis study. Each criterion chapter starts with a description about the value and meaning of the topic for the University of Michigan, followed by representative examples of activities in the relevant areas that show our commitment to each topic and that demonstrate we meet the core components for reaccreditation. A distinctly forward looking section is located at the end of each chapter, called Looking Forward, which offers recommendation that may be considered for the future. These recommendations are presented to stimulate further conversation and thought, and are not intended to convey institutional approval or commitment at this time. A closing section summarizes our commitment and, where appropriate, our goals and paths for further improvement. This structure matches the format of the reaccreditation review. The introductions and current practices sections map to the *assurance* part of the HLC review that focuses on whether the University meets the criteria for reaccreditation, whereas the forward-looking sections and conclusions map to the *advancement* part that focuses on improvement and consultation.

In addition to the chapters that address the five HLC criteria (chapters Two to Six) and the internationalization special-emphasis study (chapter Seven), various supporting documents are posted in the Resources section, including a Portrait of the University of Michigan that follows the "College Portrait" structure of the Voluntary System of Accountability, University Snapshots, recent student and alumni surveys, and various campus reports. These and additional materials are also included in the "Resource Room", which is part of the supporting materials that the HLC requires.

The web-based presentation of the 2010 reaccreditation report offers the user an interactive information environment, leveraging the power of the internet to include nontraditional print media and capitalizing on the rich resources of the University's existing and ever-growing web environment. The printed version retains the key information, but links and some graphic items are not included.

1.5
CONCLUSION

As the University finalizes the reaccreditation process, campus leadership is already considering next steps with respect to our findings and recommendations. As with all self-studies and group deliberations, there are likely to be quick wins that don't require a significant infusion of energy and funding. Other recommendations, however, would require a substantial commitment of time, people and funds. It is likely that the University will place a high priority on some of the recommendations by making them the focus of future planning and fundraising. However, especially during a time of fiscal constraints when new resources depend almost exclusively on shifts in priorities and reallocation of funds, the University needs to proceed deliberately and in close collaboration with University leadership and campus constituents when deciding on next steps apropos of the rich set of suggestions for enhancements that the reaccreditation process has generated.

2. MISSION AND INTEGRITY

2. MISSION AND INTEGRITY

Criterion 1: The organization operates with integrity to ensure the fulfillment of its mission through structures and processes that involve the board, administration, faculty, staff, and students.

2.1
INTRODUCTION

The mission of the University of Michigan is to serve the people of Michigan and the world through preeminence in creating, communicating, preserving and applying knowledge, art, and academic values, and in developing leaders and citizens who will challenge the present and enrich the future.

2.1.1
Mission Statement

The brevity and simplicity of the University of Michigan's mission statement reflects the institution's complexity. It mirrors the University's key values: knowledge and art, service, good citizenship, and leadership. It captures the University's primary activities: research and creativity, education and service. The University of Michigan's broad mission statement takes form in the University's tradition of balance between academic decentralization with strong central support for governance, infrastructure, and services.

The heart of the University of Michigan's reputation as a leader in higher education is its nineteen schools and colleges, with an array of academic departments and programs, most of which are nationally ranked. These programs cover a wide range, from general studies to mechanical engineering, from the history of art to pharmaceutical sciences, from dance to business, from human-computer interaction to graphic arts, from law to political science, from medicine to architecture, and from the environment and astronomy to musical theatre. These are but a few examples on a long list of fields and disciplines at the University.

The underlying cornerstones of the University's scholarly reputation and its pluralist academic community are its people: the scholarly and creative contributions of the University's accomplished faculty; the quality, vitality, and passion of its undergraduate, graduate, and professional students; and the contributions of staff members at all levels. Each of the schools and colleges, and each department in the larger units, has a distinct academic mission and culture born of a long and distinguished tradition of academic decentralization. Every academic program at the University shapes its own intellectual milieu for faculty and students. Faculty members form the core of each of these academic environments, supported by research faculty, postdoctoral fellows, graduate students, professional students, and undergraduate students, who collectively play key roles in the knowledge and creative enterprise.

This academic decentralization is balanced by central support for governance, infrastructure, and services. The University underwrites the efforts of each academic unit to break new ground and push on the boundaries of knowledge and creativity. This support includes setting general direction for the University, aligning the budget with University priorities, protecting the University's fiscal strength, promoting activities that reflect the University's values, and includes our long-standing commitment to diversity, ensuring institutional integrity through policies and procedures at every level, effective problem-solving, and provision of common solutions to support needs. This strategy facilitates the University's strong commitment to interdisciplinarity, helping faculty and students cross disciplinary boundaries to collaborate with others, a topic to which we will return in several places in this report.

The University's broad mission statement is an umbrella for the objectives and goals of our academic programs. It respects the fact that faculty in each of the academic units are the stewards of the units' academic mission and goals.

2.1.2
Vision Statement

The University of Michigan is developing a new vision statement that describes our goals and commitments as we move forward in our third century. This vision statement fully embraces the legacy bestowed upon us by President James B. Angell in our first century of offering *"an uncommon education for the common man."* With the vision statement, the University identifies the modern challenges and opportunities before us and recognizes that we must change, adapt, and grow to meet the needs of a rapidly evolving and global society.

- **We are a community of learners.** We serve our multiple constituents by providing access to and participation in scholarly and creative endeavors on a vast scale. Our academic research enterprise affects the world. The University is defined by a culture of interdisciplinary teaching and research, coupled with academic rigor. We encourage our students, faculty, and staff to transcend disciplinary boundaries by tackling complex and vexing problems facing modern societies at local, national, and global levels.
- **We endorse and promote creativity in its many facets.** We recognize the arts as a human essential and a foundation that helps to define our future. We see information technology as a powerful means for broadening access to ideas and for widening communication, and to promote the creation of new knowledge and share the joy of discovery.
- **We draw from study and experience to prepare our students for leadership roles** in a wide range of social institutions, including government, politics, law, business and finance, reflecting the University's many roles in contributing to good design and decision making within major domestic and international institutions.
- **We celebrate and promote diversity in all its forms,** seeking the understanding and perspective that distinct life experiences bring. We proclaim ourselves a scholarly community in which ideas may be freely expressed and challenged, and where all people are welcomed, respected, and nurtured in their academic and social development.
- **We are committed to providing for our students and faculty international learning, teaching, and research experiences** that will prepare them for a rapidly changing global community. The University encourages intellectual and cultural exchange in other countries, and programs that deeply engage scholars from disparate areas of the globe. We support and promote student, faculty, and staff immersion in local and national communities via service, learning, and leadership endeavors. We nurture lifelong relationships with alumni who span the globe.
- **We advance health care through discovery and practice.** We deliver clinical services to people within our state and the world, educate future generations of health care professionals, conduct basic research in fundamental processes of life, and vigorously advance research on the mechanisms, detection, and treatment of a spectrum of human diseases. The University champions fitness, disease prevention, and policy research to advance health, quality of life, and longevity of our own community, the nation, and the globe.
- **We stimulate economic growth and development in Michigan and beyond.** The University engages in productive partnerships among academe, industry, and government to sustain and grow a vigorous and dynamic economy. University students, faculty, and staff embody and advance innovative attitudes and entrepreneurial spirit.
- **We strive to be an exemplary employer and a positive influence in our community.** We provide an environment where all employees can deploy and develop their skills to the fullest potential.
- **We dedicate ourselves to responsible stewardship of financial, physical, and environmental resources.** We look for tools and strategies to enhance sustainable practices in all facets of operations and seek to lead in the global quest for a sustainable future.
- **We gladly accept the challenges and opportunities confronting us** and understand that the University of Michigan must change, adapt, and grow to meet the needs of a rapidly evolving society. We will always focus on the horizon.

2.2
THE UNIVERSITY'S MISSION

Core Component 1a: The organization's mission documents are clear and articulate publicly the organization's commitments.
Core Component 1c: Understanding of and support for the mission pervade the organization.

The faculty, administrators, and staff at the University of Michigan articulate and embody the University's mission in three key and intertwined ways:
- Articulate mission or goal statements, some of which include statements of vision and values.
- Study key topics and plan for initiatives.
- Plan, set, and execute budgets.

For this reason, we believe that Core Components 1a and 1c are inextricably linked, so we address them together in this section.

These interwoven activities take place at all levels of the University: by the executive officers, by the deans of the schools and colleges, and by the heads of academic departments, individual offices, and supporting units. Here, too, the academic decentralization of the University respects the differences among individual units and the strengths of respective leaders who, by working with others, plan and carry out the University's many activities. This practice of articulating missions and goals also allows units at every level to revisit their actions over time to better align them to changes in unit leadership and in the evolving nature of academic disciplines and professional practices.

2.2.1
Missions and Goal Statements of Offices and Units

The mission and goals of the University's executive officers, deans, and unit heads are articulated in formal mission and goal statements, website welcomes, and strategic frameworks, as well as in key speeches, reports, and initiatives. We provide several examples below.

Office of the President

President Coleman communicates her goals for the University through frequent publications and speeches to the University community and others; speeches, letters, and commentaries are publicly posted on her website. Since assuming the Presidency in 2002, she has outlined her main goals in two key speeches to the Senate Assembly, the elected University-wide representative body of faculty. In her speech in April 2004, "*Future Directions: Shaping the Michigan Difference*," she outlined her key initiatives as president, many of which led to the activities described below. In 2007 she followed with an address entitled, "*Five Years Forward*" that outlined the plans for her second five-year term as president. In addition, the president broadly communicates the University's mission and goals to other constituencies, for example, through her annual testimony to appropriation committees in the Michigan legislature (e.g., her testimony in 2008 to the Senate Appropriations Subcommittee on Higher Education).

Office of the Provost and Executive Vice President for Academic Affairs

The Office of the Provost has responsibility for academic affairs and budgeting on the Ann Arbor campus. As stated in the website's welcome, the office supports the research, teaching, and public service missions of the University. In collaboration with the president, the deans, faculty leaders of the academic units, and the larger faculty, the provost sets academic priorities, supports initiatives, and allocates funding to carry them forward.

Schools and Colleges

The University's schools and colleges communicate their missions in a variety of ways, including traditional mission and vision statements, as well as website welcomes, "About Us" sections, and, in the case of the Ross Business School, a statement about admissions. Examples from across the spectrum are listed below.
- College of Literature, Science, and the Arts: Welcome.
- College of Engineering: About the College.
- Ross School of Business: Leading in Thought and Action.
- School of Music, Theatre & Dance: About the School.
- School of Public Health: Mission Statement.
- School of Social Work: Vision & Goals.

Departments, Units, and Offices

The hundreds of departments, units, and offices across the University also make their mission information available in a variety of formats. Examples of online resources include:

- Department of Chemistry: Undergraduate Statement of Goals.
- Department of Comparative Literature: About Us.
- Lloyd Hall Scholars Program: Welcome.
- Architecture, Engineering, and Construction: Strategic Plan.
- Center for the Education of Women: Mission Statement.
- Office of International Programs: Mission Statement.
- Department of Environmental Health Sciences: Mission.
- University of Michigan Museum of Art: The UMMA Story.

2.2.2
Making Our Mission and Goal Statements Accessible

Units at the University describe their missions in various ways, but most of the key information is available online. Units share information through online newsletters, letters from the deans, the use of collaborative learning infrastructures such as CTools, and, increasingly, through unit-sponsored blogs. Many of these materials are also available as written materials in brochures, handbooks, bulletins, and written policies. In-person activities, such as welcome events and orientations, individual and small group meetings, and town hall meetings, remain an important avenue of dissemination as well.

2.2.3
Study, Planning, and Budgeting

The University's missions are closely integrated with study, planning, and budgeting processes at all levels, especially in the University's activity-based budget system that will be discussed more in Chapter Two. The concluding paragraph in "Budgeting with the UB Model at the University of Michigan" explicitly links the budget model with the University's missions in this way:

> The system allows the University's leadership to see clearly the fiscal implications of the activities at the school/college/research unit level, while allowing considerable flexibility to determine how best to adjust to fiscal circumstances in light of the University's missions. The system is well designed for an active provost who is willing to reallocate resources towards the academic mission and among academic units.

The planning and budgeting process is directed by the provost, who works closely with the president and with the leadership of the schools, colleges, University Library, and other major units (e.g., the Institute for Social Research and the Life Sciences Institute). Each summer the provost presents a budget to the Board of Regents (see budgeting website) that highlights a set of important University initiatives. For example, the provost's budget presentation in June 2008 accentuated several critical investments: faculty expansion, financial aid, graduate student stipends, academic program initiatives--with a focus on globalization and international experiences for our students, the University Library, research and technology initiatives, and facilities. In addition, the provost's office periodically convenes groups to examine and make recommendations about topics important to the University and its missions. Topics have included data collection and reporting for race and ethnicity, gender salary studies, online placement examinations, textbook sales, and faculty mentoring (website). At times, these discussions lead to formal initiatives such as the current Space Utilization Initiative, whose purpose is to better plan and manage the University's facilities to serve its missions now and in the future.

The president influences budget decisions through the provost, and also dedicates resources to specific initiatives that are linked to the University's evolving missions. Several examples that mirror the University's commitment to its multiple missions are illustrated here.

Multidisciplinary Learning and Team Teaching

Interdisciplinary scholarship and research is a core mission of the University. In 2004, President Coleman charged the Presidential Task Force on Multidisciplinary Learning and Team Teaching to identify the best ways to strengthen interdisciplinary and multidisciplinary opportunities for undergraduates. She subsequently allocated $2.5 million to support team-teaching efforts and interdisciplinary undergraduate degree programs. The Multidisciplinary Learning and Team Teaching website describes activities to date, including support for eight courses, one new undergraduate degree program, and two new undergraduate minors.

Interdisciplinary Junior Faculty Initiative

President Coleman committed $30 million to hire 100 new junior tenure-track faculty members through the Interdisciplinary Junior Faculty Initiative, which illustrates central support for decentralized academic efforts. Faculty members with research interests in emerging fields are hired to enhance interdisciplinary teaching and research. The program runs for five years, from the 2007-08 academic year through 2011-12. Each year the president and the provost invite faculty groups to submit proposals for new faculty clusters. As of May 2009, funding has been approved for 49 new positions.

Life Sciences Initiative

The cornerstone of the Life Sciences Initiative is the Life Sciences Institute (LSI), a hub of scientists from life science disciplines who collaborate on the biological problems of human health. These scientists work in interdisciplinary teams, studying vast stores of information generated by the capacity of modern scientific and informatics-based tools. Researchers with different backgrounds and approaches work together in a unique open-laboratory facility that sparks new ideas and projects to accelerate our understanding of life and to make progress toward treating disease. Located between the medical campus and central campus, the institute's work crosses academic boundaries. The LSI is a bridge linking the life sciences with medicine, public health, engineering, law, and business, and is a booster for the region's economy by developing, licensing, and spinning off new technologies and discoveries.

Ethics in Public Life

President Coleman launched an initiative in 2005 to restore ethics to a pivotal place in education and research at the University. The centerpiece of this initiative is the new Center for Ethics in Public Life that promotes University-wide activities and engages undergraduates regarding ethical issues they encounter on campus and beyond, through course-related and co-curricular activities. The Center also supports faculty research on ethics, creates opportunities for public discourse on ethics in public life, and promotes teaching and research on ethics in the professions.

Residential Life Initiative

President Coleman's Task Force on Residential Life and Learning, convened in 2004, produced a report to guide renovation and expansion of housing facilities on campus, and to define the campus community of the future. The University is now implementing plans to create exciting residential environments where students of all backgrounds and experiences can grow both intellectually and personally, connect with each other and with faculty, and succeed. The University is expanding and revitalizing student residence halls and dining facilities, including the new Hill Area Dining Hall that freed up space for other purposes. The ambitious North Quad Residential and Academic Complex, scheduled to open in 2010, will house 460 students and provide space for five information- and communications-related academic programs. The complex will incorporate 21st century technology with a contemporary residential space unlike any other at the University, and is expected to be a model for international living and learning communities.

Michigan Healthy Community Initiative

The Michigan Healthy Community Initiative harnesses the University's intellectual strengths to develop and test cost-effective interventions and policies for health and wellness of the University's faculty, staff, students, retirees, and dependents. The University encourages members of its community to focus on their health as a commitment to themselves and to the community. MHealthy, an offshoot of the initiative established in 2005, encourages a culture of health at the University, promoting health and wellbeing and developing more cost-effective delivery of health care as a model for the broader society.

2.2.4
The University's Internal and External Constituencies

The University's internal constituencies include everyone who is enrolled in or employed by the University of Michigan -- students, faculty, and staff. The University serves students in countless ways. We provide them with a range of services such as room and board, classroom instruction, academic advising, social and cultural opportunities, an ever-expanding array of information technology resources, psychological and health services, and many special services to meet their needs. The University serves its faculty by supporting all aspects of their research and creative work, providing and maintaining laboratories and specialized equipment, caring for research animals, supporting them as instructors, and offering them professional and leadership development. Although staff provide a full range of services to students, faculty, and other staff, the University also serves them through on-the-job education and training, with career and personal development opportunities, and by engaging them in

identifying and solving problems. The University similarly provides an array of other services to meet the needs of other constituents on campus, including groundskeeping, facilities and building maintenance, security services, and transportation.

As reflected in the mission statement, the University of Michigan defines its external constituencies in the broadest terms: the people of Michigan and the world. A perusal of the University's rich Community Assistance Directory shows a wide range of external constituencies, including patients in our health system and health care providers; students of all ages in such venues as childcare centers and schools at every level; legislators; people in business and industry, government agencies, non-profit agencies, foundations, philanthropic organizations, faith-based organizations, and communities; and underserved populations that include the elderly, migrant workers, and the homebound. In serving these people and organizations outside the University, we offer such activities as written and online information; lectures, classes, workshops, and other education and training; networking;, research; community forums; financial assistance; consultation; artistic, musical and other cultural opportunities; recreational sports; mentoring and counseling; portable educational resources; athletic events; and many activities to help individual people meet their needs.

A sample of the many ways the University of Michigan serves its external constituencies is provided in Chapter Six (Engagement and Service). Also, Chapter Seven, the University's special emphasis study on internationalization, offers examples of the ways in which the University collaborates with and services its external constituencies on an international scale.

2.3
A COMMITMENT TO DIVERSITY

Core Component 1b: In its mission documents, the organization recognizes the diversity of its learners, other constituencies, and the greater society it serves.

2.3.1
Diversity and the Learning Environment

A diversity of people, of ideas, and of cultures is a core value of this institution. We want a spectrum of students, staff and faculty, and we will always work to attain it, because it is a critical element of our commitment to academic excellence.
—President Mary Sue Coleman, Michigan Roundtable for Diversity and Inclusion; November 6, 2008

What does the concept of diversity mean to the University of Michigan? To answer, we draw from the introduction to the University's Diversity Blueprints report (March 2007), which presents recommendations shaped by the collective effort of hundreds of Michigan students, faculty, staff, administrators, alumni, and community members in response to a charge from President Mary Sue Coleman to explore ways to maintain the University of Michigan's status as one of the nation's premier educational institutions while adhering to changes resulting from the passage of Michigan's Proposal 2 in November 2006. The state's adoption of this proposal bans public institutions in Michigan from discriminating against or giving preferential treatment to groups or individuals based on their race, gender, color, ethnicity, or national origin.

Students learn better in a diverse class. They are more analytical, and more engaged. The teaching environment is more enlightening. The discussion is livelier and more often mirrors real-world issues. These students are more open to perspectives that differ from their own, and they are better prepared to become active players in our society—exactly what we need in today's graduates.

Learning is enhanced when people from varying backgrounds and experiences can interact with each other in ways that are meaningful, dynamic, and mutually rewarding and enriching. The University's educational mission requires an environment where students, faculty, and staff develop intercultural skills through interacting with many different types of people, both on and off campus. These opportunities start with recruitment and are provided through orientations, discussions, and other activities. Our successes are demonstrated, for example, by the numbers of doctorates awarded to American-Indians, Blacks, Asians, and Hispanics, where we rank in the top seven for all categories (2003-07[2]). The University strives to move beyond the facts of diversity to the actions of diversity, and, through this, to embrace diversity as a key component of excellence.

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[2] Diversity in Academe. Chronicle of Higher Education. October 11, 2009.

Criterion 1 focuses primarily on the University's mission. Diversity is at the heart of its mission. Our actions speak for themselves. The discussion below provides a sample of activities covering history, policy, planning, education and training, cultural enrichment, the curriculum, support services, awards, advocacy and networking, assessment and institutional research, outreach, scholarly research, and noteworthy achievements. The University's Bentley Historical Library has a web site, Diversity Matters at Michigan, which further elaborates.

2.3.2
History

The University of Michigan's commitment to diversity goes back in history to at least 1853, with the admission of Samuel Codes Watson, a medical student and the first known African American to be admitted to the University. That commitment was reinforced recently through the University's national role in its defense of two admissions lawsuits. Gratz v. Bollinger challenged the particular use of race in its admission process for the College of Literature, Science, and the Arts. Grutter v. Bollinger brought a more fundamental challenge to the University's general use of race in its admissions to the Law School. The University was ordered in Gratz v. Bollinger to modify its undergraduate admissions process, but the use of race was not prohibited in admissions. More importantly, the June 2003 ruling of the U.S. Supreme Court in Grutter v. Bollinger et al. was that diversity is a compelling interest in higher education, and that race is one of a number of factors that can be taken into account to achieve the educational benefits of a diverse student body. The individualized, whole-file review used in the University of Michigan Law School's admissions process was held to be narrowly tailored to achieve the educational benefits of diversity, and the Law School's goal of attaining a critical mass of underrepresented minority students did not transform its program into a quota system. This was an important victory for diversity in higher education admissions.

Then, in 2006, the passage of Proposal 2 amended the Michigan constitution to ban discrimination against or preferential treatment for groups or individuals based on race, gender, color, ethnicity, or national origin. The University complies with the law, but diversity remains a permissible and compelling interest of the University and we continue to build a broadly diverse community. Faculty, staff, and students come to the University with a wide range of backgrounds and experiences, and they contribute to the excellence and dynamics of the University's learning environment.

2.3.3
Activities in Support of Diversity

In keeping with the University's academic decentralization, schools and colleges work independently and collaboratively to support and advance diversity among the University's faculty, staff, and students, and to provide service to the communities beyond campus. The University's Diversity Matters website provides links to this array of services and programs.

Policy

Section 14.06 of the Regents' Bylaws covers nondiscrimination and affirmative action (revised April 2009), and forms the cornerstone of University policy with regard to diversity:

> *The University of Michigan is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, national origin, age, marital status, sex, sexual orientation, gender identity, gender expression, disability, religion, height, weight, or veteran status. The university also is committed to compliance with all applicable laws regarding nondiscrimination and affirmative action.*

University units include this statement in all general materials as well as materials used to recruit applicants, participants, beneficiaries, or employees, as required by the U.S. Department of Education and the U.S. Department of Labor.

Recruitment of Students, Faculty, and Staff

> *At Michigan, we are dedicated to building a student body that is an exciting and interesting mix of young men and women who each contribute unique ideas and perspectives to our University. By bringing together students of different backgrounds and different experiences, we create an intellectual environment that is unmatched in higher education, and we produce alumni who are better prepared to make a difference in all aspects of our society.*
> —President Mary Sue Coleman, accepting the 2008 Humanitarian of the Year Award from the Michigan Roundtable for Diversity and Inclusion

All units of the University strive to recruit a diverse group of students, faculty, and staff. Examples include:

- **Student recruitment.** The Office of Academic Multicultural Initiatives coordinates opportunities for middle school and high school students to begin preparation for higher education through pre-college programs that foster desire and perseverance to attend college. In another example, the Rackham Graduate School's Office of Student Success helps academic programs increase the pool of outstanding graduate students interested in their programs.
- **Faculty recruitment.** The ADVANCE Program promotes institutional transformation with respect to women faculty in science and engineering fields, and is gradually expanding to promote other kinds of diversity among faculty and students. It has produced a Handbook for Faculty Searches and Hiring that includes resources for developing a diverse pool of candidates. The Provost's Faculty Initiatives Program (PFIP) dedicates funds to help academic units hire and retain faculty members who contribute to the intellectual diversity of the institution.
- **Staff recruitment.** University Human Resources operates the Department of Recruiting and Employment Services to help with recruitment (see website) and employs a full-time diversity recruiter to assist in developing diverse pools of qualified candidates.

Curriculum

The University's curriculum offers a rich, interspersed array of courses on diversity subjects. Most of our undergraduate students participate in the Race & Ethnicity (R&E) requirement in LSA, where they take at least one 3-credit course from a list of offerings published each term in the LSA Online Course Guide. R&E-designated courses address issues of racial or ethnic intolerance, and cover one or more topics such as the meaning of race, ethnicity, and racism; racial and ethnic intolerance and the resulting inequality that occurs in the United States or elsewhere; and comparisons of discrimination based on race, ethnicity, religion, social class, or gender.

Education and Training

The University provides multiple education and training programs for students, faculty, and staff, including:

- The Division of Student Affairs and the **Office of New Student Programs** highlight New Student Orientation with the Expect Respect Campaign, which includes a video presentation from the president, activities wherein students explore self-identity with other new students, and an Educational Theatre experience.
- The **Program on Intergroup Relations** uses the resources of LSA and the Division of Student Affairs to provide courses, workshops, and other activities that promote understanding of intergroup relations inside and outside of the classroom.
- The **Center for Research on Learning and Teaching Theatre Program** develops and performs sketches for faculty and graduate students to stimulate discussions of multicultural teaching and learning and institutional climate. Sketches portray challenges faced by students of color, women faculty members and students in science and engineering, and students with disabilities. The Players perform at University-wide orientations and seminars, discipline-specific workshops, and at campuses and conferences around the country.
- **Multicultural Teaching Services** for faculty and Graduate Student Instructors (GSIs), run by CRLT and other professional staff, facilitates University-wide workshops, provides individual consultations, and offers a variety of customized programs (e.g., workshops and retreats) to help faculty members and GSIs serve the learning needs of University's diverse student body. Resources (e.g., books and articles, in-house publications, and videotapes) are also maintained to support multicultural teaching and learning.
- The **Office of Institutional Equity** (OIE) facilitates education and training on racial and ethnic issues, sexual orientation, and gender-identity sensitivity, and works to remove barriers to access for employees and to improve hiring procedures.

Cultural Enrichment

The University of Michigan and the city of Ann Arbor provide diverse cultural offerings, including:

- **Arts at Michigan** was created in 2000 to work with students in the arts with the aim of helping people shape their individual and collective identities and understand what it means to be a citizen of a diverse multi-cultural society.
- **Reverend Doctor Martin Luther King, Jr. Symposium**. Every winter since 1987 members of the University community develop programs and initiatives to remember and continue King's legacy. Events often focus on historical authenticity and the Civil Rights Movement of the 1960s, and highlight historical and contemporary issues of race, class, social justice, diversity, and societal change.

Support Services

The University offers central services to assist students and to support faculty and staff members in matters of diversity.

- The **Comprehensive Studies Program** (CSP) in LSA supports, academically enriches, and retains students who show outstanding potential. It offers support services such as the Summer Bridge Program, academic year course instruction, academic advising and peer advising, tutoring, and freshmen interest groups.
- The **Office of Academic Multicultural Initiatives** assists students with academic, financial, and other support from the time they enter the University of Michigan until graduation.
- The Division of Student Affairs runs the **Office of Multi-Ethnic Student Affairs** and the **Trotter Multicultural** Center to promote student development and engage the campus community on issues of diversity and social justice through the lens of race and ethnicity.
- **Services for Students with Disabilities** provides services to students with visual impairments, learning disabilities, mobility impairments, hearing impairments, chronic health problems, and psychological disabilities, so they can enjoy a complete range of academic and non-academic opportunities.
- The **Student Veterans Assistance Program** of the Office of New Student Programs helps students make the transition from active military duty to the University and vice versa. The program supports veterans, guardsmen, reservists, and others receiving U.S. military benefits, as they broaden the diversity of our staff, faculty, and students.

Support services for faculty include the initiatives below:
- The **Women of Color in the Academy Project** (WOCAP) has worked since 1994 to highlight the contributions of women of color to the University community and to society at large. It supports a campus-wide network committed to progressive institutional change, with programs that support the success and wellbeing of women of color scholars both locally and nationally.
- The **ADVANCE Program** was created by the University and the National Science Foundation as a five-year project to improve institutional support for women faculty members in science and engineering fields. The University has continued funding through at least June 2011, and the program is expanding to promote diversity among faculty members and students in all fields. The program's Strategies and Tactics for Recruiting to Improve Diversity and Excellence (STRIDE) Committee provides information, advice, and workshops to maximize identification, recruitment, support, and help for diverse, well-qualified faculty candidates.

Examples of support services for specific constituencies at the University are:
- **Portal En Español** was launched in 2004 to reach prospective students and their parents with Spanish-language information on academic study and admissions. A news service offering translations of the latest research findings was added in 2006, and in 2007 the University health system launched a site with more than 1,000 pages of health and wellness information and links to its Podcast site.
- The **Center for the Education of Women** (CEW) advocates for women in higher education and in the workplace, adds to the knowledge about women's lives through ongoing research, and provides services in women's education, employment, careers, leadership growth and development, and wellbeing.
- The **Spectrum Center** provides education, information, and advocacy to create and maintain an open, safe, and inclusive environment for lesbian, gay, bisexual, transgender, and similarly-identified members of the University community.

Advocacy and Networking
The University creates and supports opportunities for diverse members of the community to meet and support each other, and to advocate on behalf of their constituencies. Examples are:
- The **University of Michigan Diversity Council** was established by President Coleman in 2003 to assess, encourage, and celebrate diversity by offering expertise and guidance to foster a diverse, multicultural, and inclusive University community. The Council hosts the University's annual Diversity Summit, and also co-sponsors the Diversity Matters at Michigan website.
- The **President's Advisory Commission on Women's Issues** (PACWI) was established by President James Duderstadt in 1989 to help University leaders address issues of access, equity, and success for women. PACWI helps women to fully and actively participate in all aspects of life and leadership at the University, and promotes policies, practices, and procedures to enhance gender and racial equity.
- The **Council for Disability Concerns** was created by President Harold Shapiro in1983 to advise University programs and policies regarding people with disabilities.
- The Women of Color Task Force was established more than 25 years ago to provide professional development opportunities for employees to exchange information about the status of women of color at the University, and to address relevant concerns.
- La **Asociación de Profesores y Funcionarios Latinos** de la Universidad de Michigan esta dedicada a crear un ambiente académico y social apropiado para cumplir con las aspiraciones y necesidades en el desempeño de sus trabajos sirviendo a la comunidad universitaria. La Asociación se fundó en el ano 2003 y está dirigida por

representantes de varias escuelas, facultades y unidades administrativas, que mantienen una red informativa y de coordinación con la administración central de la universidad y grupos estudiantiles. (translation)
- The **Association of Black Professionals, Administrators, Faculty, and Staff** is dedicated to creating a work environment that meets the needs and aspirations of Black employees.

Outreach

Outreach activities are central to the University and its schools and colleges (see Chapter Six). The Community Assistance Directory (CAD) of the Office of the Vice President for Government Relations provides information about the University's many outreach projects and services. We cite just a few examples:
- The **Health Occupations Partners in Education** program (HOPE) supports junior high and high school students in the Ypsilanti Public Schools who are interested in health professions careers in an effort to increase the numbers of underrepresented minority and disadvantaged students who pursue such careers.
- **Detroit Community Partnership Center**. The University started and manages this in collaboration with Wayne State University, Michigan State University, and a number of Detroit community-based organizations. Student-faculty member teams work on projects identified by community partners, including a land bank and a retail development in Detroit, and support of urban agriculture.
- **Cultural Heritage Initiative for Community Outreach** (CHICO) makes cultural materials accessible to a broad array of audiences through pilot projects with area partners. Online multimedia resources with a strong multicultural focus are combined with personalized services and programs to enrich museum visits, classroom instruction, and independent research. Graduate students at the University of Michigan's School of Information work with collaborators, including University of Michigan departments, K-12 schools, and local, regional, and national museums and public libraries.

The University has several central offices dedicated to outreach, including:
- The **National Center for Institutional Diversity** (NCID) promotes national exemplars of diversity scholarship, multilevel engagement, and innovation. It is a catalyst, venture fund, incubator, clearinghouse, publisher, and think tank involving faculty-centered mentoring, faculty fellows, postdoctoral scholars programs, and a national consortium for diversity research and policy.
- The **Center for Educational Outreach** (CEO), created in 2007, improves educational opportunities for students in underserved middle schools and high schools in the state of Michigan, and helps the University recruit a diverse group of students.
- The **University of Michigan Detroit Center** provides a base to support dozens of ongoing instruction and research programs, and to facilitate partnerships between the University, civic leaders, and community organizations that improve the quality of the city of Detroit and the life of its residents. Eighteen University units use the center's space for classes, meetings, exhibitions, lectures, and collaborative work.

Scholarly Work and Awards

Academic programs across the University engage diversity and multiculturalism in many ways. Major programs include the Center for Afro-American and African Studies, the Department of Asian Languages and Cultures, the Center for Latin American & Caribbean Studies, and the Women's Studies department. As another example, the Diversity Center of the Ford School of Public Policy promotes interdisciplinary research, educational opportunities and dialogue, and creates an intellectual focal point for research on the policy implications of diverse societies locally, nationally, and internationally. Faculty members of color throughout the University contribute to the University's diversity, regardless of the focus of their scholarship or creative activities. Through honors and awards, the University acknowledges faculty and staff members who contribute to diversity, and many individual units recognize faculty, students, and staff who support diversity activities. The Harold R. Johnson Diversity Award and the Distinguished Diversity Leaders Award recognize faculty and staff members who contribute to the development of a culturally and ethnically diverse campus community. These are but two of many awards given to honor members of the campus community who help make the University climate positive and respectful for everyone.

2.4
GOVERNANCE AND ADMINISTRATIVE STRUCTURES

Core Component 1d: The organization's governance and administrative structures promote effective leadership and support collaborative processes that enable the organization to fulfill its mission.

To demonstrate that the University's governance, administrative, and collaborative structures provide a sound framework for effective leadership, this section will describe the University's administrative and governance structures; the key ways the University articulates its standards and procedures; the means by which the University communicates with faculty, students, and staff about its policies, procedures and activities; and the ways in which the University reviews and evaluates its policies and procedures related to this topic.

2.4.1
Board of Regents

The University is governed by a Board of Regents, which is made up of eight members who are elected at large in statewide elections every two years, and the president of the University (ex officio). The Board of Regents has been mandated by the state constitution since 1850 as an independent branch of the state government, answerable to the people of the state. According to the Michigan Constitution of 1963, the regents have "general supervision" of the institution and "the control and direction of all expenditures from the institution's funds." The regents serve without compensation for overlapping terms of eight years.

The positions of chair and vice chair rotate among the regents, based on seniority. The board has two standing committees: Finance, Audit and Investment, covering internal controls, financial reports, and investment policies and practices; and Personnel, Compensation, and Governance that evaluates the president's performance and decides on her compensation, advises the president in her review of the executive officers and their compensation, reviews compensation-related issues affecting the University's ability to recruit and retain faculty and staff members, reviews progress on diversity, reviews governance and Board performance, and advises the Board on University-wide conflict of interest policies.

The Board meets once a month in a public session, with schedule and agenda available to the public (website). All formal sessions of the board are open to the public.

2.4.2
Executive Officers

The University Executive Officers perform duties as specified in Chapter II of the Regents' Bylaws. These include:

The President

Mary Sue Coleman was appointed the University's 13th President in August 2002. As chief executive officer, she is responsible for general oversight of the University's teaching and research programs, its libraries, museums and other supporting services, the welfare of the faculty and supporting staff, the business and financial welfare of the University, and for "the maintenance of health, diligence, and order among the students" (Bylaw 2.01). The president recommends the appointment of executive officers, who perform their duties under her general direction. She is a member of the University Senate, represents the University at ceremonies and public events, and plays a major role in fund raising.

President Coleman has led several major initiatives, some of which were mentioned earlier. They include the groundbreaking Michigan Digitization Project, a partnership between the University and Google, Inc., which is digitizing some 7-million volumes from the University's libraries and that will aid preservation of and access to recorded human knowledge. She also launched "The Michigan Difference" campaign to raise $2.5 billion for the University, and in November 2008 she led the celebration of the $3.11 billion actually raised.

Executive Vice Presidents
Provost and Executive Vice President for Academic Affairs

Teresa A. Sullivan became Provost and Executive Vice President for Academic Affairs in 2006. The provost is the chief academic officer and the chief budget officer for the Ann Arbor campus, in which she collaborates with the president to guide educational programs and supporting activities as well as academic and budgetary affairs. The provost recommends faculty appointments, promotions, and tenure actions to the president for action by the Board of Regents. A listing of provost's office activities is posted online.

Executive Vice President and Chief Financial Officer

Timothy Slottow has been Executive Vice President and Chief Financial Officer (EVPCFO) since 2003. He supervises finances, property, and business for the University. His organization of ~2,850 staff members handles architecture, construction, operations, and maintenance of 31 million gross square feet (~2.9 million m^2) of buildings, parking and transportation, department of public safety and security, occupational safety, environmental health, utilities, human resources, administrative systems, and financial operations, as well as the University's endowment.

Executive Vice President for Medical Affairs

Ora Hirsch Pescovitz became the University's Executive Vice President for Medical Affairs (EVPMA) in May of 2009. She is the chief executive officer of the University of Michigan Health System and leads and manages the Health System, including Hospitals and Health Centers, and the Michigan Health Corp. The deans of the Medical School and the Nursing School also report to the EVPMA, and she recommends faculty appointments, promotions, and tenure actions in the Medical School to the provost.

Vice Presidents

Vice President and General Counsel

Suellyn Scarnecchia became Vice President and General Counsel in June of 2008. Her office provides legal advice and representation to the University, including the Board of Regents, executive officers, faculty, staff, and sometimes students. She manages the central campus and satellite general counsel offices. Her office also provides legal counsel to the UM-Dearborn and UM-Flint campuses.

Vice President for Government Relations

Cynthia H. Wilbanks has been Vice President for Government Relations since 1998. Her office directs local, state, and federal programs in the field of government relations; plans and develops the responses to proposed legislation; develops and maintains relationships with governmental officials and agencies; and analyzes and assesses legislative, administrative, and regulatory actions as they pertain to University programs, activities, and operations. She also supervises the activities of the Office of State Outreach.

Vice President for Communications

David Lampe was appointed Vice President for Communications in 2007. He directs public relations and communications work at the University, advising the president, the other executive officers, and the deans and directors. His purview includes the Offices of Public Affairs and Media Relations, Michigan Public Media, the News Service, Michigan Marketing & Design, and the Office of Freedom of Information. He and the heads of his offices plan and coordinate University communications, serve as University spokespersons, and inform constituents and the public about the University's activities, goals, and needs.

Vice President for Research

Stephen R. Forrest has been Vice President for Research since 2005. He holds responsibility for the research programs of the University, assists and advises the president and the Board of Regents in all matters pertaining to such programs, and reviews recommendations with respect to research proposals, research budgets, and the appointment of research faculty and personnel. His office maintains liaisons with external foundations, government agencies, and other organizations that provide research funding. His office also nurtures research, scholarship, and creative activity within the University; promotes responsible conduct in these activities; and helps to share the University's knowledge and expertise with the larger society. His office promotes new interdisciplinary initiatives and helps to incubate novel approaches to research and scholarship through supervision of five research units that cross disciplines or school and college boundaries.

Vice President for Development

Jerry May has been the Vice President for Development since 2003. His office is responsible for all fundraising activities at the University, policy formulation, development of strategic plans, and program implementation. His office maximizes private support in collaboration with development leaders and staff in the schools, colleges, and units. His office also stimulates and facilitates healthy, productive, and lifelong relationships with colleagues, alumni, friends, foundations, and corporations. The office planned and implemented the highly successful Michigan Difference campaign.

Vice President for Student Affairs

E. Royster Harper has been Vice President for Student Affairs since 1999. She advises the Board of Regents, the president, and other University leadership on student affairs and student services, and manages programs, services, and facilities that promote student opportunities for personal growth and acquisition of skills and tools for lifelong learning. The Division of Student Affairs (DSA) is a combination of educational enhancement, service delivery, and facility management.

Vice President and Secretary of the University

Sally J. Churchill has been Vice President and Secretary of the University since 2005. She coordinates the business affairs of the Board of Regents and facilitates communication between the board and executive officers. Her office facilitates, coordinates, and manages policy matters, governance, and communications pertaining to the board, the president, and the executive officers. She is also the official custodian of the board proceedings and other supporting documents, including the Seal of the University of Michigan. Her office maintains and disseminates official records of board actions, coordinates board meeting agendas and organizes those meetings, serves as liaison between the board and the University community, and coordinates the regents' participation in events and functions.

2.4.3
Deans of Schools and Colleges

Regents' Bylaw 6.01 defines the schools and colleges as the means by which the University serves the state and the nation through instruction, scholarly investigations, and research in the branches of knowledge that form the basis of modern culture, professional practice, and leadership in business and industry, and the application of knowledge to social problems. The affairs of the schools and colleges are the responsibility of the governing faculties, the deans, and the executive committees. The next section discusses governing faculties and executive committees. Regents' Bylaw 5.06 makes deans the executive officers of the schools and colleges. Each dean exercises a great deal of autonomy in all matters of the school or college. Working, where appropriate, with the governing faculty of the school or college and with the executive committee, each dean exercises oversight over all aspects of the school or college's activities. This set of activities includes academics (e.g., faculty recruitment, appointment, and retention; student recruitment; and all aspects of the curriculum), all aspects of the budget; external development; planning; human resources; student academic affairs; oversight of academic departments, institutes, centers, programs, museums, and other academic resources; support services; and the full range of relevant administrative matters.

2.4.4
Faculty Governance

Faculty governance structures exist at the department, school or college, and University-wide levels, as described below. In 2008 the second edition of the document "Principles of Faculty Involvement in Institutional and Academic Unit Governance at the University of Michigan" was endorsed jointly by the Office of the Provost and the Senate Assembly. In the introduction to the principles, which include general principles, academic unit level principles, and institution level principles, the document states:

> *Faculty participation in governance promotes and encourages diversity of ideas, a sense of shared responsibility, collaboration, collegiality, and institutional excellence. The faculty of the University of Michigan is encouraged to use these principles as a basis for participation in governance at all levels and in all units.*

Faculty Governance in the Schools, Colleges, and Departments

Faculty includes members of the teaching and research staff; the executive officers; the directors of various teaching, research, and library units; and librarians, curators, and archivists. Educational affairs are governed by governing faculties, executive committees, and deans of the schools and colleges, and by the directors of the University's libraries and institutes. The governing faculty typically includes professors, associate professors, and assistant professors, and, where authorized by a unit's bylaws, certain clinical faculty, research faculty, and instructors and lecturers who hold appointments of half-time or more. Each unit has established criteria in place for voting rights. The governing faculty interview and endorse candidates for faculty positions, plan for the future, make changes in the curriculum, and exercise jurisdiction over academic policies. An appointed department chair provides administrative leadership to the department, working with the governing faculty and in some cases assisted by one or more associate chairs who attend to undergraduate education, graduate education, or research.

Executive Committees

Executive committees assist the deans, who typically serve as ex officio Chair of the committee. Executive committees investigate and formulate educational and instructional policies for the governing faculty to consider, and act for the faculty in matters of budgets, promotions, and appointments. Executive committees are optional, but most of schools and colleges have them.

University-wide Governance

- The **University Senate** consists of all members of the professorial staff, the executive officers of the University, the deans of the schools and colleges, and members of the research staff designated through the Senate Assembly's standards and procedures. The Senate considers any subject pertaining to the interests of the University, and makes recommendations to the executive officers and to the Board of Regents. Actions undertaken by several faculties that affect other schools and colleges or University policy as a whole fall under the Senate's jurisdiction. The Senate meets at least once a year.
- The **Senate Assembly** consists of faculty-elected representatives from all schools and colleges of the Ann Arbor campus, and from the UM-Dearborn and UM-Flint campuses. It is the legislative arm of the Senate and deals with important issues for the University community. It meets eight times a year, in meetings open to all faculty. Its agendas and minutes are available online.
- The **Senate Advisory Committee on University Affairs** (SACUA) is the executive arm of the Faculty Senate and of the Senate Assembly, consisting of nine members elected by the Assembly. SACUA advises and consults with the president, the provost and executive vice president for academic affairs, and the executive officers of the University on matters of University policy. It also coordinates and initiates governance activities and helps to implement the actions of the Senate and the Assembly. SACUA agendas and minutes are available online.
- The Senate Assembly has 10 **standing committees** that advise and consult with each executive officer on matters within the areas of their responsibilities, and with SACUA and the Assembly. The Assembly also has committees that advise University officials and/or assist SACUA and the Assembly on such topics as tenure, civil liberties, the budget, and the economic status of the faculty. Special committees are sometimes appointed to help with the Assembly's work.

Staff-related Governance Structures

Staff related governance includes nine bargaining agreements, the University's Standard Practice Guide, and the VOICES of the Staff initiative that provides staff the opportunity to raise concerns and offer suggestions and ideas to University leadership.

- Nine **bargaining agreements** establish terms and conditions of employment for valued employees, arrived at through good faith collective bargaining between the University and the employees represented by such agreements. The Staff Human Resources Division of University Human Resources administers collective bargaining agreements and memoranda of understanding, and negotiates and administers contracts and handles grievances, discipline, and discharge processes with these units: the American Federation of State, County and Municipal Employees (AFSCME. Local 1583, Council #25, AFL-CIO); Police Officers Association of Michigan (POAM); University of Michigan Skilled Trades Board of Directors; International Union of Operating Engineers (IUOE Local 547); and the International Alliance of Theatrical Stage Employees (IATSE). Academic Human Resources administers contracts with the Lecturers' Employee Organization (LEO) and the Graduate Employees' Organization (GEO). GEO was founded in 1970 and established its first contract in 1975, making it one of the oldest graduate employee unions in the United States. The Human Resources Division of the University of Michigan Health System administers bargaining agreements with the Michigan Nurses Association and the University of Michigan House Officers Association.
- **VOICES of the Staff** was launched in 2005 to give staff at the Ann Arbor, UM-Dearborn, and UM-Flint campuses and in the University Health System the means to develop and share ideas and to encourage a sense of community among University employees. Regular dialogue between VOICES teams and the University's executive officers helps to improve the University for all. In 2009-2010, VOICES Network Teams are addressing benefits, health and wellbeing, career development, environmental stewardship, leadership development, technology/best practices, work climate, parking and transportation enhancements, improved communications, and savings and discounts through the M-Card Discount Program.

Structures for Collaboration

The University employs several structures to share information, discuss topics, develop initiatives, assess progress, and plan for the future. These include:

- The **Board of Regents** meets monthly, except for August; formal sessions are open to the public (the Office of the Vice President and Secretary posts the monthly meeting schedule and agenda on its website). A "Public Comments" session of each meeting allows members of the public to address the board.   Executive officers of the University attend all board meetings.
- **Executive officers.** The president meets with executive officers (EOs) on a weekly basis throughout most of the year.
- **Deans and Directors.** The provost convenes a twice-monthly meeting of the Academic Program Group (APG), consisting of deans of the schools and colleges, the University librarian and dean of the libraries, and the directors of the Institute for Social Research and the Life Sciences Institute.
- **Vice Provosts and Associate Deans Group** (VPADG). The provost's office convenes monthly meetings of the vice provosts and associate deans to share information, learn about University initiatives, and discuss concerns.
- **Research Associate Deans Group** (RAD). The research associate deans and comparable representatives from other schools, colleges, or units meet every other month during the academic year.

There are also less formal groups that meet for a limited time to study and make recommendations about a specific issue or topic, and to discuss the future of the University.

2.4.5
Articulation of Standards and Procedures

Formal articulation of standards and procedures is accomplished by the Bylaws of the Board of Regents and the Standard Practice Guide. Handbooks for faculty and staff members and students are not formal policy, but are key sources of information, guidance, and resources.

Regents' Bylaws and Ordinance

The Bylaws of the Board of Regents provide the rules about important matters of University organization and policy. Bylaws originate as recommendations from the schools and colleges, the University Senate, or other University forums, but some Bylaws arise directly from the board exercising its legislative powers. The Regents' Ordinance contains regulations pertaining to parking, traffic, and the use and protection of University buildings and property.

Standard Practice Guide

The Standard Practice Guide (SPG) provides employees with convenient access to the University's operating policies and practices. Sections cover organization, faculty and staff (human resources, payroll, and staff benefits), student affairs, business and financial services, and general policies and procedures. Units may complement the SPG with their own written guidelines and procedures.

Policies for Students

Policies for Students is provided by the Division of Student Affairs (DSA), often with student input, to support and maintain a healthy learning environment. Themes include respecting others, appreciating diverse perspectives, assuming individual responsibility, student rights and responsibilities, student records, religious holidays, alcohol and drug use, mental health, sexual assault, relationships between students and faculty or staff, freedom of speech, hazing, and use of information technology. Policies focused on integrity will be described later in this chapter.

Faculty Handbook

The online Faculty Handbook provided by the Office of the Provost contains information about policies and procedures affecting faculty members at the University of Michigan on the Ann Arbor Campus. An abridged version is provided to new faculty members each year. It is updated frequently, most recently in 2008.

Staff Handbook

The online Staff Handbook is provided by University Human Resources (UHR) to acquaint employees with the University's policies, procedures, and practices, including getting paid, benefits, University services, paid time off, absence from work, cultural and recreational facilities, non-discrimination, and other employment matters.

2.4.6
Communication

Many channels are used to communicate the University's mission, standards and expectations, and activities to faculty, staff, and students.

University Publications

The University uses an array of communication vehicles that range from traditional print to modern electronic communications. These include:

- The University Record, published weekly by University News Service during the academic year, serves thousands of active and retired faculty and staff members with news and features covering the University. More than 20,000 copies of each issue are distributed by mail and news racks on the campuses, and the publication is also available online and in a daily alert edition, the Record Update. The Record recognizes accomplishments, reports on progress and issues, informs faculty and staff members about changes in state and federal policies that could affect the University, and generally increases understanding about the University. The Record publishes a feature called the Regents Roundup following each board meeting, and publishes all proposed changes to the Regents' Bylaws and significant changes to the Standard Practice Guide.
- Electronic Updates. Targeted email and web postings are used increasingly to inform the entire University community about important topics, including welcome messages from the president at the beginning of the fall semester (delivered in video format), changes in University benefits, and on such topics, to give some recent examples, as the University's financial outlook in the face of the 2008-09 economic downturn, information about the 2009 swine/H1N1 flu, and the purchase of the Pfizer research campus (the new North Campus Research Complex).
- Michigan Today, published by the University News Service since 1968, is now a quarterly online magazine to engage, entertain, and educate alumni and friends. It keeps readers in touch with and reinforces their identity with and support for the institution.
- The Michigan Daily has been the campus newspaper at Ann Arbor since 1890. The paper is student-run and financially independent. It is published each weekday during the regular academic year and weekly during the spring and summer terms. It covers the campus, administration, sports teams, faculty and culture, the town of Ann Arbor, and other topics of interest to students. Former editors, reporters, photographers, business staff members, and others have gone on to work at well-known publications.

Proceedings from the meetings of the Board of Regents and the University's written and online publications have been noted above. Orientation programs are another important channel to welcome new members of the University community and convey important information. These include:

- Orientation for Faculty. The Office of the Provost holds an event called New Faculty Orientation each fall to introduce new faculty to the University, and some schools and colleges and departments offer complementary programs of their own.
- Orientation for Staff. UHR's Office of Recruiting and Employment Services provides a mandatory orientation program each week for new staff members, while the U-M Health System's HR office provides a program for all new UMHS staff members except nurses, who attend their own orientation program. Some schools, colleges, and units offer unit-specific orientations.
- Orientation for Students. The Office of New Student Programs provides a required orientation for all new students, introducing them to the University community and providing them a view of what the University offers. The Rackham Graduate School runs a web-based orientation for new Rackham students to introduce them to the University, complemented by a fall welcome event and information fair. Many academic programs conduct formal or informal orientations for their new students.

2.4.7
Policy Review

The University reviews groups of policy and specific policies regularly. The Office of University Audits, which maintains the online Standard Practice Guide (SPG), suggests policy reviews within four years of most recent revision. Policy review sometimes occurs because of changing leadership priorities, suggestions from faculty governance, external influences (e.g., shifts in practices among peer institutions), changes in practice, or circumstances that suggest a policy or practice should be changed. The SPG website lists policies that have been revised or deleted. In 2008 the Office of University Audits implemented revisions to 24 policies in the SPG. The Office of the Vice President and Secretary of the University routinely reviews and revises Regental Bylaws, often making modest revisions in a process called "housekeeping." University Human Resources is currently in the midst of a detailed review of the Faculty & Staff category of the SPG, in collaboration with the Office of Academic Human Resources and the Office of the Provost.

2.5
INSTITUTIONAL INTEGRITY

Core Component 1e: The organization upholds and protects its integrity.

The University is connected to integrity throughout the organization. This section focuses on policies that specifically address matters of integrity; training programs specific to institutional integrity; units and processes that monitor and uphold the University's integrity; and processes that respond to faculty, staff, and student input about University policies and procedures.

2.5.1
Policies Related to Integrity

Several University-wide policies and statements support the institution's commitment to integrity.

Conflicts of Interest and Conflicts of Commitment

The University as a whole and each campus unit have significantly revised the Policy on Conflicts of Interest and Conflicts of Commitment since reaccreditation in 2000. Key changes are articulated in SPG 201.65-1, focused on transparency, integrity of scholarship, and independence in pursuit of the University's mission. It states that all faculty and staff members are to act with honesty, integrity, and in the best interest of the University when performing their duties, and to abide by the highest standards of research, educational, professional, and fiscal conduct. Faculty and staff must not use their official University positions or influence to further gain or advancement for themselves, parents, siblings, spouse or partner, children, dependent relatives, or other personal associates at the expense of the University.

University Statement on Stewardship

The Statement on Stewardship outlines the responsibilities of supervisory or administrative employees to ensure that legal and financial obligations to internal and external stakeholders are fulfilled; that financial, human, information and physical assets are safeguarded; and that all members of the University community contribute to the excellence of the University.

Student Rights and Responsibilities

Students who choose to attend the University accept the rights and responsibilities of membership in an academic and social community, and are expected to uphold the values of that community in their conduct. Some schools, colleges, student organizations, and other campus entities have developed policies that govern student behavior, define procedures for reviewing alleged violations of those policies, and decide on appropriate sanctions for violations. The DSA's Statement of Student Rights and Responsibilities complements rather than supplants unit-level policies, and provides guidance on ways to educate students engaged in problematic behavior and to safeguard members of the community.

Academic Integrity Policies for Students

Each school and college has academic integrity policies and/or honor codes (see Honor Codes at the University of Michigan). The Rackham Graduate School's "Policy Statement on the Integrity of Scholarship and Procedures for Investigating Allegations of Misconduct in the Pursuit of Scholarship & Research" applies to students enrolled in Rackham programs.

Academic Integrity Policies for Faculty

The Office of the Vice President for Research (OVPR) maintains policies to which faculty and staff members must adhere in carrying out their responsibilities. (See the policy statement on "Integrity in Scholarship.") The document Procedures for Investigating Allegations of Misconduct in the Pursuit of Scholarship and Research, states in Section I.A:

> Integrity in scholarship and teaching is a fundamental value upon which the University is founded. Without integrity, we could not justify the privilege of academic freedom intrinsic to scholarship and education, nor could we provide to society the advancements of knowledge that derive from free and open inquiry.

It is the shared responsibility of all members of our academic community to assure that the University of Michigan maintains the trust of the public in all research and scholarly activity. Academic misconduct is dealt with in a timely and effective manner to preserve the high standards and good reputation of the University.

Use and Care of Animals in Research

University policy and federal law require the University to ensure humane treatment and judicious use of vertebrate animals. The University Committee on Use and Care of Animals (UCUCA) reviews applications for using vertebrate animals in research, testing, or instruction; inspects animal facilities and laboratories; and trains and guides employees in the use and care of animals. UCUCA office staff and committee members collaborate in these efforts.

Human Subjects Protection

The Human Research Protection Program (HRPP) is an integrated, institution-wide program of OVPR in collaboration with the provost, the EVPMA, the EVPCFO, and the general counsel. Nine Institutional Review Boards (IRBs) are maintained for human subjects research, and several additional committees provide research review (e.g., the Institutional Biosafety Committee, the Conflict of Interest Review Committees, the Radiation Policy Committee, the Investigational Drug Service, the Comprehensive Cancer Center, the Michigan Clinical Research Unit, the Biomedical Engineering Unit, and the Tissue Procurement Service). The Association for the Accreditation of Human Research Protection Programs granted full accreditation to the University of Michigan in 2008, signaling that that the University demonstrates safeguards beyond the threshold of state and federal requirements.

Education, Training, and Resources to Promote Integrity and Prevent Violations

Activities to educate, train, and provide resources to faculty, staff, and students regarding integrity include:
- **Conflict of Interest and Conflict of Commitment Tutorials.** The provost's office maintains a tutorial for faculty and a tutorial for staff regarding conflicts of interest and commitment, encouraging units to use these tutorials in their required unit policy implementation.
- The **Program for Education and Evaluation in Responsible Research and Scholarship** (PEERRS), run by OVPR in consultation with other units on campus, offers educational modules and short tests covering basic rules, procedures, and professional norms for the responsible conduct of research and scholarship.
- **Academic Integrity Resources.** The Center for Research on Learning and Teaching (CRLT) and the University Library maintain a list of resources on academic integrity and principles, including information on violations of academic integrity, ideas for faculty and staff members to help prevent and detect plagiarism, and guidance for students using digital resources in their research.

2.5.2
Auditing and Monitoring the University's Integrity

Leaders, managers, supervisors, and all University employees are accountable to be familiar with and observe University policies and practices. Formalized auditing structures provide central oversight as follows:

Office of University Audits

The Office of University Audits provides independent auditing, consulting, and training for managers and leaders, balancing the desire to operate efficiently with the need to identify, assess, and control risk. University Audits collaborates with managers and submits reports to the Board of Regents. It conducts financial, compliance, investigation, and operational audits, and reviews Annual Audit Plans, Management Requests, Fraud or Special Investigations, Risk and Control Assessments, and other functions. It prepares a plan of audit projects for each fiscal year, and its three work teams (campus operations, information technology, and medical operations) coordinate staff and resources to provide necessary audit coverage.

Office of Internal Controls - Business & Finance

The Office of Internal Controls is operated by the CFO to guide, provide support tools and documents, and help units across campus manage financial processes. Internal controls provide assurance that units at the University meet specific objectives for fiscal responsibility: effectiveness and efficiency of operations, compliance with laws and regulations, and reliability of financial reporting. Each year, the office asks more than 40 units to certify their status on policies and practices related to internal controls.

External Audits

The University is independently audited by accounting firms; federal, state, and local agencies; and other entities. The executive director of the Office of University Audits is notified of all such audits, and where appropriate, helps coordinate the independent review. All reports of independent audits are forwarded to the audits office.

Health and Behavioral Sciences Institutional Research Boards

The Health and Behavioral Sciences Institutional Review Boards (IRBs) assure the rights and welfare of human subjects participating in biomedical and behavioral research. The IRBs support the design and conduct of sound

research by investigators in pursuit of the mission to develop and disseminate new knowledge in the public interest. The welfare and rights of human subjects take precedence over the goals and requirements of research.

Medical Institutional Research Boards

The five Institutional Review Boards (IRBs) oversee research conducted by Medical School faculty, students, and staff at any University of Michigan Health System facility or site. The IRBs apply federal and state laws as well as University policies and ethical principles, particularly as articulated in "Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research," published by the National Institutes of Health.

2.5.3
Conflict Resolution and Grievance Processes

A full set of services for faculty, staff, and students is provided to explain individual and University rights and responsibilities, including ombuds and mediation services. Individuals can challenge the University if they believe their rights have been violated, the right of due process hasn't been carried out, or the University has not adhered to its own standards or procedures. The University is firmly committed to treating faculty, staff, and students with fairness and respect, and to continuous review of its policies and practices.

Ombuds Services

The University offers a range of ombuds services to faculty and students that provides members of the campus community with individual assistance in resolving concerns and addressing issues regarding rights and responsibilities. These services are:

- The Student Ombuds of the Division of Student Affairs provides students with a place to explore concerns and complaints in a confidential, informal, and safe environment. The office offers informal dispute resolution services, resources and referrals, and help for students to understand their rights and available options. The ombuds operates independently with no formal decision-making authority, providing supplemental services to administrative and formal dispute resolution processes. The ombuds advocates not for the student or the University, but for fair and consistent treatment.
- **Rackham Graduate School Dispute Resolution**. The office of Graduate Student Affairs in the Rackham Graduate School offers formal and informal dispute resolution services, resources and referrals, and alternative resolutions, in consultation with other offices as appropriate.
- **School and College Faculty Ombuds**. Faculty ombuds can be appointed in the schools and colleges, with the Faculty Senate Office as coordinator. Faculty ombuds are either elected or appointed, and provide confidential and impartial assistance through good faith efforts to resolve issues, inform and counsel, and help faculty members explore options for raising concerns, problems, and complaints.
- The Office of the Provost created the University Faculty Ombuds in 2003 to appraise situations and advocate for fairness and equity in institutional level policies, processes, and procedures. The University faculty ombuds works with the faculty ombuds in schools and colleges to facilitate resolution of faculty problems and complaints. He or she can also work directly with faculty members by investigating their complaints, academic dilemmas, or conflicts, and by helping them to address their concerns.

Mediation Services for Faculty and Staff

- Mediation Services for Faculty and Staff offers free private consultation, attempts to mediate issues or problems, and educates involved parties about conflict resolution. Its staff provides a safe harbor to discuss workplace concerns off-the-record, and to explore alternatives for addressing them. Mediation helps two of more people in conflict resolve their differences collaboratively. It is voluntary and not legally binding, is facilitated by trained mediators, and provides a safe, structured setting in which to address problems and consider constructive outcomes.
- The Faculty and Staff Assistance Program (FASAP) offers services to staff, faculty, and their immediate family members regarding personal, emotional, family, and work place issues.

Formal Grievance Procedures for Faculty, Staff, and Students

Faculty, staff, and students have the right to file grievances on unresolved matters, as described below:

- **Faculty Grievance Procedures.** Each school or college has formal faculty grievance procedures based on a model policy, available to faculty members who wish to file a complaint concerning the terms and conditions of their employment or possible unfair or illegal decisions concerning an aspect of their employment. An ad hoc group appointed by the provost and led by a senior member of the faculty has proposed revisions that are currently under review.

- **Staff Grievance Procedures.** The Standard Practice Guide's Grievance Procedures and Dispute Resolution defines the procedures staff may use to file a grievance. Any employee may file a grievance on matters associated with his or her employment, to resolve misunderstandings and maintain positive work relationships.
- **Student Conflict Resolution Services.** The Office of Student Conflict Resolution (OSCR) files charges against students who have allegedly violated the Statement of Student Rights and Responsibilities, and provides a formal process for students to respond to such charges. OSCR also provides a formal resolution process for students to file complaints.

2.6
CONCLUSION

The foregoing descriptions related to Core Component 1, Mission and Integrity, show an extensive array of strategies by which the University of Michigan pursues its mission to serve the people of Michigan and the world through preeminence in creating, communicating, preserving, and applying knowledge, art, and academic values, and in developing leaders and citizens who will challenge the present and enrich the future. This mission is accomplished with an intentional pursuit of diversity, using governance and administration dedicated to the highest standards of institutional integrity. The heart of the University's success is a balance between academic decentralization and strong central leadership with respect to mission and support of the schools, colleges, and other units in pursuit of their objectives. This balance has ensured the University's academic excellence in the past and will do so in the future.

It is gratifying that the University has achieved excellence while remaining an outstanding place to work. In 2008 the Chronicle of Higher Education conducted a survey of Great Colleges to Work For. They surveyed more than 15,000 administrators, faculty, and staff at 89 colleges and universities on 70 items related to satisfaction with fifteen work benefits. The University of Michigan was ranked in the top five of all large institutions (2,500 or more employees) on matters of collaborative governance. It was also ranked highly for its healthy faculty-administration relations and for faculty confidence in senior leadership. Overall, the University was highly ranked in 13 categories:
- Healthy Faculty-Administration Relations.
- Compensation and Benefits.
- Facilities and Security.
- Job Satisfaction.
- Work-Life Balance.
- Disability Insurance.
- Vacation or Paid Time Off.
- 403b or 401k.
- Career Development.
- Research and Scholarship.
- Policies, Resources, and Efficiency.
- Physical Workspace Conditions.
- Confidence in Senior Leadership.

This independent assessment confirms that the University's governance and administrative structures promote effective leadership and support collaborative processes that enable the campus community to fulfill its mission.

3. PREPARING FOR THE FUTURE

3. PREPARING FOR THE FUTURE

3.1 INTRODUCTION

Criterion 2: The organization's allocation of resources and its processes for evaluation and planning demonstrate its capacity to fulfill its mission, improve the quality of its education, and respond to future challenges and opportunities.

Since being established in 1817, the University of Michigan has worked to unearth, preserve, and interpret the past in ways that scholars and students at major research universities are well suited to do, while at the same time continuously looking ahead to the demands and many opportunities the future holds. The University accomplishes these connected goals through three major strategies, as linked to the Higher Learning Commission criteria:

1. By making plans and decisions at all levels of the University about how to address issues and explore new opportunities.
2. By monitoring and committing a full range of University resources—its funding, its people, and its physical infrastructure—toward meeting its mission and looking ahead.
3. By gathering and using a wealth of information about the University to assess, reflect upon, and improve what we do within the context of our mission.

In this chapter, we will provide an array of evidence of the University's continuous cycles of planning, decision-making, and assessment. We especially highlight the University's fiscal, human resources, and facilities infrastructure. Together, these resources allow the University to meet its mission while planning continually for the future. Since units undertake planning within the context of meeting the University's mission, we address core components 2a and 2d in one section below.

3.2 PLANNING AND DECISION MAKING

Core Component 2a: The organization realistically prepares for a future shaped by multiple societal and economic trends.
Core Component 2d: All levels of planning align with the organization's mission, thereby enhancing its capacity to fulfill that mission.

Societal and economic trends influence many aspects of higher education. Forces for change create challenges at times, and at other times opportunities. With respect to changes in the University's fiscal circumstances, the University has had to respond to multi-year cuts in the state of Michigan's allocation to the University and to the changes in its endowment portfolio (although with far less of an impact than other universities with more aggressive spending models). As an example of stepping up to new realities, in the spring of 2009 units on campus worked quickly to produce proposals for funding available as a result the U.S. president's stimulus package.

Information technology is another significant force of change. Students arrive on campus with ever more sophisticated information technology skills and expectations that the University must meet to continue to successfully recruit the best and brightest, while also promoting and protecting academic integrity in an increasingly digital world. At the same time, new technologies significantly expand research and creative opportunities in many departments and open doors to exciting new sources of funding.

Changing demographics is yet another example of a significant force on the University. The University has benefited greatly from the numbers of international students, especially at the graduate level, who come to the United Stated looking for advanced education—just as the University had to respond to the impact of challenges in the student visa process following the attacks on the World Trade Center. The University must also be mindful of

anticipated changes in the number of high school graduates over time and must prepare itself for the time when significant numbers of faculty and staff members in the Baby Boom generation are expected to retire, which will drain a great deal of talent from the University and will require serious succession planning for who will take their places and how the work will get done.

These are a few examples of the challenges and opportunities within the structures, processes, and information analysis that help the University prepare for the future. Below is a sample of the types of planning processes that the University undertakes at various levels to ensure it can address issues in a timely way and be ready to embrace new opportunities.

3.2.1
Executive Planning

Chapter Two provided a brief overview of the ways in which the University, particularly the provost because of his or her role as chief budget officer, imbeds planning into the budgeting process. The president and the other executive officers (EOs) meet weekly to discuss both immediate and long-term issues and plans. These meetings are occasionally dedicated solely to strategic discussion of a long-term issue or a set of issues. In addition, the EOs hold at least one retreat per year and meet with the regents for an annual informal session devoted to a long-term view of the institution. Since the executive officers bear the primary responsibility for carrying out the University's mission and planning for its future, their frequent meeting schedule reflects the president's commitment to planning as an ongoing activity and the recognition that circumstances in the University environment can change quickly, calling for immediate action. Below we highlight key examples of planning activities in executive offices.

The University's Budget System

The structure of the University's budget system, which is called the University Budget (UB) model, is an "activity-based" system first implemented in FY 1998-99. The model reflects the University's commitment to planning at the unit levels, which was earlier described in Chapter Two. Under this model, when units increase certain activities, the resources and costs flow automatically to the units that do the work and obtain the revenue. Units that engage in activities that produce revenue receive at least the major share of those revenues. At the same time, increased activities generally create increased costs, both directly in those units and indirectly in other University administrative areas, and so associated costs generally also rise as revenues increase.

The underlying logic behind the budget model is that schools, colleges, and research units can most clearly see the costs and benefits of undertaking various activities. For example, the question of whether a school or college should increase charges to provide resources to help the unit recruit and retain an excellent faculty can be best framed and answered by the unit's leadership. The budget model also helps local leaders and central administrators to identify potential budget threats and to envision budget opportunities. For example, a research unit that generates large increases in sponsored research will be able to reinvest the resulting revenue in unit activities that best support and further its mission.

The administrative and public goods units are handled much differently within the University budget model. These units are budgeted incrementally to cover growth in salary, benefits, and other inflationary costs. These units must then appeal to the provost for additional funding to launch new initiatives or to expand their services in meaningful ways. This helps assure that these units perform exactly the services that the provost asks of them. Since they must request additional funding to significantly expand their services, the provost can assure that new services proposed by these units are high priorities for the University leadership and do not duplicate services that are already being performed.

In the University's budget model, the provost retains a portion of the revenues (about 5% in a typical year) for allocation to the highest University priorities. Having this level of discretionary central funding is crucial for a couple of reasons. First, this allows the provost to support important interdisciplinary and cross-unit initiatives within the academic units for which funding might otherwise be difficult to secure. Second, this funding can be used by the provost to support new services and activities by the administrative and public goods units that often benefit the entire campus. For a more in-depth exploration of the University's budget system, see Budgeting with the UB Model at the University of Michigan.

The provost uses the budget model to develop the General Fund budgets of both academic units and service units, representing units that generate significant revenues through their activities and units that don't. In the budget, the provost allocates funds only to units at a fairly high level, for example, to the schools and colleges rather than to individual departments, and to the executive officers rather than to the separate offices or functions in their areas. This model embraces the decentralized approach that characterizes the institution.

The provost's office makes special efforts to create a transparent budget structure for the campus. In addition to annual publications with budgetary information, the University has a deans' Budget Subcommittee, a faculty Budget Advisory Committee, a student Budget Advisory Committee, and a Prudence Panel, as well as offering a Budget and Resources Academy and year-round town halls.

The University's Endowment

In 1999 the chief financial officer (CFO) of the University created a new Investment Office under the leadership of a chief investment officer (CIO). Subsequently, the CIO established and trained a team of analysts and experts by hiring junior and mid-level analysts, and working with them to develop their expertise. Under this team's leadership, the University's endowment grew from $2.5 billion in 1999 to $7.6 billion in 2008. The figure below shows the uses of the University's endowment in fiscal year 2008. Although the University experienced significant losses in its endowment during the 2008-09 economic downturn, the losses were minimized due to careful investment strategies.

Other 2% ($147M)

Instruction 21% ($1,624M)

Academic Support 22% ($1,629M)

Research 9% ($691M)

Scholarships and Fellowships 20% ($1,491M)

Health System 26% ($1,990M)
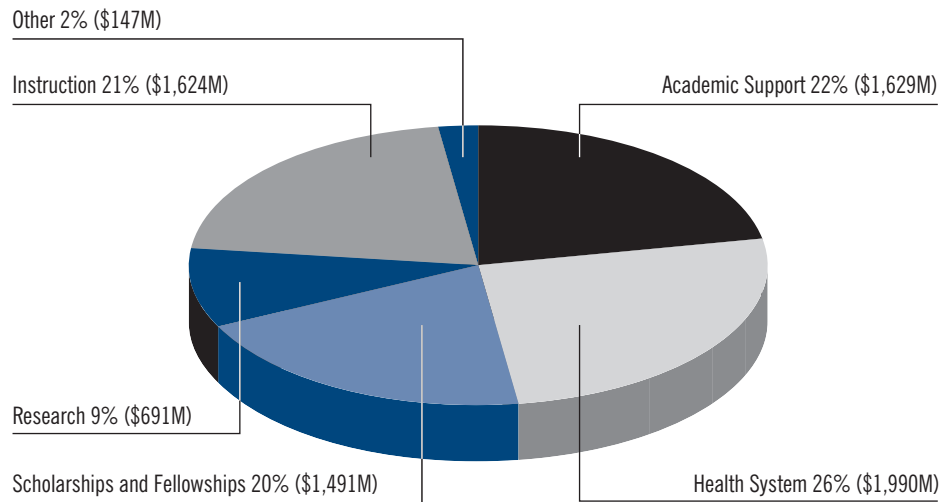
The endowment supports core operating expenses of the University's primary missions in education, research, and patient care. Total endowment on June 30, 2008: $7,572M. From: Financial Report 08

Among the notable changes is the way endowment is paid out to the University. At a time when the endowment returns were high, the University changed the time span for calculating the average market value for the 5-percent payout from three years to seven years. This change was made to better shield the endowment from volatility in the market, which occurred soon thereafter. A longer-term averaging of market value smoothes the payout from year to year, minimizing the impact of volatility in financial markets, and allows University operations that rely on endowment funds to confidently plan for a fixed amount of funding each year. The move to a seven-year average was one of half a dozen deliberate strategies that the University undertook over the period 2003-2008 to increase stability in as many of the revenue and cost streams as possible, knowing that the University would also experience continued volatility in the state appropriation revenue line. These strategies are serving the University well in today's downturn, and offer an excellent example of how the University attends to current needs and plans for the future.

3.2.2
Unit Assessments

The provost's office guides a range of activities that include formal planning and informal discussions on long-term goals. In addition to the central budgeting process described above, another example of the office's planning activities is the strategic assessment of units.

The strategic assessment process provides the schools, colleges, and key administrative units that report to the Office of the Provost with the opportunity to take stock of their strengths and weaknesses, to evaluate their strategies and goals, and to receive assistance from external groups of academic leaders within the University and from other academic institutions. Through the assessment process, each unit articulates its possible intellectual directions and identifies the most fruitful ones to pursue given its individual strengths and the strengths that the larger University can add to the unit's own resources. The process is flexible enough to adapt to the goals and operating style of individual units.

Each year the Office of the Provost asks two academic units to conduct strategic assessments; thus, each school undergoes this form of strategic assessment approximately once every ten years. When appropriate, the unit may conduct this process simultaneously with a unit-level or accreditation review, so that similar work may serve both purposes. In addition, the provost's office generally asks two non-academic units to conduct strategic assessments each year as well.

The dean or director of the unit leads the process. The Office of the Provost provides oversight and staff support for the relevant elements of the process, working closely to coordinate activities with the office of the dean or director and with the external groups that are involved. A standard four-stage process includes establishing an information base and a shared context for discussion, unit assessment and planning, coordinating external perspectives from within the University of Michigan and from outside the University, and discussions with central academic leadership and agreement on priorities and directions. An example report is located in the Resource Room.

3.2.3
Information Technology

In April 2009, the University announced a plan to merge three campus information technology (IT) groups into Information and Technology Services (ITS), a new IT organization whose mission is to create and support the learning and cyber infrastructure that will allow faculty, staff, and students to pursue learning and discovery for the next century, and to offer a shared, cost-efficient IT infrastructure to the University. Previously, as a separate group, Information Technology Central Services (ITCS) supported the academic and educational goals of the University by maintaining a modern technology infrastructure that facilitates learning, teaching and research. Through two other groups, the University's Michigan Administrative Information Services (MAIS) was responsible for the campus administrative systems, infrastructure, and security, and the Information Technology Security Services (ITSS) Office collaborated with individual units to develop a University-wide security strategy and to implement best practices security efforts.

A primary goal of the new organization is to build an environment that supports the way the University's current and future students learn, communicate, and socialize. Another goal is to create a robust infrastructure that allows University researchers to pull together vast stores of data that let them analyze trends and develop new business ventures. A third goal is to create an infrastructure that allows people to search, analyze, and contribute to the University's huge and ever-growing digital repositories. This initiative is a response to the University's evolving role in the modern information age.

3.2.4
Partnerships for Planning and Innovation

We highlight statewide and regional partnerships, outreach activities that Chapter Six will also address, because they reflect important activities with external institutions in planning for the future in ways that are integral to the University's mission, especially in its commitment to serve the people of the state of Michigan, the nation, and the world.

- The Michigan Initiative for Innovation and Entrepreneurship (MIIE) is a consortium of all fifteen Michigan public universities to foster a new Michigan knowledge economy based on entrepreneurship and innovation. By using the considerable resources of Michigan's institutions of higher education, MIIE seeks to enhance the state's economic competitiveness and stimulate growth. The consortium supports individual universities in their role as local and regional economic drivers for Michigan and encourages regional collaboration between universities, foundations, economic development organizations, government agencies, and private enterprise. Working with a grant from the C.S. Mott Foundation, MIIE is running a pilot program to fulfill its mission by leveraging university assets for economic development and supporting institutional culture change.
- The University Research Corridor (URC) is an alliance between Michigan State University, the University of Michigan, and Wayne State University to transform, strengthen, and diversify the state's economy. The three universities support regional economic development through invention, innovation, and technology transfer, and by educating a work force prepared for the knowledge economy and attracting smart and talented people to the state. The URC partners work to improve understanding of the vital role they play in revitalizing the state's economy. The URC disseminates information to key stakeholders, including the business community, researchers and students, policymakers, and other investors. In doing so, the universities enhance their outreach and collaborative efforts, speed up technology transfer and development, and communicate the advantages of doing business in the state.
- Headquartered in the Midwest, the Committee on Institutional Cooperation (CIC) is a consortium of the Big Ten universities plus the University of Chicago. Established more than 50 years ago, the CIC advances the academic missions of these 12 world-class research institutions, generates unique opportunities for students

and faculty, and serves the common good by sharing expertise, leveraging campus resources, and collaborating on innovative programs. Governed and funded by the provosts—of the member universities, the CIC carries out its mandates from its Champaign, Illinois headquarters. Through collaborative projects, CIC members achieve far more than any one individual campus could ever hope to do through a growing array of programs that expand educational opportunities, advance research, enhance efficiency, reduce costs, and amplify the CIC's impact in the wider world. Collaborations exist in library collections, technology, purchasing and licensing, leadership development, course sharing between campuses via video conferencing, and study abroad. Through CIC groups, University of Michigan senior administrators meet periodically with administrators from other CIC campuses to update each other about activities, explore best practices, and discuss future challenges and opportunities in such areas as institutional research, information technology operations security, libraries, university relations, and accreditation.

3.3
THE UNIVERSITY'S FISCAL AND HUMAN RESOURCES

Core Component 2b: The organization's resource base supports its educational programs and its plans for maintaining and strengthening their quality in the future.

This section of the report will focus on ways the University builds, safeguards, and makes good use of its fiscal resources, human resources, and facilities to maintain the University's long history of excellence while anticipating the changing demands of the future.

3.3.1
Finance

Each year the Office of the Executive Vice President and Chief Financial Officer produces an in-depth financial report that describes the University's financial health. The Financial Report for 2008 states:

…the institution maintains the highest credit ratings from both Standard & Poor's (AAA) and Moody's Investor Services (Aaa). This is particularly encouraging in light of the challenging state economy that we've faced for a number of years. These ratings are important indicators of the University's strong financial health and outlook. The University, in fact, is one of only three public universities in the country to maintain these highest possible ratings.

The Financial Report includes three financial statements: the Statement of Net Assets, which presents the financial position of the University at the end of the fiscal year and includes all assets and liabilities; the Statement of Revenues, Expenses, and Changes in Net Assets, which presents the University's results of operations; and the Statement of Cash Flow, which provides additional information about the University's financial results by reporting the major sources and uses of cash. The chart below shows the University's total revenues by area from all operating activities.

Other Auxilary Units 4% ($214M)
Other 3% ($140M)
Distributions from Investments 7% ($338M)
Private Gifts 3% ($137M)
Non-Government Sponsored Programs 3% ($131M)
Government Sponsored Programs 14% ($723M)
Health System and Other Clinical Activites 42% ($2,105M)
Net Student Tuition and Fees 16% ($791M)
State Appropriations 8% ($404M)
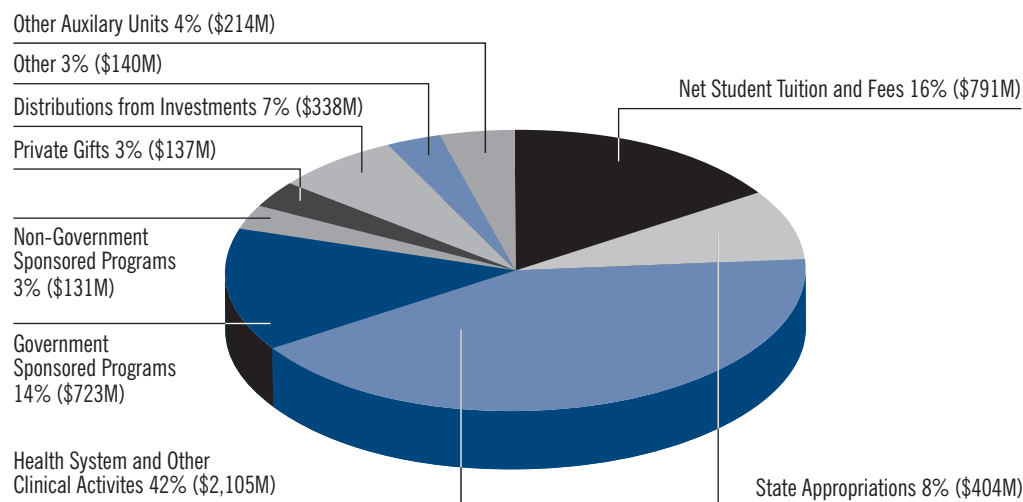
2008 Operating activities. Total revenue: $4,983M. From: Financial Report 08

The report also includes letters or reports from the president, chief financial officer, and vice president for development, and information about the University's fundraising, new appointments, the student profile, and major projects. Three sections, *Excellence + Achievement, Creativity + Innovation,* and *Leadership + Service,* each provide "Briefs," which are examples of University activities and accomplishments in these areas. A sample drawn from each of these three sections of the 2008 report is provided below:

- **Excellence and Achievement**. Research expenditures by the University were $876 million in fiscal year 2008, a 6 percent increase over the previous year and an all-time high. The federal government provided 70 percent of the total. Investments by the University, industry, foundations, and the state accounted for most of the rest.
- **Creativity and Innovation**. A new $5 million, five-year grant from the National Institutes of Health will bring the University of Michigan Medical School closer to developing an implantable artificial lung that can serve as a bridge to lung transplantation. The grant will fund collaborative research with the College of Engineering's Department of Bioengineering and the U-M Health System.
- **Leadership and Service**. The expanded Robert H. Lurie Nanofabrication Facility is expected to change the high-tech landscape in southeastern Michigan. During the past five years, the facility has contributed an estimated $500 million to the state's economy. Small and large companies as well as other universities utilize it for research and development.

With respect to the University's overall fiscal health, the budget is a disciplined approach that allocates funds to meet current and emerging operating needs, and also focuses on cost savings. The University of Michigan adheres to government standards of fund accounting to be sure that revenues are spent for their intended purposes. The University's four operating funds are as follows:

- **General Fund:** tuition, state appropriation, and indirect cost of sponsored research.
- **Expendable Restricted Fund:** gifts and endowment payout, and direct costs of sponsored research.
- **Designated Fund:** executive and continuing education, and conferences.
- **Auxiliary Fund:** revenues to health system, athletics, and housing.

The University's budget approach, its diverse sources of revenue, its long-term investment strategy, and its fundraising campaigns contribute to the University's strong financial position. As a result, the University continues to be able to make key investments in the facilities, programs, and people necessary to maintain its academic excellence and to help define what it means to be one of the world's best public research universities.

Public Funding and the Endowment

Top-tier universities such as the University of Michigan focus inherently on the future. As a major public educational and research institution, the University develops the people and ideas that drive innovation and growth in all aspects of the nation's economy. In the same vein, the University also focuses its finances on the future to allow the institution to fulfill its mission not just today but also for generations to come. The cornerstone of the University's ability to achieve this long-term commitment is its endowment, a permanent fund that the institution manages carefully so that it will provide income to help cover the University's core operating expenses in perpetuity.

As the figure below shows, funding from the state of Michigan has become an increasingly smaller fraction of the operating budget of the academic enterprise, moving from 23% of revenues in 1998-99 to less than 15% in 2007-08. During this same time, the endowment and its capacity to grow has become a key resource on which the University depends to carry out its mission and take on new initiatives. The increase in gifts/investment income spending as a percentage of total revenues increased during this same time period from 8% to 13%, with the remainder of lost revenue from the state being made up through fees and tuition, which increased from 32% to 37%.
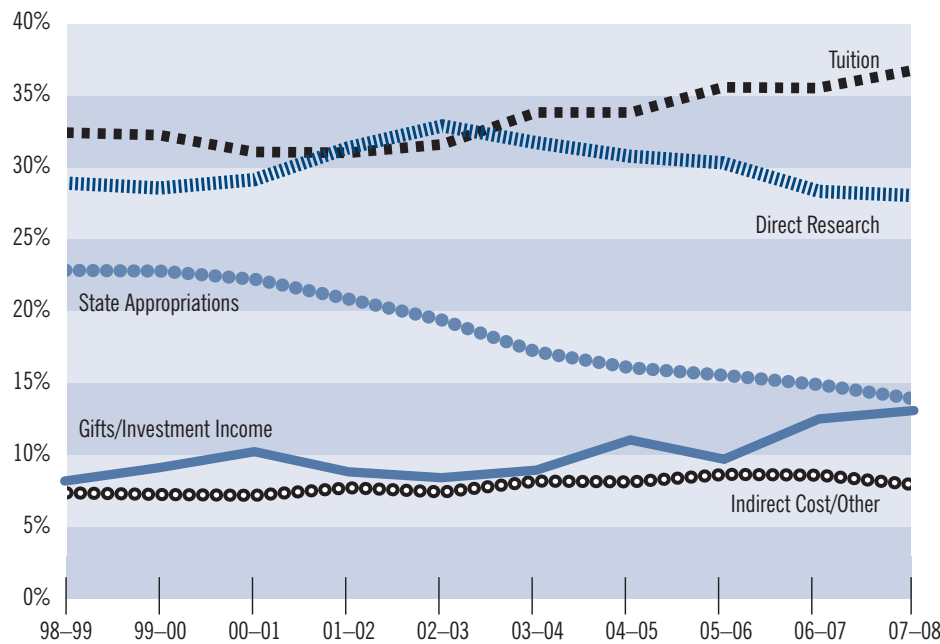
Ten-year revenue shares from five primary sources that support the Ann Arbor campus's mission: Tuition/Fees, Direct Research, State Appropriations, Gifts/Investment Income, and Indirect Cost /Other. Over time, the decline in state appropriations has been offset by increases in tuition and fees, and gifts and investment income.

The University's endowment is built principally from gifts from alumni and friends who invest in the mission of the University of Michigan. Donors make endowment contributions with the understanding that the principal will remain untouched so that it will provide ongoing benefit to students, faculty, and academic programs. A majority of these gifts are restricted by donors to specific uses, such as scholarships. About 25% of the total endowment is restricted for use by the University of Michigan Health System. The Office of University Development has posted to its website Milestones in Giving, an interactive timeline of giving from 1817 to the present, which illustrates the many ways donors have helped the University to fulfill its mission over time.

To maximize the impact of the endowment, the University provides prudent stewardship of this resource. To accomplish this, the University strikes a balance that generates a steady, predictable stream of annual support for current needs and also preserves its purchasing power for the future in the face of inflation and inevitable fluctuations in financial markets.

Cost Savings and Environmental Stewardship

A central aspect of good fiscal management is to achieve cost savings through efficiencies. The example of this type of activity we highlight here is Planet Blue, a campus-wide educational and outreach campaign that actively engages the campus community to conserve utilities and increase reuse and recycling, thereby saving money and benefiting the environment. A 1% reduction in utility usage translates to over $1M in annual savings for the University that will be available to advance the core teaching and research missions. Planet Blue reflects our commitment not just to efficiencies and cost savings, but also to protecting the environment and the Earth's resources, as mentioned in the University's vision statement (Chapter Two).

In FY 2008, the University piloted the Planet Blue project in five buildings on the Ann Arbor campus, with positive results. Many energy-saving actions were successfully implemented in the pilot buildings, while other recommendations are under review. Changes range from installing occupancy sensors for fume hoods to reducing operating hours for HVAC fans. Other efforts include compiling and distributing an annual report on consumption trends, research activities, and operations efforts; increasing electricity produced from renewable sources; maintaining and expanding alternative transportation options for students, staff, and faculty; strengthening procurement offerings to ensure that green products are prominently promoted; and revising construction and renovation guidelines to improve energy efficiency.

3.3.2
Human Resources

The University's financial health depends in large part on its faculty and staff, who build on the University's strong foundation and tradition of excellence by remaining focused on the institution's core missions, even in the face of significant challenges. According to the University's Office of Budget and Planning, in 2008 the University employed more than 6,000 faculty and more than 32,000 staff (of which almost 18,000 were employees of the U-M Health System). As in any organization, the people at the University are its greatest asset and give the campus its uniqueness. A significant part of the University's budget covers the salary and benefits of its faculty and staff. Therefore, it's critical for the University to develop, serve as a steward for, and invest in its faculty and staff. Some of the key ways in which the University plans and accomplishes these aims are described below.

Human Resources Strategic Plan

As part of its overall Strategic Plan, University Human Resources (UHR) has established a set of strategic goals, provided below, that articulate the human resource community's focus, the desired outcomes, and the roles and competencies needed to achieve those outcomes. UHR uses these goals to plan, to allocate resources, and to assure that its actions align with the University's mission. Several of the activities and initiatives described below echo these goals.

- Develop leading practices in the recruitment, retention, and development of an outstanding faculty and staff.
- Build human resources skills, competencies, and expertise to advance University goals.
- Increase UHR's contribution to the success of the University of Michigan through business intelligence (i.e., the applications and technologies that an organization uses to gather, store, analyze, and provide access to information, with the goal of helping the organization to make business decisions).
- Support and promote the health and wellbeing of the University of Michigan community so individuals and the organization thrive.
- Foster and maintain a work and learning environment that is inclusive, welcoming, and supportive, and is free from discrimination.
- Improve human resource processes, systems, and infrastructure to provide high levels of efficiency, quality, and cost-effectiveness.

Human Capital Report

One important way the University safeguards its human resources is to compile information that helps University leaders make decisions and plan effectively. For this reason, since 2005 University Human Resources has created an annual Human Capital Report. The 2008 edition of this report examines the challenges and opportunities that the University faces in the years ahead due to anticipated retirements of faculty and staff members. The University's goal is to project the impact of retirements over the next 5-10 years, and to plan accordingly.

Training and Development

Another way the University builds and supports its human resources is to provide training and development opportunities for its faculty and staff. The University's executive officers have formally adopted a Staff Development Philosophy that defines the role of staff members and management in this regard. This statement publicly recognizes that people are the University's most important resource for sustaining excellent teaching, research, and service. To enhance the ability of staff members to contribute to the units where they work and to experience greater job satisfaction, the University has made this broad commitment to support ongoing staff development for all staff members. When the University achieves this goal, through training and mentoring, staff members grow, develop their talents, acquire and use new skills and knowledge, and become more effective. Training and mentoring for staff is provided on the job, through unit activities, and also through University-wide programs. A few examples of such activities are provided below.

- Each year **Human Resource Development** (HRD) offers employees more than 100 courses designed to teach professional and personal skills to help them advance in their careers. HRD also delivers customized training, uses technology to promote learning, engages unit-level staff in discussions about their workplaces, and assesses and develops needed competencies.
- **Career Development Services** is an online resource for University employees that provides a wealth of information for employees to assess and plan their careers, find career-related information, and access job search tools.
- Participants in the **Advanced Leadership Seminar** develop leadership skills through presentations by executive and senior-level University administrators, by actively participating in focused discussions on organizational development, through assigned readings and small group discussion, and by undertaking an independent project that focuses on principles of leadership and systems change management. While working on these projects, participants also receive individual and group consultation and support.

- The Plant Operations Division, a branch of Facilities and Operations within Business & Finance, has created a **Plant Academy** that delivers education, skills, and organization development programs and services. The Academy's vision is to create a learning organization that encourages employees to develop skills to help them achieve the performance objectives of their work units—within the larger context of supporting and reinforcing the University's mission, policies, culture, and strategic goals.

The University similarly provides professional and leadership development opportunities for faculty and academic administrators, a few of which are described below.

- **Teaching programs, services, and support.** CRLT offers a variety of services and programs for faculty members who are interested in pursuing new and innovative approaches to teaching, want to learn more about teaching methods relevant to their courses, or want to consult about ways to improve their teaching and their students' learning. These services include grants for teaching, workshops and seminars, mentoring, consultations on such topics as course design and the effective use of technology in teaching, mechanisms for student feedback, a variety of publications, and access to University honor codes and other policies.

- **New Department Chair and Associate Dean Orientations and Leadership Program.** The Office of the Provost, with CRLT, offers an orientation program to new department chairs and associate deans, and a companion set of roundtable sessions for all University department chairs and associate deans. The orientation program provides an opportunity for participants to learn about the workings of the University, to deepen their understanding of the role of departmental and school or college leaders, and to become acquainted with others who serve as chairs and associate deans. The roundtable sessions focus on such topics as faculty hiring and retention, negotiation and conflict resolution, learning assessment, dealing with difficult faculty members, and planning for the future.

- The **Health Care Leadership Institute** of the University of Michigan Health System is a collaborative institute developed and managed by the UMHS, the Ross Business School, and the School of Public Health. The Institute provides senior leaders in the health system with a multi-disciplinary learning experience that includes in-class work on leadership skills, management tools, and special topics, which are taught by University faculty in business, medicine, and public health.

- **Other school/college academic leadership training.** The College of Literature, Science, and the Arts and the College of Engineering each provide college-specific education and networking sessions for their department chairs. The program content is typically specific to the policies, procedures, culture, and workings of the college.

- The Committee on Institutional Cooperation (CIC) is a consortium of the Big Ten universities plus the University of Chicago. The CIC's **Academic Leadership Program**, an annual program that was established in 1989, is for faculty members who have demonstrated exceptional leadership ability or who show great promise in this area. Each year, the 55-60 selected ALP Fellows attend three 3-day seminars hosted by the participating CIC universities on a rotating basis. The program content addresses the challenges and opportunities of academic leaders at major research universities and helps the Fellows to prepare for leadership roles. Many of the programs' Fellows have gone on to serve with distinction as deans, vice presidents, provosts, and presidents of institutions of higher learning.

- Each year, the CIC also offers a three-day **Department Executive Officer Training Program** for approximately 50 department heads and chairs from participating CIC universities, with topics that range from conflict resolution and time management to faculty development, performance reviews, and group problem solving.

3.3.3
Facilities and Infrastructure

The University's buildings and related infrastructure are an integral element of its identity and values. In 2008 the University owned 538 buildings (including 223 apartment buildings on the North Campus) on 3,070 acres (~12.5 km^2) for a total of more than 31 million gross square feet (~3 km^2), including buildings on the medical campus and other auxiliary operations. In addition, in June 2009 the University purchased property previously owned by Pfizer, Inc., which consists of 30 buildings suitable for advanced research and administrative offices located on 174 acres (0.7 km^2); see image below. The University has named this new acquisition the North Campus Research Complex (NCRC), and planning for its use is underway.

The North Campus Research Complex (formerly the Pfizer property). Source: OVPR

Even in the face of ongoing economic pressures from the state and escalating health care and energy costs, it is essential that the University invest in its future by strategically renovating and replacing University facilities. These facilities play a critical role in such activities as meeting patient care needs, bringing in new technologies, and supporting academic, research, and clinical needs as they grow over time. In FY 2008 the University completed more than 327 projects across campus, representing an investment of more than $609 million. At the time of this report, the University had completed or begun construction on many facilities to support its academic, research, and athletic functions as the University strives to meet its changing needs.

General Facilities and Master Plans

In this section of the report, we highlight a few features of the University's commitment to maintaining, improving, and adding to its capital infrastructure and campus planning: the University's campus planning studies; the division of Architecture, Engineering and Construction; and the recently developed "Capital Project Guidelines."

- Since the 1960s, the University has undertaken **campus planning studies** for each of its Ann Arbor campuses. These studies, conducted by the local planning firm of Johnson, Johnson and Roy, have included the Central Campus Planning Study of 1963, the North Campus Planning Study of 1984, the Central Campus Planning Study update of 1987, and the South Campus Planning Study of 1991. In developing these plans, the University uses the concept of "framework planning," which provides a flexible organizational structure for the campus by accommodating physical change over time without trying to forecast the details of future projects. In 2005, an update of the Medical Center master plan was completed, encompassing not only the Medical Center Campus core area but also the Wall Street district located nearby, and the East Medical Campus located on the northeast side of Ann Arbor. In 2008 an update of the North Campus Master Plan was completed, which provides a flexible physical framework for the University to coordinate incremental development on North Campus that focuses on four guiding themes: to create strong connections, to promote campus vitality, to optimize development capacity, and to respect and incorporate environmental features into the planning process.

- **Architecture, Engineering, and Construction** (AEC) plans and manages the design and construction of new facilities, additions, renovations, and utility and infrastructure improvements. AEC, a division of the Department of Facilities and Operations within Business & Finance, manages the design and construction activities for all University of Michigan capital projects. Through all stages of design and construction, AEC's project managers select all the consultants, construction contractors, and project leads. One of AEC's primary responsibilities is to assure that all University projects are constructed in accordance with University and state of Michigan standards for design quality, including the economics of construction and operation. AEC also provides campus and building information, campus maps, planning topics and guidelines, traffic advisories, and information about topics and guidelines for sustainability. A list of current and completed projects is available on AEC's website; major projects include the North Quad Residential Academic Complex, described in Chapter Two, an addition to the Art & Architecture Building, the Law School Academic Building and Hutchins Hall Law School Commons Addition, a replacement for the C.S. Mott Children's and Women's Hospitals, and the Michigan Stadium expansion and renovation.

- The newly implemented **Capital Projects Guidelines**, which were developed through the University's Space Utilization Project, strengthen the process through which academic and administrative units on the Ann Arbor campus that are supported by the University's General Fund may submit proposals for capital projects. The guidelines establish a structured, consistent, and documented process that provides information to units on the steps to follow, information to include in a proposal, criteria used to evaluate a proposal, and what to expect once a proposal has been submitted. The primary goal of this new process is to allow University leaders to review capital project requests at the same time each year, which greatly enhances our ability to make decisions and commit resources to institutional needs and priorities from a University-wide perspective.

Facilities to Help the University Achieve Its Mission

In Chapter Two, we described the new North Quad Academic and Residential Complex, which is an ideal example of the University's commitment to plan, design, and build innovative facilities that will support future activities and enhance the ways in which we educate our students. Below are two more examples of such facilities on campus.

- Since opening in 1996, the **James and Anne Duderstadt Center** has provided faculty and students with a wide array of state-of-the-art tools, technology, and spaces designed for innovative and collaborative work and creativity. The resources of the center are open to faculty, students, and staff. The Audio Studio is a laboratory set up in the style of a recording studio that encourages users to experiment, research, and develop skills and techniques in audio production. Three professional multimedia workrooms are also available. Using high-end equipment, users can edit and audio recordings, convert work from one media to another, and author DVDs, among other activities. The Video and Performance Studio provides a large, flexible space in which faculty, staff, and students can undertake experimental or academic projects that involve research and teaching/learn-

ing in the areas of art, music, dance, and film/video. An example is the Animation Station, conceived by faculty members in the School of Art & Design and staff in the Digital Media Commons. The Animation Station, which allows users to make their own short films at a portable kiosk, won the 2009 Michigan EMMY Award for Advanced Media Arts/Entertainment.

- In January 2009 the Ross School of Business' opened a 270,000 square feet (~25,000m2) building. The new facility is a 21st-Century structure designed to help catalyze business education by supporting the school's commitment to action-based learning. It is built to nurture ideas that shape complex, global organizations, and for the people who lead them. In form and function, its design supports the school's collaborative culture, embodies its commitment to environmental sustainability, and reflects its emphasis on creative imagination toward affairs of the world.

3.4
SUPPORTING CONTINUOUS IMPROVEMENT

Core Component 2c: The organization realistically prepares for a future shaped by multiple societal and economic trends.

A common theme throughout this report is the University's decentralized structure. The University of Michigan is made up of eight executive officer areas; nineteen schools and colleges; almost 190 academic departments, programs, centers and specializations; and multiple institutes, libraries, units, and offices. In such a complex organization, there is no one-size-fits-all for institutional research and evaluation. Moreover, there is no single office at the University with responsibility for planning across the campus. Instead, there are several key offices and people on campus whose responsibility is to assist units and offices in their planning and evaluation, as described below.

To prepare for the future, the University continuously engages in three types of activities that are closely interwoven. People make plans, gather and consider information related to our activities, evaluate or assess our efforts, and then, coming full circle, commit to a plan. Some of the basic questions that drive this process are these: What are we doing? How well are we doing it? What's going on inside and outside the University that's of interest? What more information do we need? Should we continue to do what we're doing, or should we be doing something else or something more? Units across the University, the offices of executive officers, the schools and colleges, and the academic and non-academic units on campus carry out this planning and assessment cycle from the micro level to the macro.

At the micro level, individual faculty and staff members engage in the planning cycle on a day-by-day basis. At regular meetings of University faculty and staff in the hundreds of offices across the University, leaders at all levels imbed this planning process and cycle into group discussions. Toward the macro level, many offices and units on campus engage in more formal planning processes that take place on a schedule. This type of formal activity, too, happens at many different levels, as this section describes.

3.4.1
Planning and Assessment

In Chapter Two, we touched upon some of the key planning activities, especially at the central leadership levels of the University. In this section, we will provide additional examples of planning efforts at various levels of the University, as well as activities that are geared specifically to assessment. Units undertake these activities to stay informed of changes both inside and outside the University and to modify what they do accordingly.

Assessment of Schools and Colleges

As mentioned earlier, each year the provost initiates a strategic assessment of two academic units and two non-academic units. The purpose of the strategic assessment process is to ensure that each unit periodically takes a critical look at its intellectual directions and priorities, its strengths and weaknesses, and how it compares to other institutions. Such an assessment can guide the unit's future decisions and initiatives in a way that promotes the pursuit of academic excellence. The assessment is also an opportunity to identify points of potential contact between the unit's agenda and the strengths of the University of Michigan, as well as possible synergies and collaborations. Finally, these assessments provide the opportunity for faculty and staff in the unit and the University's academic leadership (president, provost, and executive vice president for medical affairs) to achieve a shared understanding of the significant intellectual choices and trade-offs facing the unit. An example assessment is located in the Resource Room.

At the level of the schools and colleges, there are two main mechanisms by which formal reviews take place. Eleven of the nineteen schools and colleges (see below) are accredited by their professional organizations and undergo a formal review periodically for reaccreditation:

- School of Art & Design: National Association of Schools of Art & Design.
- Ross School of Business: Association to Advance Collegiate Schools of Business.
- School of Dentistry: Commission on Dental Accreditation.
- College of Engineering: Accreditation Board for Engineering and Technology.
- School of Information: American Library Association.
- Law School: American Bar Association and the Association of American Law Schools.
- Medical School: Liaison Committee on Medical Education.
- School of Nursing: Collegiate Commission on Nursing Education and the Michigan State Board of Nursing.
- College of Pharmacy: American Council for Pharmacy Education.
- School of Public Health: Council on Education for Public Health.
- School of Social Work: Council on Social Work Education.

In addition, some programs and departments within the schools and colleges receive formal accreditation. A few examples are programs in the Taubman College of Architecture and Urban Planning (i.e., accreditation of the Program in Architecture by the National Architectural Accrediting Board, and of the Program in Urban Planning by the Planning Accreditation Board), the Athletic Training program in the School of Kinesiology (Commission on Accreditation of Athletic Training Education), and the Department of Dance in the School of Music, Theatre & Dance (National Association of Schools of Dance).

Assessments of Departments

The schools and colleges and the Rackham Graduate School conduct formal reviews of the departments within their purviews. For example, LSA conducts formal reviews of its departments on roughly a ten-year cycle. As part of each review, the department presents a long-range plan, and the college conducts a thorough external review of all aspects of the department. These reviews are shared with the provost's office . The goal of the complementary Rackham Graduate School Program Review, which follows a four-year review cycle of all Rackham programs, is to assess and improve graduate education at the University of Michigan. For each review, Rackham, the dean's office, and the graduate program work collaboratively to identify opportunities and to share ideas and promising practices related to graduate education. Examples of these reviews are available in the Resource Room.

As a common starting point, the Rackham review compiles and shares a significant set of comparative data, tailoring both the data they provide and the conversations they hold to the program being reviewed. These data include the indicators below:

- The program's performance on Rackham's selected indicators, including basic metrics such as the percent of students who achieve candidacy, the percent of students who complete their degree, and time to degree;
- Data about the indicated measures of success that the program has identified;
- Results from the responses of the program's students who completed Rackham's exit survey of doctoral recipients;
- A report about faculty members who have served on recent dissertation committees of students in the program;
- Data from the program's report to Rackham on the current location of their graduates over the last five years; and
- Total funding Rackham has provided to support the program's Rackham students.

During the review, Rackham also surveys the current graduate students in the program about such aspects of graduate education as orientation, communication, advising, mentoring, financial support, and climate. Also, Rackham faculty and staff members meet with the program's leaders to discuss the quality of the program, any areas of concern, strategies for specific aspects of the education the program provides, future directions for the program, and how Rackham can provide expertise or services to help the program initiate any new faculty initiatives. Examples of LSA and Rackham reviews are available in print form in the Resource Room.

Assessment in Other Units

Annually, staff members in most units meet with their supervisors for an annual performance evaluation and planning meeting. In some units, supervisors ask staff to submit comments in writing before the meeting, which is likely to include a self-assessment by the staff member of his or her performance, accomplishments from the previous year, and future goals. In addition, some staff members engage in what is called a 360-degree evaluation, in which the staff member and his or her subordinates, peers, and supervisors evaluate the staff member's job performance.

At the unit level, many unit leaders convene staff and/or faculty for formal planning sessions or planning retreats, commonly once a year. In addition, University leaders may take the initiative to develop an annual report of activities or respond to such a request from his or her supervisor. Links to examples of such annual reports are provided below:

- Office of the Vice President for Research: Annual Report on Research, Scholarship, and Creative Activity.
- College of Engineering: Engineering Career Resource Center.
- Office of Technology Transfer: Annual Reports.
- Department of Occupational Safety and Environmental Health: Annual Environment Report.
- Office of the Registrar: Enrollment and Degree Reports.

The strategic planning process of the Division of Student Affairs (DSA) is an example of the formal planning and review process that is used in several units. Through this process, the DSA creates and implements a set of long-range, division-wide goals that are meant to plan the next five to seven years. Evolving continually, the process brings together strategic planning steps, a reflective process, prominent assessment throughout, and a group process approach to supporting individuals' growth in helping to change the organization. This model has advanced the division's direction by allowing the leadership to manage operations from an informed perspective and to establish a shared vision. Ongoing assessment helps to establish and define division-wide goals and use research findings to help the division form goals for the strategic process.

3.4.2
Institutional Research

People engaged in institutional research at the University gather, analyze, and distribute information to meet external reporting requirements, to communicate activities both within and outside the University, and to help faculty, University leaders, and staff to plan and make decisions in all areas of the University. These areas include budget, student enrollment, faculty and staff, instruction, student life, residence hall life, facilities, athletics, and University alumni. At the University of Michigan, institutional research is carried out by University-wide offices, by offices within the larger units at the University, and by staff members for whom institutional research is one their responsibilities. Offices at all these levels collect data and prepare reports on a regular basis. For example, the deans of the schools and colleges collect and disseminate information to department chairs, associate deans, and to the faculty. Below we will briefly describe major data gathering and report efforts, satisfaction surveys, and sharing of best practices.

The Office of Budget and Planning

The Office of Budget and Planning (OBP) is the University's central office for institutional research whose role is to enhance the general knowledge and understanding of the University and its activities to help administrators and others to manage the institution and plan for its future.

Under the direction of an associate vice provost and executive director and with oversight by the vice provost for academic and budgetary affairs, OBP produces detailed information about the University budget, including budget planning workbooks; enrollment projections; and tuition attribution data for the schools and colleges. The office also handles data and reports about the faculty, staff, and students on the Ann Arbor campus. The office presents institutional data in an electronic and partially protected format on their Facts & Figures website, providing an efficient way for relevant campus units and individuals to access this information. OBP also administers and analyzes student surveys, both internally and in collaboration with other institutions, and studies of higher education (e.g., with the Association of American Universities). By analyzing the results of these surveys, The University is constantly seeking to improve the experience of its students, faculty, and staff.

One example of the work of OBP is a summary profile of each school and college, which is updated annually. These (password-protected) profiles contain 10-year data on the unit's General Fund budget, the unit's budget sources (by category of use), the number of instructional faculty (by type); the number of staff; the number of student applications, admissions, and enrollments; the number of Fiscal Year Equated Students (FYES) and the average number of FYES for each instructional faculty member (based on formulas that allow the University to compare enrollments fairly across the schools and colleges); the number of student credit hours that the unit's students elected; the number of credit hours the faculty taught; and the number of degrees the unit conferred. A printed example of these profiles is located in the Resource Room, and an example comparison that shows student headcount per faculty member in each unit is below.

Fall 2008 Student Headcount Enrollment per Faculty Member
(General Fund FTE of Tenured and Tenure-Track Faculty)
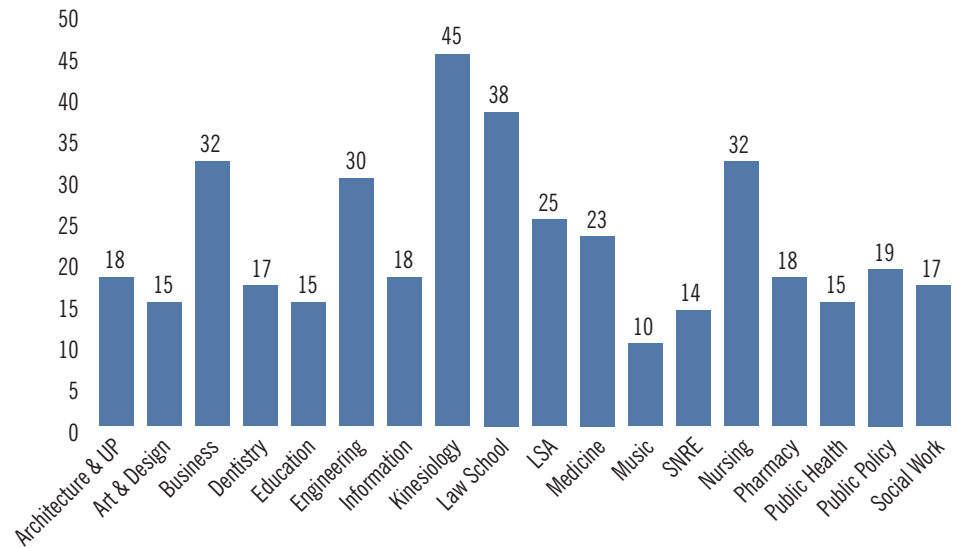
The OBP also prepares an overview for each school or college that provides the unit's current tuition and fees by level of enrollment, the current percentages of tenure-track or tenured faculty by gender and race/ethnicity, information about fall term student headcount, degrees conferred by level, percentage of underrepresented/minority/domestic students by level, faculty and staff headcounts by fund type, all funds revenue, sponsored research expenditures, fund balances, and Net Assignable Square Feet grouped by type of room.

Behind these profiles and overviews are critical points of inquiry. What are student enrollments over time? How is the overall fiscal health of the school or college? How many students complete their degrees? How much teaching are faculty members doing, both for students enrolled in the school or college and other students at the University? These documents assist the provost in assessing such factors (often with cross comparisons) as a school or college's faculty, staff, and student composition; its teaching activity levels; its financial status; and its space usage.

The OBP also maintains the College Resources Analysis System (CRAS), which measures such factors as teaching loads, course offerings and enrollments, class size, and teaching salary cost per credit hour for academic departments or programs. These data sets are specifically produced to help each unit plan effectively and to make decisions aligned with its mission and goals, and they also reflect the University's institutional values as described in Chapter Two.

Other Offices

Several other offices collect data and offer assessment tools that typically meet their particular areas or fields of interest. Examples are below.

- **Student Affairs Research** in the Division of Student Affairs (DSA) helps many University departments and units to create assessment tools, collect data, disseminate results, expand knowledge about University of Michigan incoming students, and conduct other tasks. As part of the long-term vision for Student Affairs Research, the office implements conceptual research design, which includes longitudinal and cross-classification research, regularly collects information from students about their opinions on current issues, and shares information about students with a larger audience to help the University better educate its students. Participation in the Cooperative Institutional Research Program's (CIRP) survey produces a portrait of the University's incoming freshman that includes parental income and education, ethnicity, financial aid, secondary school achievement and activities, educational and career plans, and values, attitudes, beliefs, and self-concept.

- LSA's **Management Information Systems** (MIS) team develops and maintains administrative information systems on behalf of the college and its departments. Additionally, on an ad hoc basis MIS staff retrieve and analyze administrative data for LSA departments and for the dean's office. They manage databases and reporting for the general management of the college's general affairs, academic reporting, budgets, undergraduate recruiting, graduate education, and department-specific programs.

- The College of Engineering's **Resource Planning and Management** (RPM) provides support for the college to manage and plan its finances and facilities, and to manage its human resources. RPM also does institutional research and is the source of all official data and statistical information about the college.

Satisfaction Studies

Numerous units at the University, in the schools and colleges as well as other units, conduct institutional research on the levels of satisfaction among the people they serve. Below are three examples.

- In 2005 **Business & Finance** (B&F), a central unit that is the responsibility of the executive vice president and chief financial officer, conducted its first customer satisfaction survey, to which over 3,400 people responded. A similar survey was conducted in 2007, with over 6,000 respondents, followed by a third survey in 2009. The main purpose of this survey is to measure satisfaction with the services of more than 35 units of B&F in four areas: Facilities and Operations, Finance, Michigan Administrative Information Systems (MAIS) (now part of Information Technology Services), and University Human Resources (UHR). The survey contents reflected nine common goals for B&F units:
  1. Understand customers' needs.
  2. Understand and explain University policies and procedures.
  3. Communicate service standards.
  4. Demonstrate functional and technical expertise.
  5. Implement changes in service effectively.
  6. Communicate change effectively.
  7. Be easily accessible.
  8. Provide friendly and courteous service.
  9. Achieve overall customer satisfaction.

  The B&F shares information online about the results of its surveys, showing an average satisfaction score of >7 on a 10-point scale that is used to develop action plans.

- In 2004 the Senate Assembly established the **Administration Evaluation** program, which develops annual questionnaires for faculty to evaluate University administrators, from the president to department/unit heads. The results of the evaluations are reported to the faculty, the administrators, and the Board of Regents, and are available online. Despite modest response rates (17% in 2008), the questionnaires mirror a set of expectations or performance measures for each group of administrators. For example, the questions on the instrument to evaluate department chairs suggest that chairs should
  - Actively promote an environment for scholarly excellence and teaching excellence,
  - Effectively represent the interests of the department to senior administrators,
  - Consult with the faculty adequately before making important decisions,
  - Make excellent faculty administrative appointments,
  - Foster a fair and rigorous promotion and tenure process,
  - Manage departmental administrative staff well, including maintaining appropriate staffing levels,
  - Manage the department's resources well,
  - Be attentive to long-term, strategic issues that affect the department,
  - Ensure that departmental policies, procedures and available resources are transparent to all faculty members, and
  - Inspire confidence in leadership overall.

- The **Housing Research Office**, part of DSA's University Housing, undertakes a wide range of research activities that improve the services that are provided to the students, faculty, and staff who reside in University facilities. The office conducts large, housing-wide research projects that ask students and staff to evaluate University Housing's programs and services, and to examine how well it is able to create and sustain diverse, learning-centered communities. The Housing Research Office also disseminates its findings to University staff members and other campus stakeholders, and to University of Michigan peers in the student affairs area. It provides information to meet the needs of individual units within University Housing and to help them make decisions and perform long-term strategic planning. For example, University Housing annually surveys resident students about their perspectives on a variety of its services and programs and participates in a national benchmarking survey to compare its services to peer institutions across the Big-10 and to other peer institutions with comparable housing systems. Several reports are posted on their website.

Sharing Ideas and Practices

A key aspect of institutional research is for members of the campus community to have the opportunity to share and discuss their work, compare ideas, and explore best practices. In previous sections we emphasized the availability of data and analysis on websites of the units involved in data mining and planning activities. Opportunities for other discourse are also available at the University and beyond, as described in two representative examples below.

- Each year, DSA holds a **Division of Student Affairs Research Symposium** to inform members of the University about the kinds of research on students that units at the University are pursuing, to collaborate on common dilemmas in researching students (particularly in applying theory to practice, as described below), to help staff develop skills in assessing and evaluating programs, and to help staff use research in their day-to-day decision making and work. "Theory to practice" is about ways people at the University can apply research to their day-to-day work with students. This approach focuses on such questions as those below:

- How do we use data to make decisions, large and small?
- How might we use theories about student development to influence how we work with students?
- What do we do with the information we collect in our assessment or research projects?
- In turn, how can our practices inform or influence our research and theory?

- The Office of Budget and Planning periodically participates in surveys developed through the **Association of American Universities Data Exchange** (AAUDE), including the Graduating Senior Survey in the spring of 2008 and the Alumni Survey in the spring of 2009, which are used throughout this report. AAUDE is a public service organization whose purpose is to improve the quality and usability of information about higher education. The membership is comprised of institutions that support this purpose and participate in the exchange of data/information to support decision-making at their institutions. Each year, the organization meets at least once to discuss new developments and continuing priorities, which one or more staff members from the University's Office of Budget and Planning attends.

3.5
CONCLUSION

In contrast to many other institutions of higher education, the University of Michigan does not have a campus-wide long-range planning process for its academic mission. The highly decentralized structure of the University asks units to develop such plans at the school/college level and, for large units, at the departmental level. Central administration supports these plans through budget allocations and strategic funding, creating a flexible planning environment.

Campus-wide goals for the University are supported through presidential initiatives that target themes and structures with a distinct forward-looking perspective. Major examples during the past decade include the Life Sciences Initiative, which established the Life Sciences Institute and a host of related research endeavors, and the Interdisciplinarity Initiative, which has supported educational innovation and cluster-hiring of interdisciplinary junior tenure-track faculty members. As part of the current self-study toward reaccreditation in 2010, the University selected the topic of internationalization as a special-emphasis study (Chapter Seven), which includes the proposal of a new presidential initiative in this area, with both off-campus and on-campus components.

The University faces a challenging environment for our core teaching and research activities because of unprecedented and continuing reductions in our state appropriation. This is illustrated by the figure below showing the inversely proportional increase in LSA tuition relative to state appropriations over time.
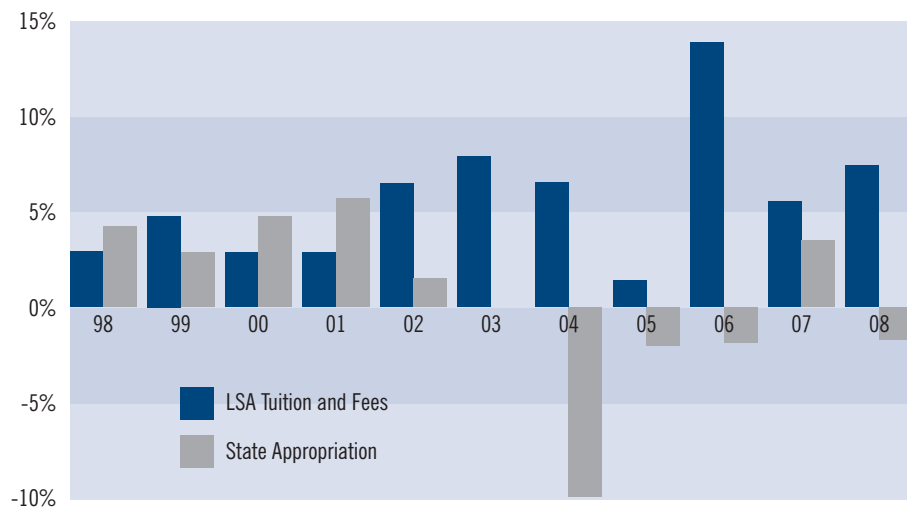
Ten year record of percentage change in undergraduate tuition and fees for LSA students and state appropriations.
From: Financial Report 08

With state support steadily declining during the past decade and an uncertain outlook for the upcoming years, the University must act internally and increasingly rely on other funding streams for its mission. The University has responded responsibly by examining its expenditures and by aggressively promoting efficiency in all areas of operation. An unwavering commitment to preserving the quality of core academic activities remains our highest priority in today's otherwise challenging environment.

4. STUDENT LEARNING AND EFFECTIVE TEACHING

4. STUDENT LEARNING AND EFFECTIVE TEACHING

Criterion 3: The organization provides evidence of student learning and teaching effectiveness that demonstrates it is fulfilling its educational mission.

4.1 INTRODUCTION

Examining teaching and learning issues at today's research universities is often challenging because it is the hidden centerpiece of our collective work. Whereas the outcomes of our research efforts are inherently public, the outcomes of our teaching activities typically are not. With an enrollment of over 40,000 students, the learning environment is expansive at the University of Michigan, and the decentralized nature of the institution means that assessment reflects the range of our enterprise and is equally diverse.

4.1.1 Framework

In order to frame our examination we use a simple evaluation schematic that was popularized in the higher education community by Alexander Astin[3]. Astin's Input-Environment-Output model (figure below) underscores the need to have an understanding of student qualities and characteristics upon their entry into an educational program, the nature of the educational environments with which they come into contact, and their qualities and characteristics as they exit the program in order to be able to fully evaluate its effectiveness.
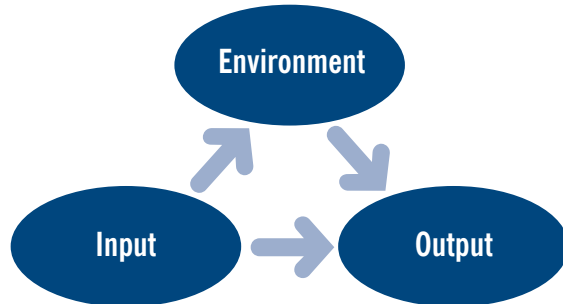
Astin's I-E-O model

In applying this scheme to the University's learning environment, several key points became clear that serve to guide our examination:

- The student learning environment at the University of Michigan is not confined to formal classroom or institutionally-sponsored educational activities, and any consideration of the student learning environment that does not explicitly recognize this fact will be limited.
- It is important to have a common set of educational goals or competencies against which progress can be measured and achievement assured.
- Individual faculty members and academic programs have unique and specialized outcomes that they may pursue in addition to the general institutional effort.

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[3] Astin, A.W. (1991). Assessment for Excellence: The Philosophy and Practice of Assessment and Evaluation in Higher Education. Washington, DC: American Council on Education/Oryx Press Series on Higher Education.

4.1.2
Mapping Assessment

In the absence of a centralized, coordinated institutional effort to undertake assessment and evaluation activities, it would be wrong to conclude that there is little such activity at the University. Rather, we can identify and map a broad range of ongoing assessment and evaluation efforts that occur at various levels throughout the University; these are presented below. As indicated on the left axis, activities range in scale and scope from individual instructor/class-based, to programmatic, to institutional, to national.

Generalized map of assessment activities at the University of Michigan

| Primary Focus | External Data | Crosscutting Issues |
| Institutional | Test Scores, US News | |

Centralized, Campus-Wide Activities
Alumni Surveys, NSSE, CIRP, SERU
MSS, TQ, Assessment Pilots

Teaching Improvement
Technology Implementation
Campus Affordances
Research Opportunities
Community Engagement
Non-curricular Engagements

Schools, Colleges and Program Activities

Common (Gen Educ) Outcomes | Fine and Performing Arts | Humanities | Sciences | Social Sciences | Professional Fields

Course-embedded and Classroom Research
ISL/SoTL, TQ, Evaluation of Innovations

Individual

Abbreviations are: CIRP-Cooperative Institutional Research Program, ISL/SoTL-Investigating Student Learning/Scholarship of Teaching and Learning, MSS-Michigan Student Study, NSSE-National Survey of Student Engagement, SERU-Student Experience in the Research University, TQ-Teaching Questionnaire, US News-U.S. News and World Report.

At the institutional level we have centrally-coordinated efforts to collect and disseminate data based on information from both internal and external audiences. In addition to ongoing participation in externally-based activities such as the Cooperative Institutional Research Program (CIRP), the National Survey of Student Engagement (NSSE), and the new Student Experience in the Research University (SERU) project, the University develops its own student research and assessment initiatives. Most notable among these is the ongoing Michigan Student Study (MSS), as well as more targeted data collected from students on their evaluations of classroom experiences through the Teaching Questionnaire (TQ) system managed by the Office of Evaluations and Examinations (E&E), and surveys completed by graduating seniors and alumni (see recent reports under Resources). The University has also been involved in a number of centralized assessment studies, including the Collegiate Learning Assessment (CLA) pilot in 2007-08 and the FIPSE-supported inter-university learning assessment study that produced its Test Validity Study report in 2009.

Consistent with the decentralized organization of the University of Michigan, a good deal of assessment and evaluation activity occurs in the schools and colleges, as well as in many academic programs. These activities vary according to disciplinary norms, and are often aligned with specialized accreditation requirements for some of the professional schools, such as the College of Engineering and the Medical School. Ongoing campus programs, such as the Undergraduate Research Opportunity Program (UROP), have long-established assessment efforts, while new programmatic activities, such as the Instructional Development and Educational Assessment

(IDEA) Institute, are poised to foster additional cross-unit collaboration. In addition, departments, schools, and colleges can draw on the Center for Research on Learning and Teaching (CRLT) to assist with data collection and to facilitate discussions around goal setting, data interpretation, and other aspects of assessment. A CRLT-hosted website on assessment offers resources and describes several campus practices.

At the individual level, assessment activities are harder to summarize, but they generally are robust and increasing. For example, in September 2008 the Medical School, the School of Education, and the Center for Research on Learning and Teaching (CRLT) co-hosted a "walking dinner" in which faculty members and research groups presented posters that summarized more than 60 research and assessment efforts related to teaching and learning. The College of Engineering and CRLT-North similarly hosted a lunch event in October 2008, at which about 20 posters summarized research on teaching and learning underway at the College of Engineering. Further supporting this range of individualized activities, the University offers an internal grants program titled "Investigating Student Learning," intended to foster additional activity in this area.

We also find assessment activities in a number of cross-cutting areas that reflect work focused around specific themes. Examples include teaching improvement projects involving CRLT personnel, as they typically incorporate evaluation components that assess student learning, as well as other improvement-related outcomes. Similarly, activities exploring instructional technology innovations often incorporate evaluation and assessment measures to gauge their effectiveness. Broader-based research and assessment efforts, including work by the Office of Student Affairs Research within the Division of Student Affairs, examine the effects of the general education on campus, including co-curricular engagements.

4.2
LEARNING GOALS

> *Core Component 3a: The organization's goals for student learning outcomes are clearly stated for each educational program and make effective assessment possible.*

In this Chapter, once again we begin by framing this section of the report within the context of a highly decentralized academic environment. The University offers programs and majors as diverse as Social Computing, Movement Science, Chemical Engineering, Periodontics and Oral Medicine, Finance, Educational Studies, Judaic Studies, Romance Languages and Literatures, Biology, Neuroscience, String Instruments, Environmental Justice, Midwifery, Public Policy, Pharmaceutical Sciences, and Social Work. In view of this academic diversity and richness, for academic programs to identify learning goals and how to measure whether their students meet these goals is an activity that differs greatly from one unit to the next.

An important part of the University's success lies in the commitment to intellectual freedom that the nineteen schools and colleges enjoy (twelve of those involve undergraduates). This freedom can exist only within the context of a strong administrative infrastructure that ensures that all University units meet the highest standards of professionalism and institutional integrity. In keeping with this culture, the academic units were queried about the ways in which they articulate their academic missions, how they expect their students to grow, how they use the evidence about student learning that they gather, and the processes by which they make curricular innovations and change. These questions were purposely phrased to allow for answers that reflect the many differences across academic discipline.

The Office of the Provost asked the deans of the schools and colleges to respond to, or where applicable, to have each of their departments respond to, five key questions about student learning, which are provided below:
1. *What processes are in place for faculty members to discuss whether the curriculum is designed to promote students' growth and learning, and to make revisions to the curriculum and program requirements?*
2. *What are the key ways you expect your students to have grown by the time they complete the program (your unit's educational goals)? Such measures of growth could include skills acquired, attributes developed, experiences, and "products" that could include course work, artistic work, and theses.*
3. *How is the curriculum/program designed and structured for your students to meet these goals?*
4. *In what ways does the unit measure whether students achieve your stated goals? Beyond grades and graduation rates, other ways can include portfolios, projects, theses, and capstone experiences.*
5. *How do you communicate your goals (or mission) to students and other constituents, and the ways in which the curriculum/program is designed to help students achieve them, both on and off campus?*

The full set of responses to these questions, which varied widely, as anticipated, is available in the 2008 report, Units' Assessments of Student Learning. As a result of the way in which we asked these questions, the schools and colleges' responses are the farthest thing from "one size fits all." Rather, the responses show a wide array of goals, values, ideas, and approaches that are a rich representation of the University's diverse and well-regarded academic enterprise. Additional analysis of the responses is included in the supporting report.

4.2.1
Schools, Colleges, and Departments

The few examples below touch on a few of the ways the academic units articulate their learning goals for students, as described for the entire campus in the Units' Assessments of Student Learning report that was produced in support of our reaccreditation process.

College of Engineering

In its Bulletin for Undergraduate Education, the College of Engineering describes its undergraduate education mission, its undergraduate educational objectives, and its undergraduate education outcomes. The mission of the undergraduate degree programs of the College of Engineering is to prepare graduates to begin a lifetime of technical and professional creativity and leadership in their chosen fields. The college's Undergraduate Educational Objectives are below:

- Prepare students for professional creativity and leadership in their chosen fields of study.
- Providing students with a comprehensive education that includes in-depth instruction in their chosen fields of study.
- Emphasizing analysis and problem-solving, exposure to open-ended problems, and design studies.
- Fostering teamwork, communication skills, and individual professionalism, including ethics and environmental awareness.
- Providing adequate co-curricular opportunities that cultivate lifelong learning skills.

For undergraduate educational outcomes, the objectives state that graduates of the College of Engineering's undergraduate programs will have:

- An ability to apply knowledge of mathematics, science, and engineering within their chosen field.
- An ability to formulate engineering problems and develop practical solutions.
- An initial ability to design products and processes applicable to their chosen field.
- An ability to design, conduct, and interpret the results of engineering experiments.
- An ability to work effectively in diverse teams and provide leadership to teams and organizations.
- An ability for effective oral, graphic, and written communication.
- A broad education necessary to understand the impact of engineering decisions in a global/social/economic/ environmental context.
- An understanding of professional and ethical responsibility.
- A recognition of the need for and an ability to engage in life-long learning.
- A broad education necessary to contribute effectively beyond their professional careers.
- A sense of responsibility to make a contribution to society.

Department of Asian Languages and Cultures, LSA

The Department of Asian Languages and Cultures in LSA expects their students to learn about the regions and disciplines covered by the department; to develop skills in Asian languages, along with an appreciation of the place of languages in definitions of cultures; to acquire a critical understanding of the assumptions and methodologies that underlie the study of Asia; and to progress toward the larger goals of liberal studies in the humanities, which include fostering interest in and understanding of other cultures, assisting in the development of critical thinking, and training students to read and write with nuance.

Department of History of Art, LSA

At the curricular level, the undergraduate program in LSA's History of Art program is designed to provide students with:

- A broad knowledge of the world's visual cultures and artistic traditions.
- An understanding of the connections and interrelationships among the visual practices of diverse cultures.
- A full comprehension of the ways in which artworks function in their own socio-historical contexts.
- A highly developed capacity to employ the skills—including critical reading, sustained visual analysis, advanced independent research, and persuasive writing—necessary to understand and communicate the ways in which artworks, images, objects, and built environments "speak" to their audiences, past and present.

As students advance through the concentration or minor, they learn to deploy a wide variety of interpretive methods devised to approach visual artifacts as elaborate acts of communication. They also learn the importance

of face-to-face encounters with original objects, of close formal analysis, and of the complex relationships between visual and verbal forms of representation. In a larger sense, the students gain a thorough understanding of the discipline of art history and a heightened level of visual literacy—one that extends across diverse cultural and historical traditions.

Organizational Studies Program, LSA

In the process of developing their program, the faculty in LSA's Organizational Studies Program paid particular attention to designing the program's goals to promote "intellectual exit competencies" through a variety of different means. These goals are described below.

- **Theoretical knowledge and skills.** To be able to draw upon theoretical concepts and methods from a range of social science disciplines to interpret organizational phenomena.
- **Engagement in planning student course of study.** To strengthen student ability to understand and articulate their planned course of study through the curriculum and how it relates to their career and/or continuing educational aspirations.
- **Research Skills.** To develop research skills, including 1] problem analysis and solution generation, and 2] the ability to pose theoretically informed questions and use research methodologies to analyze organizational questions.
- **Participate in a variety of learning opportunities.** To create learning opportunities outside of the classroom and to recognize that peers can be a learning resource.
- **Writing and presentation skills.** To develop strong writing and formal presentation skills to communicate in both academic and nonacademic settings.
- **Teamwork Skills.** To develop skills required to work in diverse teams and be comfortable in both leadership and subordinate team roles.

School of Public Health

The School of Public Health articulates its learning goals for students and each of the school's five departments through a set of student competencies. Each of the departments has articulated competencies specific to its professional discipline. In addition, the school has articulated competencies in the core areas of public health that any Master's of Public Health graduate should possess. Based on these competencies, measures of growth include skills in that discipline and in the broader area of public health, recognition of the role of professionalism in that discipline and in broader public health, and exposure to interdisciplinary learning. Products include course work and capstone experiences. Indeed, the capstone experience varies by discipline to best fit the needs of that discipline but include critical reflective papers, theses, or work that reflects students' growth in combining all the individual skills and pieces of knowledge acquired.

4.2.2
Learning Goals of Units

Taking a broader look at the learning goals that the academic programs include in their responses to the five questions listed above, we sorted these goals into four general categories: knowledge and understanding, competencies, experience or engagement, and character.

Within each of these categories, goals can be found that often appear on lists of learning goals or objectives. For knowledge, common goals include knowledge, theory, independent thinking, the ability to think synergistically, and understanding the value of diversity. In the category of competencies, these goals include critical thinking; team building; identifying, formulating, and solving problems; leadership; and creative thinking. With regard to experience and engagement, common goals include the ability to both create and apply knowledge, relationship building and networking, and practical experience. In the fourth category of character, we find such common goals as ethical behavior, tolerance, and discipline.

Perhaps even more interesting are the goals or learning objectives that the academic units articulate beyond the generic. In the category of knowledge, these goals include the ability to read with nuance, the ability to do "close reading," intellectual and academic breadth, and a deep understanding of the world. In the category of competencies, some of the more unique goals include scientific reasoning; change dynamics; the ability to resolve complexity and uncertainty; and passionate, innovative, and flexible leadership. For experience and engagement, such goals include contextual awareness, cultural engagement, professional identity, exposure to a range of possibilities, and the ability to derive maximum satisfaction and fulfillment from future activities. Finally, with respect to the category we define as character, we find these goals: the ability to express the uniqueness of one's vision with clarity and insight, a well educated sense of citizenship, becoming a sophisticated consumer, and strength of character.

There are many ways in which academic units at the University assess whether students have met the academic goals their departments, schools or colleges have set for them. Below are a few responses from individual units that illustrate this range, edited for brevity. Full descriptions can be found in the Unit's Assessments of Student Learning report.

School of Social Work

The School of Social Work uses a number of strategies to assess each objective in the Master's of Social Work program. The faculty also frequently makes special efforts to assess emerging needs and to evaluate innovations within the school. The faculty collects process as well as outcome data and uses both types of data to plan and implement program changes.

The school routinely gathers data through direct assessment methods of student learning (e.g., pre and post measures of competencies, use of students portfolios in Alternative Reaffirmation Proposal implementation, field learning contracts, and instructor graded course assignments) and indirect assessment measures (e.g., end of the semester evaluations, focus groups, Foundation Year Measure, Second Year Competency Exit Measures, and alumni surveys). The Office of the Associate Dean for Educational Programs administers the assessment tools and analyzes the data. Standing committees for action and continuous program improvement (including the curriculum committee, the executive committee, and the community advisory board) review these reports.

In recent years, the faculty has made numerous changes in assessment strategies. First they re-examined and re-cast the curricular objectives and competencies for foundation and advanced concentration courses. As a result of this process, the faculty then changed and added items to the school's ongoing assessment instruments to better determine whether students are meeting the stated objectives. In addition, the curriculum committee, working with curriculum workgroups, has begun to set up levels of proficiency for each competency. If a majority of students report that they are unable to meet minimal levels of competency, the curriculum committee shares this information with the relevant curricular workgroups for them to take action.

Through the Alternative Reaffirmation Plan proposal, the faculty is in the process of testing students' use of portfolios to assess the degree to which their learning is integrative. Although assessment isn't the primary force behind the school's interest in portfolios, they could provide a comprehensive measure of how well students meet the school's learning outcomes. The school is also participating in a pilot project across a number of units at the University to test and further develop electronic, portfolio-based learning software to help facilitate student learning and curricular assessment in ways that integrate curricular, co-curricular, and professional practicum experiences.

Through a range of assessment strategies, the school demonstrates its commitment to evaluating students systematically and to increasing confidence in the data by using multiple sources of reporting. The school also provides a table with the foundation and advanced educational objectives for the Master's of Social Work, which also describes the data used to evaluate each objective.

School of Natural Resources and Environment

The School of Natural Resources and Environment (SNRE) tracks completion of degree requirements for Masters and Ph.D. students. Students in landscape architecture also prepare a formal portfolio of their work for use in employment applications. Although employment is a rough measure of program quality, the school initiated an annual employment survey of the most recent graduates, which they conduct six months after graduation. For the last two graduating classes, 90% of respondents said they were employed at the time of the survey. The school also monitors the progress of its Ph.D. students in comparison to a timeline by which it would like students to complete the preliminary examination, defend the dissertation proposal, achieve candidacy, and complete the degree. The school sometimes penalizes students who don't reach mileposts (e.g., by naming them ineligible for Graduate Student Instructor positions or, in the extreme, expelling students from the program).

For certain segments of the school, assessments are put into place through the process of review by an external accreditation entity, such as the American Society of Landscape Architects and the Society of American Foresters. In addition, the SNRE Student Government has organized sessions with students to assess whether the courses had achieved their goals. The students condense the results into a report to the dean, which has been shared with faculty members who teach the courses. Each year, SNRE's Office of Academic Programs administers the "Exit Survey of Graduating Students" to assess students' satisfaction with the school's academic program, climate, and career services. The director of the office compiles and summarizes results from the survey.

Finally, SNRE maintains an active network of alumni working in the conservation and environment field. The school solicits feedback from this group on whether its learning goals are being achieved. Alumni have a perspective on their own education and on the training of recent graduates whom they either employ or view as prospective employees.

Department of Communication Studies, LSA

The Department of Communication Studies in LSA relies on a variety of informal indicators, including course evaluations and specific questions about students' introduction to and grasp of key concepts in the field. As part of prospective students' applications to be admitted to the concentration, the department asks students to write an essay about their prerequisite classes and what they learned. The department also sponsors a variety of shared forums in which faculty members evaluate and share information about the curriculum.

Each May the department holds a retreat during which faculty members discuss the undergraduate program. Also, smaller groups of faculty who teach the same course in alternate semesters or years meet periodically to discuss readings, curriculum, overlap between courses, and the like. Faculty members also discuss curricular issues as they arise. Many faculty members ask students about the curriculum during their advising hours and bring issues raised by students back to their faculty colleagues. Thus, the department seeks to continually assess and revisit how the curriculum is working.

The department's various 400-level classes, nearly all of them seminars with a strong emphasis on analytical thinking and writing, help faculty members to see how far their students have come in their studies. For example, in these classes students are required to produce visual work, a series of seminar papers, or a final research paper. Such work can show faculty members whether the students have achieved the department's goal of having them think about the media more critically and with increased oral and written sophistication.

Since 2004 the department has also begun more aggressive efforts to build ties between its alums, its current students, and the department. Events bring alums back to Michigan to talk to current students about how to find internships, network, apply for jobs, and discover what they would most like to use. During these events, the alums talk specifically about the ways in which the department's curriculum connected to what they learned from the program and how it has served them on the job. These various events and activities have been very important to the department's desire to drive home to its current students why the curriculum is designed the way it is.

4.2.3
Additional Approaches to Assessment

An overview of the academic units' responses to the question about methods of assessment reveals again both a common set of approaches as well as less common methods (Units' Assessments of Student Learning). Among typical ways to assess learning outcomes are written work, laboratory work (e.g., student lab reports), examinations (including practical exams), group work, skills tests, student projects, clinical experience, thesis, artistic and creative works (e.g., designs, recitals, performances, and exhibits), publications (e.g., in University and external publications), oral presentations (in a variety of settings), results on proficiency exams, degree audits or assessments, presentations, internships, community engagement or service learning experience, capstone experiences, qualifying exams, job placement information (including how long it takes students to find jobs), results of graduate and professional school examinations, admission to graduate or professional school, and alumni accomplishments and successes.

Other methods for assessing students by the University's academic units include clinical simulations in health fields; student-taught seminars; active-learning pedagogical activities (e.g., one-minute papers, peer review of draft papers, and small group discussion); local and national awards and honors; student leadership positions (on and off campus); student-designated pathways for the concentration; enrollment in multiple fields; evidence that a student's progression through the major has a clear shape and direction; progression through a building block sequence; the ability to link theory to models, processes, and practice; faculty reports on how prepared students are for upper level courses; external funding; broad analysis of a student cohort's writing and research presentations; and evidence of clinical judgment.

Curricular and Assessment Efforts

In response to the question "What processes are in place for faculty to discuss whether the curriculum is designed to promote students' growth and learning, and to make revisions to the curriculum and program requirements?," the schools, colleges, and departments described many different types of mechanisms for faculty members to review and revise the curriculum, and whether they help students to grow and learn in ways that match the unit's learning goals and objectives, as described below.

Faculty members discuss, review, and make decisions about the curriculum and student learning in regular or special all-faculty meetings, in groups with designated responsibility for discussing matters related to the curriculum, and in a variety of other types of settings and structures. Depending on the size of the unit, all governing members of the faculty are invited to participate in regular faculty meetings, typically with the dean or department chair. At times, special meetings of the faculty are called to focus on the curriculum. The purpose of such meetings is to review and make recommendations or decisions about existing core courses, new courses, program requirements, and the overall curriculum (e.g., integration among offerings). Groups with designated responsibility for curriculum include executive committees, curriculum committees, steering committees, education policy committees, ad hoc committees, and department faculty representative groups (for undergraduate and graduate education). In addition, some academic units hold periodic retreats for curriculum discussion. At times, units undertake an initiative to review and revise a major, concentration, or program. Most of the units have an associate dean for education in place (undergraduate and/or graduate), and many of the departments appoint an associate chair for education.

Deans, department chairs, and faculty committees often take advantage of CRLT services and expertise in evaluation and curriculum development when planning their curriculum discussions. CRLT consultants gather and analyze data (through surveys and focus groups with faculty, students, and alumni), consult about ways of assessing student learning, and serve as outside facilitators for discussions of curricular issues. Other mechanisms the academic units have used include curricular workshops, teaching innovation exchanges, selecting a core course coordinator (e.g., where faculty members teach similar courses), developing a curriculum management plan, appointing a course coordinator or "faculty of record," mapping learning outcomes to courses, creating reports on the portion of students who successfully achieve the unit's stated learning outcomes, asking instructors to submit end-of-term reports about their courses, creating shared teaching archives for faculty members to draw from, and designating a faculty teaching mentor (e.g., available to all faculty members but assigned to faculty members whose classes aren't meeting departmental goals).

Other activities the units list include appointing faculty teaching mentors, conducting a needs analysis of departments and students across campus, creating electronic sites where faculty members can share teaching materials and discuss the curriculum, writing a unit-specific guide for new instructors, scheduling faculty member visits to the classrooms of graduate student instructors (GSIs), creating teaching circles for new GSIs, conducting an internal academic program review, offering teaching seminars, doing a survey of courses taught at other universities, involving students in the work of the curriculum committee, creating a curriculum across the disciplines, and seeking external funds for curriculum change or innovation.

4.2.4
Centralized, University-wide Assessment Efforts

In addition to the school, college, and department activities described above, the University engages in University-wide assessment activities, several of which are described below.

National Survey of Student Engagement

The National Survey of Student Engagement (NSSE) collects information annually from samples of first-year and senior students about the nature and quality of their undergraduate experience. Since NSSE was first administered in 2000, approximately 1,200 baccalaureate degree-granting colleges and universities in the U.S. and Canada have used the instrument to measure the extent to which students engage in effective educational practices that are empirically linked with learning, personal development, and other desired outcomes such as student satisfaction, persistence, and graduation. Faculty, administrators, researchers, and others use NSSE data for institutional improvement, accountability, and related purposes.

The University of Michigan has participated in the NSSE survey in 2000, 2001, 2003, 2006 and 2009. Administered by the Office of Budget and Planning to freshmen and seniors, the survey gauges students' experiences inside and outside the classroom. The NSSE data can be classified into five benchmark categories: (1) academic challenge, (2) active and collaborative learning, (3) student-faculty interaction, (4) enriching educational experience, and (5) supportive campus environment. In March 2006, the Office of the Provost distributed detailed NSSE results to the campus in the first issue of its publication M Know Blue. With this information, faculty and student affairs administrators examine what students gain and what organizational practices can be improved to enhance the undergraduate experience.

First Year Student Survey and College Senior Survey

The First Year Student Survey, which the University has a long history of administering, and the complementary College Senior Survey, which the University began administering in 2007 after more than a decade, are part of the Cooperative Institutional Research Program (CIRP), a national longitudinal study the American Council on Education began in 1966, which it now conducts jointly with the University of California, Los Angeles. Through the Division of Student Affairs, the University of Michigan participated in the first years of the First Year Student Survey (1966-1976), and resumed participation in 1993. Over the last fourteen years, the DSA has administered this survey to more than 60,000 entering University students. The items in this survey include students' self-reported reasons for attending college and the University in particular, as well as student hopes and expectations for their educational experience. The CIRP survey results create a snapshot of new undergraduate students that informs key faculty and staff members about University students and their needs.

The First Year Student Survey serves the University in two main ways. First, it provides us with a picture of our new undergraduate students, including:
- One year snapshots of entering student groups.
- Trend analyses of entering student experiences and attitudes over the years.
- Comparison of University of Michigan entering students to the nation and to public and private peer institutions, which tells us about the particular needs of our students and how they are alike and different.
- Education of faculty, staff, and administrators about our student population through presentations to various groups and units.
- Information provided to the colleges and schools about their newly admitted students.
- Projection of future trends, needs, and traits of undergraduate (and graduate) students.

In addition, many programs, units, and staff actively seek out this information to plan in a responsive manner. Some examples are below:
- The Career Center uses this information with other information about student destinations after graduation to learn more about the outcomes of their work.
- The Ginsberg Center for Community Service and Learning adjusts offerings by understanding how many entering students have been previously involved in community service and learning experiences.
- The International Center uses data about student study abroad experiences before college to inform their work with undergraduate study abroad programs.
- The Office of Multi-Ethnic Student Affairs uses data about targeted populations to inform their planning and programming for particular student needs.
- University Housing and the University Health Service uses information about student smoking and alcohol use before college to target health education programs and living arrangements.
- Several areas with questions about first generation student needs and traits have been able to move forward with more targeted programs to provide a better university experience for these students (which translates into gains for all students).

For more information, see the website of the Office of Student Affairs Research in the Division of Student Affairs.

Graduating Senior and Alumni Surveys

In 2008 the University of Michigan joined other institutions in the Association of American Universities Data Exchange (AAUDE) in administering a survey of graduating seniors. AAUDE, of which the University of Michigan is an active member, is a public service organization consisting of members of the Association of American Universities (AAU) whose aim is to improve the quality and usability of information about higher education. AAUDE institutions exchange data and information that inform their decision-making, and issue data and reports on both public and confidential topics. The organization also meets at least once annually to discuss new developments and continuing priorities.

In the spring of 2008, the Office of Budget and Planning administered the Graduating Senior Survey to University students who were about to receive their baccalaureate degrees. In spring 2009 this was followed by a survey of alumni cohorts. These surveys included a core set of questions that participating AAUDE institutions agreed to (allowing for cross-institution comparisons) and additional items directly related to the University's review for reaccreditation, with a focus on internationalization, involvement in research and creative works, and service and engagement.

Graduating Senior Survey

Below are two charts that show the responses of our students to questions about how well the University prepared them in select skill areas and how well the University prepared them to meet a select set of personal and professional situations. The full report, the Michigan Experience I: Perspectives from the Class of 2008, is posted. The results are a good example of the type of information that helps units at the University to assess their academic programs and the services and other opportunities they provide to our students. Parallels can be seen with a number of the goals for student learning discussed above.

When asked to evaluate how well the University prepared them for specific skills, seniors gave their highest scores to thinking logically and analytically, acquiring new skills and knowledge on their own, using the knowledge gained from their major field, and ability to judge the value of information (see below).

How well did U-M prepare you to: (n=1535)
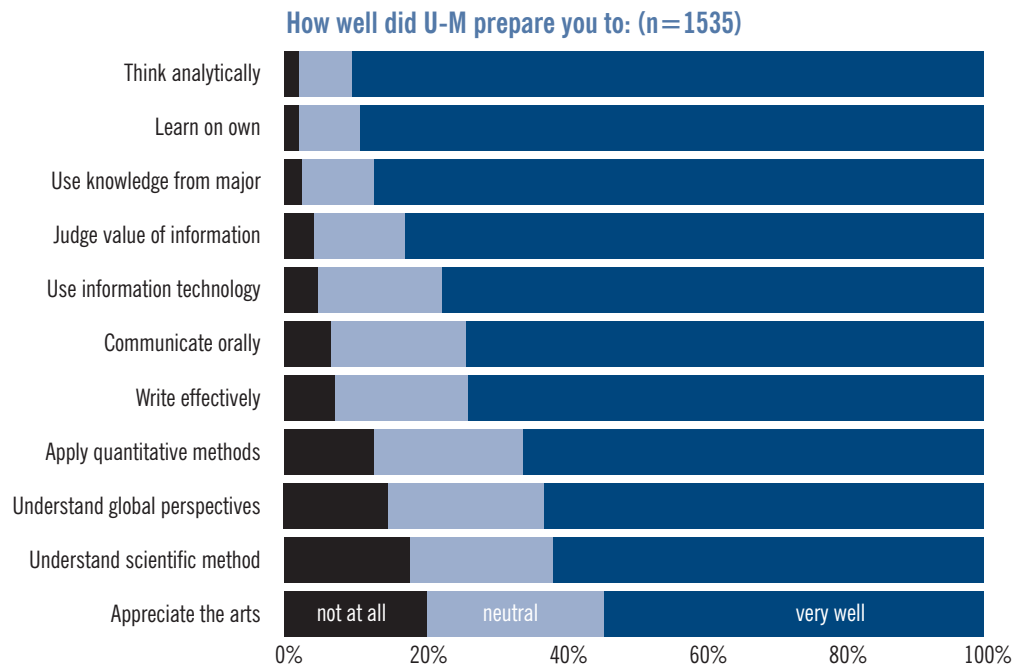
Similarly, when asked how well they were prepared for personal and professional situations, seniors gave high marks to feeling prepared for teamwork, getting along with people from diverse backgrounds, and decision making (see below).

How well did U-M prepare you for situations that require you to: (n=1524)
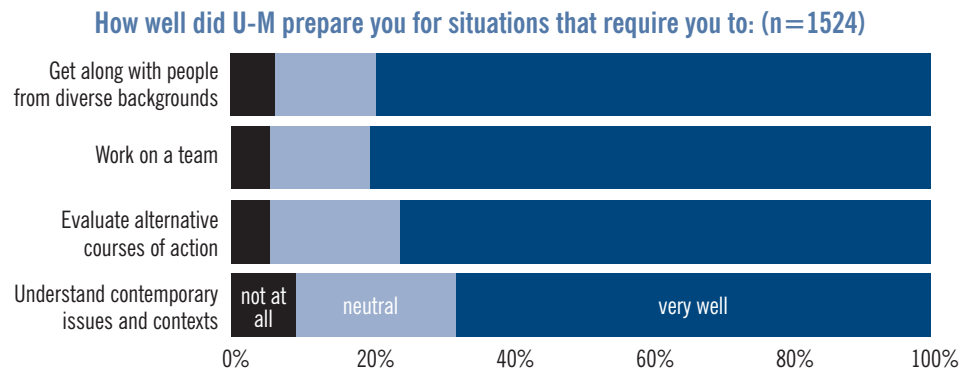
Alumni Survey

The responses of alumni to the questions above are very similar to those of 2008 graduating seniors; the full report, the Michigan Experience II: Perspectives from Recent Alumni Cohorts, is posted. When students were asked about how well the University experience prepared them for their careers, the responses from two cohorts were overwhelmingly positive (figure below).

How well did University prepare for career: (n=2379)

Very/generally well	3–5 years out — 85%
	9–11 years out — 86%
Neutral	11%
	10%
Inadequate/very inadequate	3%
	3%
Not relevant	2%
	1%
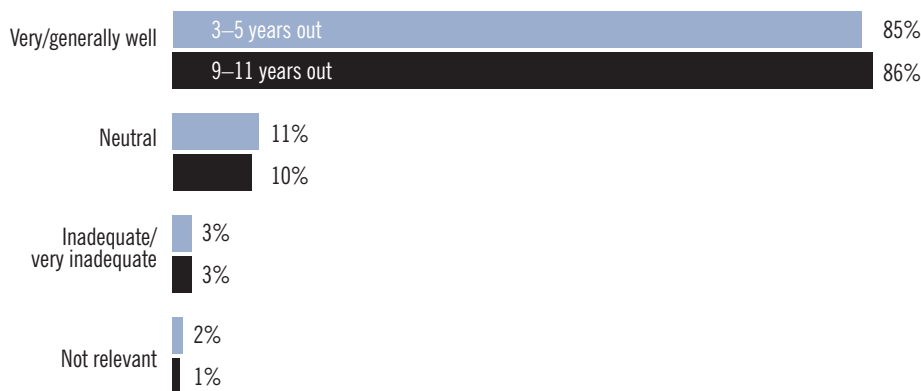
The Collegiate Learning Assessment

In 2008 the Association of American Colleges and Universities (AAC&U) invited the University of Michigan to participate in a national project on assessing student learning outcomes, a substantial joint venture by the Association of American Colleges and Universities (AAC&U), the American Association of State Colleges and Universities (AASCU), and the National Association of State Universities and Land Grant Colleges (NASULGC; now called the Association of Public and Land-grant Universities). This project is supported in part by the U.S. Department of Education's Fund for the Improvement of Postsecondary Education (FIPSE). The goals of the project are to build campus leadership and capacity to assess student learning outcomes and put the results to use.

As part of its participation in this project, during the 2007-08 calendar year the University administered a pilot of the Collegiate Learning Assessment (CLA), a standardized test intended to measure higher order skills such as critical thinking, analytic reasoning, problem solving, and written communication. The CLA was administered to 200 first term, first-year undergraduates and 200 undergraduate seniors in LSA. Among first year students who took the CLA test at 176 institutions, the group of LSA first year students scored in the 99th percentile (CLA score 1302). The LSA seniors scored in the 97th percentile (CLA score 1322). These results indicate that students who are admitted to the University of Michigan have already acquired the skills the CLA tests for. With entering first year students scoring so high, the CLA is not likely to be an effective instrument for the University of Michigan to assess the effect of our learning environment on its students. Rather, we favor the distributed and diverse campus approach currently in place.

Campus-wide Course Evaluations

Another important University-wide assessment effort is the University's campus-wide course evaluations, which the Office of Evaluations and Examinations (E&E) conducts through its Teaching Questionnaires (TQ). In 2008-09 the system moved from a paper-based format to online. Each academic unit must include four University-wide questions in its questionnaire, including the four items below that the instrument asks students to respond to on a five-point scale of agreement-disagreement. These questions are:

  1. *Overall, this was an excellent course.*
  2. *Overall, the instructor was an excellent teacher.*
  3. *I learned a great deal in this course.*
  4. *I had a strong desire to take this course.*

Of these four common questions, the faculty and academic administrators typically use responses to the first two questions about quality of the course and the instructor in three key ways: to consider ways to improve the curriculum, in faculty dossiers for tenure and promotion, and as a source of information to consider when setting annual merit increases.

A campus-wide compilation of these results shows a high degree of satisfaction with courses and instructors among our students. Here we focus on the student learning experience (TQ Q3), which shows high and steady marks from 2000 to 2008, especially at the upper undergraduate level and graduate level.

"I learned a great deal in this course." (TQ Q3)
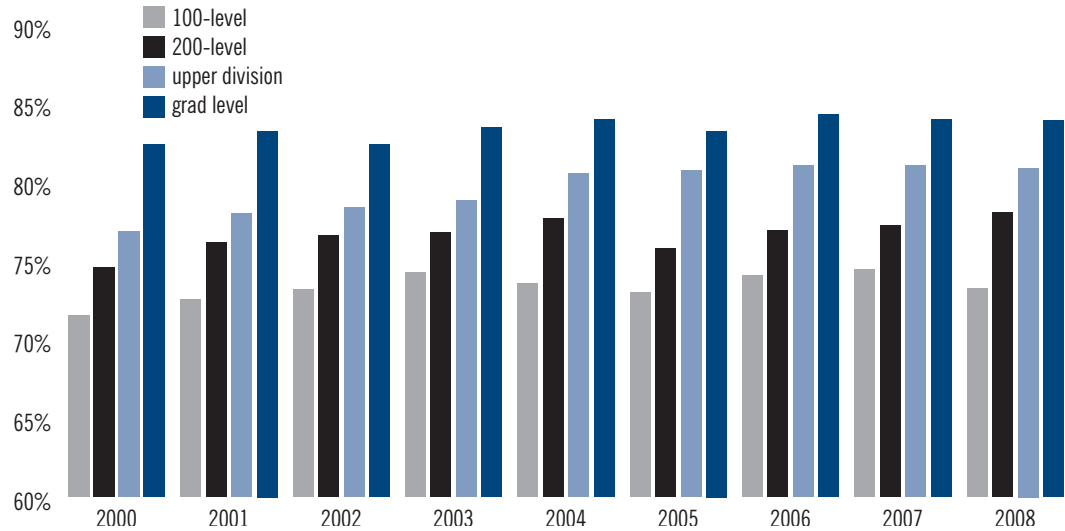
In addition to campus-wide evaluation, staff members at E&E help individual instructors, departments, and the schools and colleges to design custom questionnaires. Each academic unit may add up to 26 agreement-disagreement questions and up to five open-ended questions on each TQ. Faculty members design questionnaires online, individually or in groups, depending on the procedures individual departments follow. Some departments generate questionnaires based on a pre-defined set of core questions for all their courses. Other departments allow faculty members to design their own questionnaires for each individual course.

To further assist academic units and individual faculty members, E&E offers a catalog of hundreds of questions about teaching improvement from which academic units can select. These questions cover the topics of student development (knowledge, interests and values, participation, social awareness, self concept, and vocational skills and attitudes) instructor effectiveness (skill, climate, interaction, feedback, organization, and difficulty), assignments (written, reading, laboratory, and other), textbook, audiovisual material, instructional computing, and exams. In addition, E&E offers fifteen open-ended questions from which academic units can choose. Here, too, the topics of these items reflect back to the learning goals discussed above, with the academic units able to customize their questionnaires. The full set of optional questions is available on E&E's website.

Academic units may also choose whether to include on their questionnaires a set of eight questions that the Michigan Student Assembly, the central student government at the University, uses to compile Advice Online, an evaluation guide for students. In the fall of 2008, the TQ program became a paperless operation allowing students to fill out electronic forms online. Systematic results from this change in procedure are not yet available.

ePortfolios at the University of Michigan (MPortfolio)

There are two main types of ePortfolios (electronic portfolios): professional or career portfolios, and portfolios that focus on students' integrative learning. Professional portfolios consist of "artifacts" that showcase a person's knowledge, skills, and abilities to others, increasingly using multimedia. Such artifacts can include papers, thesis, lesson plans, personal statements, evaluations, letters of recommendation, written reflections, designs, and musical compositions and resumes, as well as photographs, videos, and audio recordings. In ePortfolios whose purpose is integrative learning, students reflect on their learning, identify evidence of their learning, connect their personal and professional values and goals to their formal and informal learning experiences, apply knowledge and skills across different contexts, and demonstrate their ability and achievements. The University is piloting ePortfolios (called MPortfolio) and recently developed a website that includes examples produced by undergraduates from a range of educational levels, backgrounds, and disciplines.

ePortfolios can be used by academic programs, by units that provide co-curricular learning experiences, and in a wide variety of settings. Several units at the University that have piloted ePortfolio efforts include the School of Social Work, University Housing, the Ginsberg Center for Community Service Learning, the Office of Student Activities and Leadership, the Spectrum Center (with a focus on LGBT students, faculty, and staff), the Career Center, and the Program on Intergroup Relations. All of these units and programs have decided to continue beyond the

pilot phase. In addition, many individual students create ePortfolios using Sitemaker, a University-supported software environment that lets non-technical people create customized websites and web-databases.

4.2.5
Individual Faculty Member Learning Assessment

As mentioned above, some units allow individual faculty members to tailor the Teaching Questionnaire to their individual courses, providing them with an opportunity to assess their students' learning. In addition, faculty members from units across campus investigate aspects of student learning, in some cases with the support of grants from the University's Center for Research on Learning and Teaching (CRLT), as described below. In a later section that focuses on IT and learning, several other faculty-based examples are described.

Investigating Student Learning Grants

Since its inception in 2008, 20 faculty members have received Investigating Student Learning Grants to investigate aspects of student learning in their courses or programs. The competition is open to all tenured and tenure-track faculty, clinical instructional faculty, and lecturers who have continuing appointments and course development responsibilities. Grants may be made to individual faculty members or to teams of faculty members and up to two graduate students to undertake a joint project.

The grant's main objective is to support faculty members who want to explore if and how their pedagogical strategies are working, or to do research related to new innovations in teaching. To be approved, projects must be inquiry based, use methods appropriate to the discipline, and the results must be made public to inform the work of their colleagues and the discipline more broadly.

A few sample project titles are provided below to give a sense of the topics that faculty grant recipients have decided to focus their efforts on:
- The Art and Science of Story-Telling in the Engineering Classroom.
- Do Student Presentations Enhance Student Learning in Pathology Labs?
- Fostering Critical Engagement and Cross-Cultural Comparison.
- Beyond Clickers - A Web-Based System for Lecturing.
- Structuring Evaluation to Improve Mathematical Writing, Reading, and Problem Solving.
- Pedagogical Implications of Individual Interview Assignments through International Teleconference Using Skype.

Faculty Teaching Innovations (Faculty Development Fund Grant)

In the fall of 2008, twelve faculty members (eight individual faculty members and two two-person teams) received funds through the Faculty Development Fund Grant for innovations to enhance the quality of student learning. Administered by CRLT, this competition is open to all tenured and tenure-track faculty, clinical instructional faculty, and lecturers who have continuing appointments and course development responsibilities. When choosing between projects of equal merit, priority is given to proposals submitted by applicants who have not previously received funds and to proposals that incorporate multicultural perspectives and that use active learning strategies.

4.2.6
Sharing Ideas and Practices for Assessment

Although individual faculty members across campus are engaging in the study of learning assessment in their courses and in innovative approaches to teaching, as with so many other types of activities at the University providing venues for faculty members to share these ideas and approaches with their colleagues can be a challenge. Below, however, are examples of such information-sharing efforts.

Teaching Grants Information Sharing

As mentioned above, as part of its grant programs to support research on and innovation in teaching, CRLT asks faculty members to provide summaries of their findings, which are posted to CRLT's website.

Examples of Faculty Members Using Technology in Teaching

The University provides descriptions online of how more than 50 University faculty members from a wide cross-section of disciplines use technology in their teaching. The projects are grouped into several categories: experiential and collaborative learning; using multimedia in classroom teaching; using the web for students to publish their work, using web-based training, tutorials, and simulations to engage students; using technology tools and strategies to promote active learning; and using inline tools to engage students with course content and to help them interact with others.

Research and Assessment of Teaching and Learning Posters

In September 2008, the Medical School, School of Education, and CRLT co-hosted a "walking dinner" in which faculty and research groups presented posters summarizing 62 separate research and assessment efforts related to teaching and learning. Also in fall 2008, the College of Engineering and the Center for Research on Learning and Teaching-North hosted a lunch event that featured 19 posters summarizing research on teaching and learning currently underway in the College of Engineering.

Provost's Seminar on Teaching

Since the mid-1990s the provost has been hosting a seminar on teaching that covers a broad range of topics (see topics list on website, described in further detail below in the section on support for teaching). For example, in October 2008 the Provost's Seminar on Teaching featured three concurrent sessions on effective teaching approaches for the millennial generation. In September 2009 the Provost's Seminar focused on assessment, including an address from the provost on the need for faculty members to examine what students learn, a keynote address from Carol Schneider, President of AAC&U, and panels of University faculty members sharing their approaches to assessment in various settings.

LSA Assessment Symposium

The College of LSA sponsored a symposium bringing together faculty leaders in the college (chairs, associate chairs, and key staff) to exchange ideas about ways to further a culture of assessment. In addition to remarks from the dean, faculty members presented approaches to assessment across a wide range of disciplines. A second symposium in 2009 examined assessment activities currently underway at the department and college levels, and considered ways to further embed assessment of student learning into the college culture.

Enriching Scholarship Series

Taking place usually during one week in early May, the Enriching Scholarship Series, part of the Teaching and Technology Collaborative, offers pedagogical and hands-on, skill-building sessions for faculty members and other University instructors. This series offers sessions that explore ways to effectively integrate information and technology with teaching, learning, and research. One of sessions during the May 2009 Enriching Scholarship Series included posters or presentations by three 2-person faculty teams and two individual faculty members who are the inaugural 2009 Teaching Innovation Prize Winners. This prize will be described more fully below in the section on teaching awards.

The examples described above reflect a high degree of distributed activity and reveal a considerably amount of information sharing about teaching and learning across the schools and colleges, especially for such a diverse and widespread campus.

4.3
SUPPORT FOR TEACHING

> *Core Component 3b: The organization values and supports effective teaching.*

In this section, we will provide information and examples of the ways in which the University supports and rewards teaching. A key aspect of teaching support is to provide opportunities for faculty members to explore new teaching approaches or to enhance their teaching in general —whether they are first-year assistant professors or senior faculty members. Some key examples of such support are described below.

4.3.1
University-wide Support

The Center for Research on Learning and Teaching (CRLT), which has been mentioned in numerous places in earlier sections of this report, was founded in 1962 and was the first such teaching center in the country. Centrally-supported, CRLT partners with University faculty members, graduate students, and administrators to promote a University culture that values and rewards teaching, respects and supports individual differences among learners, and encourages the creation of learning environments in which diverse students can learn and excel.

CRLT offers a full range of services for faculty members at all levels during their entire academic careers, for graduate student instructors, and for the academic units. The staff at CRLT offers a wide range of services to the University community, including orientations for new faculty members and graduate student instructors, fall

and winter seminar series, teaching and learning grant programs for the faculty (some of which were described earlier), discipline-specific programs, presentations and workshops, interactive theatre presentations, research and evaluation services, and a variety of publications on teaching and learning. CRLT's Annual Report describes the full range of their services in detail.

To provide a snapshot of its activity, in 2007-08 CRLT staff provided 15,964 services to University and external clients, including 3,787 unique individuals from the nineteen schools and colleges, and to central administration. During this time, CRLT distributed more than $300,000 in grant money to 96 University faculty members through eight grant competitions. A few of CRLT's services are highlighted below.

Seminars for Faculty Members

CRLT's seminars provide a forum for faculty members to explore topics in teaching with colleagues from across campus. Each term, CRLT offers seminars on a variety of topics. All seminars are interactive, solidly grounded in the research on teaching and learning, and designed to offer practical suggestions that faculty members can incorporate into their classrooms. In winter term 2009, seminar topics fell into three categories: Spotlight on Thurnau Professors (holders of the University's most prestigious teaching honor, described in the section below on faculty awards), Best Practices, and Evaluation and Assessment.

Provost's Seminars on Teaching

Begun in 1994, the Provost's Seminars on Teaching, which the Office of the Provost offers in partnership with CRLT, provide an opportunity for academic administrators and individual faculty members across campus to engage in lively and substantive dialogue about a wide range of teaching and learning issues. The invitation list for each seminar includes faculty members at all ranks from all the schools and colleges, including faculty members who have special interest or expertise in the seminar topic. Many of the approximately 100 faculty members invited to each seminar are campus leaders in curricular and instructional innovation. The provost selects a topic for each seminar, bringing together an interdisciplinary group of faculty members and academic administrators to discuss an issue of particular importance to the campus. A history of seminar themes is available online.

CRLT Players Theatre Program

Through performances, workshops, seminars, and individual consultations, the CRLT Players Theatre Program provides educators and administrators with an original and dynamic approach to dialogue, promoting inclusivity, and effecting positive change inside and outside the classroom. This program develops and performs sketches that engage faculty members, graduate students, and staff in discussions of multicultural teaching and learning, and institutional climate. Sketches are based on research concerning the experiences of under represented students and faculty, such as women faculty members and students in science and engineering, students of color, and students with disabilities.

The CRLT Players perform regularly at campus-wide orientations and seminars, as well as discipline-specific workshops. In addition, the CRLT Players have become a national resource, performing at campuses and conferences around the country. In 2006, the Program won the 2006 TIAA-CREF Theodore M. Hesburgh Certificate of Excellence.

Public Goods Council

The thirteen members of the University's Public Goods Council (PGC), which was created in 1998, includes academic units dedicated to the advancement of scholarship and culture that are not affiliated with a school or college. Collectively the members of the Public Goods Council encompass a rich body of public cultural resources, or "Goods," including art, music, book and plant collections, historical archives, scholarly resources, performance programs, coursework, and experiential learning.

PGC members continually collaborate on ways to extend the University's reach into the community through teaching, partnering, and resource sharing. At the same time, the council strives to engage members of the community through innovative programs that encourage public participation or attendance. By promoting partnerships with community residents and groups, the PGC helps faculty members to share their knowledge and resources with a broader spectrum of learners.

Through its Grants for Teaching, the PGC provides funds to encourage faculty members to make greater use of the council's resources in teaching undergraduates. The PGC invites proposals for projects that draw on public culture and cultural institutions to engage undergraduates and help shape their education. Priority is given to proposals that aim to empower students to engage actively with primary historical resources and public culture, to integrate the project into course content, to identify ways to document the project, and to identify student learning.

4.3.2
School and College Support

The schools and colleges support faculty members in their teaching in numerous ways. Some of this support takes place informally through mentoring, by discussing teaching at faculty meetings, by taking advantage of the resources described above, and by nominating faculty members for teaching awards. Some of the larger schools and colleges have more formal structures in place to support faculty members in their teaching endeavors, three of which are illustrated below.

LSA Teaching Academy

The Teaching Academy of LSA helps junior faculty members make the transition to being faculty members who carry a broad spectrum of teaching responsibilities for both undergraduate and graduate students. Faculty members who participate in the Teaching Academy benefit from working with an interdisciplinary group of peers while preparing for their first teaching assignments. The Teaching Academy includes several sessions held throughout the year.

CRLT-North

The Center for Research on Learning and Teaching North (CRLT-North) is a partnership between the College of Engineering and the campus-wide CRLT office. Established in 2004, CRLT-North, which is located on the University's North Campus, is staffed by experienced engineering educators who collaborate closely with College of Engineering faculty members and administrators. Engineering services provided by CRLT-North and the main CRLT office include those below.

- College-wide programs to promote a culture of teaching and learning in engineering.
- A comprehensive range of services (including orientation programs, classroom interventions, and consultations) for engineering faculty members and GSIs at all levels of their careers.
- National leadership to enhance the visibility of the University in engineering education.
- Research in engineering education to explore issues related to teaching and learning in engineering.

Department of Medical Education

The Department of Medical Education is the Medical School's primary resource for expertise in educational research, faculty development, instructional design, and educational assessment and evaluation. This resource is available to support all segments of the Medical School's education mission. Faculty members in this department have expertise in a wide range of areas and apply this expertise to educational issues for practicing physicians, medical school faculty, students and residents, allied health professionals, and patients.

The department's scope of educational activities extends from the first day of Medical School through continuing education for experienced medical professionals. Department faculty members provide expertise in such areas as curriculum development and reform, educational goals and outcomes, instructional methods, innovative educational technologies, and outcomes assessment.

4.3.3
Teaching Awards

One of the ways the University of Michigan demonstrates that it places a high value on good teaching is through its teaching awards, which both central administration and the schools and colleges bestow on the faculty. There are many centralized teaching awards, but two of the most notable include the Thurnau Professorships and Golden Apple Award, described below.

Arthur F. Thurnau Professorship

The Arthur F. Thurnau Professorships, named after a student at the University of Michigan from 1902 to 1904, are supported by the Thurnau Charitable Trust that was established through his will. With these prestigious professorships, the Office of the Provost recognizes and rewards faculty members for outstanding contributions to undergraduate education. Specifically, the program honors tenured faculty who, through their commitment to and investment in undergraduate teaching, have had a demonstrable impact on the intellectual development and lives of their students. Each year five or six tenured faculty members are designated as Thurnau Professors and hold this title for the remainder of their careers at the University. They also receive a one-time grant to support activities to enhance their teaching.

University Undergraduate Teaching Award

The University Undergraduate Teaching Award honors faculty members who have demonstrated outstanding ability in teaching undergraduate students in the early stages of their careers. Nominees must have an evident commitment to students, a record of innovation in teaching and learning, notable dedication to working effectively with the University's diverse student population, and a consistently positive effect on students' intellectual and artistic development. Any tenure track faculty member who has been in the professorial ranks for more than two years may be nominated. Each year up to two awards are given, each with a $1,000 stipend.

Golden Apple Award

In 1991 Students Honoring Outstanding University Teaching (SHOUT), a self-named group of students, created the Golden Apple Award to honor "University teachers who consistently teach each lecture as if it were their last, and strive not only to disseminate knowledge but to inspire and engage students in its pursuit." Each year, SHOUT invites University students to nominate the faculty members they believe to be most worthy of this award. When a winner has been identified, SHOUT representatives deliver the news to the winner while he or she is teaching. The recipient is invited to give his or her "Last Lecture," which is open to the University community and consistently draws a large audience. The recipient also receives a modest grant to support activities that will enhance his or her teaching.

Teaching Innovation Prize

In 2009 the University's Teaching Innovation Prize was established, sponsored by the Office of the Provost, the Center for Research on Teaching and Learning (CRLT), and the University Library. Program goals are to recognize faculty members who have developed innovative approaches to teaching that incorporate creative pedagogies, and to encourage the dissemination of best practices by sharing promising innovations with faculty more broadly. Details about the project are available on the Teaching Innovation Prize Winners website.

School and College Faculty Awards

In addition, many of schools and colleges administer their own teaching awards. Below are three examples.
- Each year the College of Engineering bestows its **Teaching Excellence Award** on three professors who have shown sustained excellence in the instruction and guidance they provide to undergraduate and graduate students. To be eligible for nomination, faculty members must demonstrate excellence in supervising graduate students or in developing new courses, teaching labs, teaching techniques, or software packages for self-teaching. Award recipients receive modest grants to support activities to enhance their teaching.
- Each year, the School of Public Health selects one faculty member to receive the **Excellence in Teaching Award**. Nominees must have shown notable achievement in teaching based on students' and faculty members' evaluations of the nominees, their courses, the content and appropriateness of their course syllabus, evidence of having taught a diversity of students, and evidence of having provided student support or mentoring.
- Complementing the **Excellence in Education awards** LSA gives to individual faculty members, the College each year also awards $25,000 to a department that has demonstrated a special commitment to undergraduate education.

4.3.4
Support for Graduate Student Instructors

At the University of Michigan, Graduate Student Instructors (GSIs) are important members of the University's community of educators. Working in partnership with faculty, GSIs contribute to the teaching enterprise by providing instruction in a variety of ways. They facilitate discussions in small sections connected to large lecture courses, run laboratory sections, hold office hours for one-to-one teaching, and, in some cases, teach small introductory classes. Because of the crucial roles GSIs have as educators, the University provides several services to support and support them, a few of which are described below.

CRLT Programs and Services

The Center for Research on Learning and Teaching (CRLT) offers programs and services to support GSIs in all stages of their teaching careers at the University. These services, which range from helping GSIs to prepare for their first teaching experiences to helping them enter the job market, include orientations, guidebooks, workshops, seminars, conferences, individual consultations, student feedback, information about employment opportunities, and other publications. For more information, see GSI Training Resources on CRLT's website

Graduate Student Instructors Guidebook

 Among several handbooks and guidebooks, CRLT publishes the GSI Guidebook. While not a comprehensive teacher-training manual, it offers information to guide GSIs along the path to becoming good teachers. The guidebook is available to GSIs, faculty, and departments free of charge.

Departmental Training for GSIs

Many departments provide information and skills to their GSIs that are tailored to their fields. In many departments, professors with teaching expertise or associate chairs for education develop and run these training sessions.

For example, the Department of English Language and Literature appoints a large number of GSIs. Since graduate students in the department do not teach in their first year (to give them time to adapt to their program of study), in the second year prospective GSIs take a required three-credit course in pedagogy. Concurrently, they lead discussion sections for large literature courses and are supervised by the professor teaching the course as they work with undergraduates in class and during office hours. This opportunity demonstrates to the GSIs how the theory and practice of teaching are intertwined.

During the spring before their third year, English graduate students participate in the faculty-led GSI Training Workshop, where they learn such skills as how to write syllabi, grade student papers, and lead class discussions. In the following term most English GSIs begin teaching an introductory composition course. Throughout their first term they meet with faculty members in small groups called Teaching Circles. A faculty member also observes them once they begin teaching. To supplement these experiences, the English department selects graduate student mentors who provide classroom visits and additional support, such as regular lunchtime programs on teaching. Together these experiences provide the skills English graduate students need to become excellent teachers.

4.4
LEARNING ENVIRONMENTS

Core Component 3c: The organization creates effective learning environments.

In this section, we will describe several of the ways in which the University creates rich learning environments for its students and faculty, with a focus on learning communities, technology enhanced learning, unique academic programs and offerings, and academic student services that enhance the learning environment.

4.4.1
Michigan Learning Communities

Many students choose the University precisely because of its size, a population of more than 40,000 students, and its breadth--on many dimensions. Many other students, however, prefer by nature or choice to study and learn in a more intimate setting. To meet this need, the University has developed thirteen learning academic communities (called Michigan Learning Communities or MLCs) that combine the personal attention of a small college environment with easy access to the unparalleled resources of a large research university. LSA, in collaboration with the Division of Student Affairs, administers the majority of these learning communities and provides faculty directors and instructors for the programs. Students in these communities, ten of which include the opportunity for students to live together in a residence hall setting, are each part of a friendly, supportive, and intellectually stimulating community that also gives them access to everything else the larger University has to offer. Students and faculty members, often from diverse backgrounds, choose to be part of these communities because of their common goals and intellectual interests. Those interests range from community service to cutting-edge research, and with regard to discipline from mathematics to communication arts. Descriptions of a sample of these communities are provided below.

Residential College

Founded in 1967 within LSA, the Residential College (RC) is a four-year interdisciplinary liberal arts program that is one of the longest running living-learning programs in the U.S. The RC's interdisciplinary curriculum engages students in creative exploration of the humanities, the social and natural sciences, intensive foreign language study, and the visual and performing arts. The college seeks to foster in its students a genuine appreciation and lifelong passion for learning--not just an individual quest for knowledge but preparing students to engage effectively and responsibly in the real world. By combining typical residence hall facilities (residence hall rooms,

lounges, dining halls, etc.) with the academic and artistic resources required for a liberal arts education (classrooms, creative arts studios, faculty offices, performance and exhibit spaces, and student support services) the RC is a small college fully integrated into a major public research university.

Women in Science and Engineering Residence Program

A joint program of LSA and the College of Engineering, the mission of the Women in Science and Engineering (WISE) Residence Program, is to recruit, support, and retain a diverse group of students in the science, mathematics, engineering, and technology fields; to link students with resources and opportunities that support their academic and personal pursuits; and to allow students with similar interests to develop relationships and build a diverse community based on mutual respect. Made up of approximately 100 first-year students, 50 returning students who serve as Peer Mentors and Program Board Members, and four upperclass students who are Resident Advisors, the WISE Residence Program provides students with an abundance of academic and social opportunities to expand their horizons and help them to transition successfully into the University environment.

Comprehensive Studies Program

The Comprehensive Studies Program (CSP) is a non-residential Michigan Learning Community within LSA whose mission is to support, academically enrich, and retain its students within and beyond the college. To achieve its mission, the program offers a variety of academic support services, including the Summer Bridge Program, academic year course instruction, academic advising and peer advising, tutoring, and freshmen interest groups. Through a comprehensive approach, CSP works to develop self-directed, successful students through course instruction, academic advising, mentoring, and other services. CSP collaborates with a wide variety of academic departments, offices, and programs throughout the University, including offices in the various schools and colleges, the Undergraduate Admissions Office, the Office of Financial Aid, and the Division of Student Affairs.

4.4.2
Distance Learning

Faculty and staff at the University use technology to expand the learning environment in several key ways, some of which we will describe below in the section on how the University uses information technology to enrich the education it provides to students. Therefore, in this section we will focus on distance or web-based learning, some of which requires students to spend time on campus.

Web-based learning is used in two ways: to increase the flexibility for regular students to enroll in courses and to provide professional and continuing education. More details can be found at the Distance Learning Programs at the University of Michigan website.

School of Nursing

The School of Nursing offers several Master's degree programs that include a great deal of web based learning. For example, in 2000 the school converted its graduate education program in Nurse-Midwifery (NMW), which was created ten year earlier, to a web-based format. The programs in Business and Health Systems and in Gerontological Nursing also include web-based learning. Among the school's graduate courses, more than 25 are web-based.

School of Public Health

The School of Public Health (SPH) offers several distance learning opportunities. The Executive Master's Program in Health Management and Policy is a non-residential program that combines 13 intensive four-day weekend class sessions in Ann Arbor with online instruction and interaction to facilitate the completion of readings, exercises, and projects during the periods between class sessions on campus. Students can complete the Master of Health Services Administration or the Master of Public Health degree in 24 months. The Clinical Research Design and Statistical Analysis Master of Science program in the Department of Biostatistics is also a non-residential program in which participants meet at the SPH for a four-day weekend once every four to five weeks, for thirty hours of class time. Between weekends on campus, participants complete course assignments and work on projects while remaining on their jobs. This Master of Science degree program lasts eighteen weekends spread over eighteen to twenty months. In addition to these degree granting programs, the School of Public Health also offers the 16-hour interdepartmental Certificate in the Foundations of Public Health, which includes coursework in each of the five major disciplines of public health for students wishing to earn graduate credit. Courses are taught by SPH faculty using distance learning technology, and certificate coursework may be transferable to an SPH degree program.

Michigan Interdisciplinary and Professional Engineering

Drawing on the expertise of College of Engineering faculty and affiliates, the college's Program in Interdisciplinary and Professional Engineering (InterPro) offers continuing education programs, including online engineering programs, that range from interdisciplinary graduate degrees to professional development short courses. Some of these programs have an online delivery option. For example, the Six Sigma Certification program offers classes through streaming video so that students can take classes whenever and wherever they choose. In addition, direct email communication with faculty members makes it easy for students to stay connected. More than 8,500 students have been certified through this program.

Executive Master's in Business Administration

The Executive MBA Program at the Stephen M. Ross School of Business uses a variety of distance learning technologies to connect students and faculty from around the world. The twenty-month curriculum combines the intensity of on-campus classes with the convenience of distance-learning at home. Between residencies, teams engage in interactive web-based learning and team collaboration. Laptop computers and handhelds keep participants connected to the program. Lectures are provided as video podcasts, providing excellent portability. Program and course websites inform students about schedules and deliverables, and an enterprise-level collaboration suite helps teams and individuals stay connected.

4.4.3
Distinctive Academic Programs and Opportunities

The University also enhances the learning environment for students through a variety of distinctive academic programs, three of which are highlighted below.

First-Year Seminar Program

The First-Year Seminar Program in LSA offers entering students the chance to enroll in small classes, many of which are taught by senior faculty members. The seminars expose first-year students to intellectually-challenging topics and the sense of intellectual and social community that often develops in small classes. They also help students make the transition from high school to a large research university, and let them explore subjects of particular interest with a faculty member. All seminars remain closed until first-year students begin to preregister either during summer orientation for fall terms or the early registration period for winter terms.

The Honors Program

The four-year Honors Program in LSA provides a rich and challenging set of academic offerings to talented and highly motivated students. Honors Program students enroll in special courses, engage in early research with faculty members, and are part of a vigorous intellectual community that includes Honors faculty fellows. Through these activities and others, the Honors Program lets students identify and deeply pursue their intellectual interests. The Program's curriculum offers a wide range of challenging courses in almost every department and in Honors Program concentrations in every field of the college. Students may enroll in special seminars and courses, and work directly with faculty members right from the start of their University experience. Students must elect half their course work in Honors; many enroll in even more. Many students also participate in research during their first two years, and almost all Honors seniors pursue their own independent research projects under the guidance of a faculty mentor, leading to an Honors Program senior thesis.

Service-Learning Courses

The University offers dozens of service-learning courses enabling students to provide direct service to local schools, non-profit organizations, and government agencies. In almost every department at the University, students can enroll in service-learning courses or earn independent study credit with the support of a faculty sponsor. Academic units that offer a cluster of service-learning courses include, in LSA, the Program in American Culture, Department of English Language and Literature, Department of Psychology, Residential College, and the Women's Studies Department, as well as in the School of Art & Design. In addition, there are two large service-learning courses, Project Community and Project Outreach, for which trained undergraduate students facilitate weekly seminars and serve as liaisons for service sites. Plus, a social justice course fair takes place each semester, where different programs recruit students for the upcoming semester.

More information about service and engagement opportunities for our students will be covered in Chapter Six of the report.

4.4.4
Academic Services for Learning

Another important aspect of creating effective learning environments is to provide services to students that enhance their ability to take advantage of the University's wealth of academic resources. These services fall on a continuum that begin with orientation and lead to a range of career services. Below is a description of key points along that continuum of services and support.

- **New Student Orientation** programs for undergraduate and graduate students help new students to make a smooth transition into the University. This is a crucial first point in the continuum of basic academic services that students receive from their academic units, three of which will be described briefly below: orientation, academic advising, and career services.

- The University requires all admitted undergraduate students to attend a three-day **Summer Orientation Program**, which is offered throughout the summer by the Office of New Student Programs. During the program students take any necessary placement tests, receive group and individual academic advising, and register for courses. On the first day, students receive an introduction to orientation, learn about money management, take placement exams, and become familiar with the campus through a walking tour and theater presentation. The second day consists of programs on academic success strategies and skills, as well as academic advising and course registration information. On the third day, each student meets with an academic advisor from the school or college to which he or she has been admitted and then registers for classes.

- The **Graduate School Student Fall Welcome and Information Fair**, to which all newly admitted students to the Rackham Graduate School are invited, includes a keynote address, an information fair, and a welcome picnic.

- **Schools, colleges, and departments** typically offer orientation programs tailored to the needs of their incoming students.

Academic Advising

Ongoing academic advising is a critical aspect of the support the University provides to our students as they progress through their academic programs. Over the course of their undergraduate careers, students will have contact with general academic advisors, concentration advisors, pre-professional study advisors, and peer advisors. Through a variety of academic programs, individual advising appointments, and workshops, these advisors provide support to students as they navigate the range of resources and variety of programs available to them. Typical advising conversations will address academic aspirations, curricular planning and progress to degree, internship opportunities, study abroad, and career exploration.

Declaring an academic concentration or major is a pivotal decision point for undergraduate students in their education at the University. Undergraduate students usually declare a concentration by the end of their sophomore year or very early in their junior year. Since the great majority of first-year students at the University are admitted to LSA or the College of Engineering, descriptions of the academic advising services in these units are offered as examples below. In the other schools and colleges, academic advising is provided by faculty and administrative staff in the department or academic unit, with a variety of structures in place, some more formal than others, for providing students with ongoing advising.

- The **Newnan Academic Advising Center** of LSA serves undergraduates by helping them to make informed decisions about their educational goals and the curriculum, and by encouraging them to formulate academic programs appropriate to their individual interests and abilities. The center also provides them an opportunity to understand the purposes of a liberal arts and science education, challenging students to see connections among curricular and co-curricular experiences, their values, and professional directions. Characteristically, general advisors guide students from orientation to graduation, offering the necessary guidance to ensure a coherent program of study for each student. They provide students with a variety of resources to help them select a concentration, including a written guide with various techniques for making this important decision. Each department in the college appoints one or more concentration and academic minor advisors, usually faculty members and professional staff members who help students to shape and focus their academic goals. They discuss with students how best to progress in a concentration program (or minor) and provide official confirmation to the LSA auditors when a student has completed the academic requirements. Concentration advisors also provide guidance on post graduate options, and, in conjunction with general advisors, assist students as they prepare for admission to graduate and professional schools. They also discuss the ways in which the skills that students have acquired in their studies provide them with a foundation for the professional world.

- The **Engineering Advising Center** at the College of Engineering provides a similar array of advising services to engineering students, who, when admitted to the college as first-year students, must declare a major at the end of the first year. The center fosters success by assisting students in the development of their academic plans and career goals, as well as their personal decision making.

Capstone Experiences

Since many undergraduate students seek a capstone experience or must complete such an experience as part of their program requirements, the concept of a capstone experience is well worth including in this description of marker points along the continuum of a University education. Some departments have specific structures in place for an undergraduate senior capstone experience, which can be a designated course, a thesis, a research experience, or another type of faculty-supervised activity. In addition to the Honors Program thesis, which was mentioned above, two more examples are given below.

- The capstone course of the **Women's Studies Department** in LSA is offered in a seminar format. The goals of the course are to provide students with an opportunity to create a summary and synthesis of the field, to build community among the students enrolled in the seminar, and to help students make the transition to the next phase of life after they graduate.
- The **Program in the Environment**, offered jointly by LSA and the School of Natural Resources and Environment (SNRE), offers the Senior Capstone Course to give interested students an overarching experience in their studies in which students either focus material from their courses on a very specific environmental issue or draw from multiple disciplines to examine the environment. Capstone courses change each semester.

Career Services

The last category of academic services we describe in this section is connected to the final phase of a University undergraduate education: students' plans for their lives after graduation. As with so many other types of services, the University provides career related services to its students in both centralized and decentralized ways.

Centralized career services

The descriptions below reflect only two examples of centralized career services.

- The University of Michigan's **Career Center** prepares students and alumni to develop and implement their career decisions as a step to becoming active, life-long learners. Guided by theory and reflective practice, Career Center staff members work with students to facilitate their overall development and to provide resources to help them explore and pursue their career and educational goals in a complex, diverse, and interconnected world. The Career Center also forges appropriate partnerships with the University community, as well as with employers and educational institutions outside the University. Career Center services include programs and special events, counseling, drop-in advising, information fairs, a library, e-mail groups, a reference letter service, and alumni profiles (by field) that provide a glimpse into how recent alums got where they are and what their work lives are like. In addition, the Career Center Connector links to employers who are seeking to hire University of Michigan-Ann Arbor students for internships and permanent positions--with access limited to full-time, degree-seeking students at the University, new graduates, and alumni. This service includes job and internship postings, on-campus interviewing opportunities, employer presentations, and job fair and graduate school fair information.
- The Center for the Education of Women's (CEW) interest in the work lives of women dates to its founding in 1964. Over the years, as women's lives, work participation, and career paths have changed, **CEW Career Services** has assisted thousands of women and men as they navigate the processes of making a career choice, job searching, and managing their careers. Through its counseling program, workshops, and other events, and its library and information services, CEW works with career changers, re-entry workers, and those making other career- and job-related decisions.

Unit career services

All of the schools and colleges at the University of Michigan provide career services to their students and alumni, including those on the hotlinked list below:

- Ross School of Business.
- College of Engineering Career Resource Center.
- School of Information.
- Law School.
- Medical School.
- School of Natural Resources and Environment.
- School of Nursing.
- School of Public Health.
- Ford School of Public Policy.
- School of Social Work.

4.5
LEARNING RESOURCES

Core Component 3d: The organization's learning resources support student learning and effective teaching.

In the sections above, we have focused on the ways in which the University supports and rewards teaching, and the ways in which the University creates rich learning environments for its students and faculty through its learning communities, technology enhanced learning, unique academic programs and offerings, and academic student services that enhance the learning environment. In the final section of this chapter, we will focus on the University's learning resources, including its learning centers, facilities, information technology resources, and many academic units outside the schools and colleges, all of which are crucial elements that allow faculty members and students to teach and to learn effectively.

4.5.1
Academic Resource and Learning Centers

With an eye toward meeting the various academic needs of students, in addition to the services described above, the University provides services to support students in their research, their writing, and their overall ability to succeed academically. Some of these services are University-wide, some are school- or college-based, and some are geared to meeting the needs of specific groups of students. A few of these academic resources and learning centers are described below.

Sweetland Writing Center

Established in 1978, the Sweetland Writing Center (originally called the English Composition Board) in LSA provides writing services for students and faculty members. These services include a writing workshop and a variety of resources on composition, writing, tutoring, and teaching writing. The center also administers LSA's First-Year and Upper-Level Writing Requirements. For undergraduates, Sweetland faculty and staff members help students select writing courses, teach courses that prepare students for courses that satisfy LSA's First-Year Writing Requirement, and train upper-level undergraduates to become peer tutors who help fellow undergraduates. For graduate students and faculty members, Sweetland faculty and staff members provide seminars on composition theory and writing pedagogy, train and consult with the instructors of First-Year and Upper-Level Writing Requirement courses, and direct a Dissertation Writing Institute for graduate students. The center also conducts research to improve the understanding of writing and tutoring, and interacts with high schools and the community to foster the exchange of knowledge and experience.

Research Consultation Program

The Research Consultation Program at the University Library is a walk-in service that helps undergraduate students with their particular research needs, including how to get started and referrals to the most appropriate sources among hundreds of internet- and print-based library databases and resources.

Center for Statistical Consultation and Research

In addition to the general research support provided by the University Library, higher level statistical services are available through the Center for Statistical Consultation and Research (CSCAR). The center offers statistical services to graduate students (as well as to faculty and staff members) for up to one hour per week at no charge. The center also provides free and remote consulting services on research grants and proposals, database design and management, statistical methodology, and software; it also helps with interpreting the results of statistical methods, presenting the results of statistical analyses, and modeling spatial data.

Engineering Learning Resource Center

The Engineering Learning Center (ELC) at the College of Engineering provides academic support for engineering students. The ELC offers a 24-hour study area and a variety of academic support services, including free peer tutoring, supplemental instruction for select first- and second-year courses, workshops on academic skills such as time management and study skills, and practice exam sessions. Students can also consult individually with center staff members.

Science Learning Center

Through the Science Learning Center's (SLC) Study Group Program in LSA, students enrolled in introductory science may sign up to meet weekly with study groups (facilitated by trained peer leaders) to review course material, solve problems, and gain an understanding of course concepts. Plus, graduate student instructors who are affiliated with several introductory science courses hold weekly office hours to provide one-on-one assistance.

The SLC also sponsors or co-sponsors a variety of free workshops and events for students on such topics as study skills, career options, and study abroad programs. At the SLC's two centers, students have access to computer labs, meeting alcoves, study space, and a loan desk for reserve and study materials.

Stephen M. Ross Academic Center

The Stephen M. Ross Academic Center is an important commitment that builds upon the classroom achievements of our student-athletes. [Our donors] have provided them with the space to study, to collaborate, and to excel — and any student will tell you just how important that is to succeeding in the classroom.
President Mary Sue Coleman, 11/18/2005

A place that supports the academic success of University of Michigan athletes, the Stephen M. Ross Academic Center of the Department of Athletics provides tutoring and a range of academic services. The building houses a classroom that seats 100 students; large, medium, and small-sized meeting rooms where students meet with professional staff; a career development area; a computer lab with 75 work stations; staff offices for nine academic professionals; and a student lounge.

Multi-Ethnic Student Affairs and the Trotter Multicultural Center

In alignment with the mission of the Division of Student Affairs, the Office of Multi-Ethnic Student Affairs (MESA) and the William Monroe Trotter Multicultural Center are committed to the goals of student learning, diversity, community, life skills and wellness. MESA and Trotter programs and services, which include talks, workshops, cultural events, performances, lunch series, and a calendar of events, help students to develop skills such as cross-cultural competency and personal empowerment.

4.5.2
Learning Facilities
Classrooms

Based on the 2008 report from the Office of Space Use Analysis, the University dedicates more than 557,000 square feet (~52,000 m^2) of space to classrooms, more than 517,000 square feet (>48,000 m^2) to instructional laboratory space and more than 936,000 square feet (>87,000 m^2) to study facilities, for a total of more than 2,000,000 square feet (~190,000 m^2) dedicated to space for student learning.

Earlier, we described some of the facilities that contribute to the University's learning environment, including the James and Anne Duderstadt Center on the University's North Campus, the new Ross School of Business building, and the North Quad Academic and Resident Complex that is nearing completion. In this section, we will highlight some of the changing needs of students and faculty members and the key principles the University uses when designing learning spaces in new facilities or in major building renovations, and we will also briefly describe two state-of-the-art facilities that respond to these changes.

In the area of instruction, lectures, large classes, and individual work are giving way to more interactive, multimedia, and smaller class environments that involve group work. With respect to research, the spaces the University designs reflect an increasingly collaborative and interdisciplinary research environment. Similarly, student life is moving increasingly in the direction of online services, living/learning communities, and gathering spaces. To meet these needs and changes, the University creates new and renovated learning spaces that offer mixed use space, flexible walls and furniture, room for laptop computers, and high-tech options that are also energy efficient. Below we will elaborate on three facilities, two completed and one under construction, that manifest the University's commitment to enhancing its learning environment for faculty members and students.

- Opened in 2006, the Undergraduate Science Building (USB) has 30 classrooms, lab and study spaces, a 125-seat auditorium, and other spaces that encourage interactive and distance learning. For example, the Science Learning Center uses a satellite hookup to facilitate long distance collaborations. The building offers classes in many disciplines, including chemistry, biology, neuroscience, physics, and communications studies. Two dinner-theater style rooms in the building, for which a virtual tour is available, are good examples of the evolving nature of classrooms reflecting the University's principles behind classroom innovation.

    The Undergraduate Science Building is a strong statement of the idea that space matters. Having the right facilities and the right technology does make a difference in student learning. We know that Michigan undergraduates are more likely than students in most other institutions to integrate ideas from several courses when completing their assignments. The USB brings people from several disciplines together under the same roof.
    Provost Teresa Sullivan, 9/26/2007

- As mentioned earlier in the report, **the Ross School of Business's new building,** which opened in 2009, helps to catalyze business education through spaces that promote and support action-based learning. For example, the 12 tiered and U-shaped discussion classrooms, with adjacent group-study rooms, support the conversations and explorations that are so essential to successful team-based learning. Also, integrated technology such as wireless technology, video cameras, one-touch lecture-capture devices, plasma screens, and high-speed, print/scan/copy/fax devices enable students and faculty members to interact with one another on campus and with project-sponsors and teams all over the globe.
- The **North Quad Residential and Academic Complex** is scheduled to open in 2010. It will house students and four academic units in LSA and the School of Information. The building will have several TV studios, a space called the Media Gateway, technology-enhanced spaces for creating and displaying student and faculty projects, media intensive classrooms and research areas, and exhibit space, as well as collaborative workspaces for students, faculty, and staff.

4.5.3
Information Technology Infrastructure for Learning

The quickly evolving field of information technology (IT) is changing how we do business and lead our lives, and this certainly holds true with respect to its effect on the University's learning environment. This section of the report will touch on the University's information technology infrastructure, both University-wide and in the schools and colleges,

University-wide IT Support

In 2009, the University announced plans for a new IT structure to better meet the needs of digital-era students and to offer high-performance computing for the recruitment and retention of its faculty and staff. The University has combined Information Technology Central Services (ITCS), Information Technology Security Services (ITSS), and Michigan Administrative Information Services (MAIS) into a new umbrella organization called Information and Technology Services.

- In an action reflecting the University's commitment to provide our students with new and exciting learning environments, in 2008 the provost appointed the **Special Committee on Institutional Innovation in Collaborative Technologies for Learning** and asked the group's members to explore three main issues: the kinds of environments that help the University to lead the search for innovative ways to create and disseminate knowledge in the information age; the kinds of structures that will support such an environment; and the types of structures that will help the University to share its lessons learned and helpful practices with other institutions. Published in January 2009, the group's report details their recommendations.
- **Information Technology Services**. As the backbone of the University's IT environment, the range of services provided by the newly-formed Information Technology Services (many of which were previously offered by a an office called Information Technology Central Services or ITCS (which is now part of ITS) helps to connect all members of the campus community with one another through high quality, cost-effective technology and communications services and facilities. The ITS Service Catalog includes over 130 distinct services that range from maintaining the campus internet or backbone to running large-scale backup systems. Most ITS services are free of charge to faculty, students, and staff, but some have associated costs such as the purchase of software through campus-wide agreements that ITS negotiates. Other ITS priorities are to connect the campus community with faculty, scholars, and students from across the globe; to provide infrastructure, middleware, and technology and communications services to all; to engage the campus community in collaborative problem solving; and to plan for future IT needs. By partnering with units across campus, ITS supports the academic and educational goals of the University by maintaining a world-class technology infrastructure that facilitates learning, teaching, and research.
- **Campus Computing Sites** provide public access workstations across campus for students, faculty, and staff to use. At sites across campus, users have access to a wide variety of software and services that are part of the University's "Basic Computing Package." Several campus computing sites are staffed with computer consultants who can answer Basic Computing Package and sites-related computing questions. Student residents also have access to computing sites in the residence halls. Each hall has a computing site equipped with computers connected to the same campus network and offering the same access to printers, scanners, and software as campus computing sites.
- **CTools** is a web-based environment that shares course and project websites among instructors, researchers, and students . For coursework, certain CTools features supplement and enhance teaching and learning, such as integrated class schedules, private student-instructor drop-boxes, real-time chat, and email notification of announcements and resources. To support collaboration, CTools helps users to engage together in work on campus and around the world, and gives them easy access to non-University participants and the ability to

control access to sites, upload files, and organize a complex array of information for users.

- The **University of Michigan wireless network** is available to everyone who has a valid University of Michigan uniqname and password. Access to the wireless network is becoming increasingly seamless and secure with the introduction of campus-specific protocols (MWireless).

- **ITS Education Services**, part of Information and Technology Services (ITS), provides education and training programs for the University community and beyond. Workshops are held throughout the year at different locations on the Ann Arbor campus; departments and work groups may also ask ITS to provide workshops specifically for them. These workshops cover many topics of interest to end-users and IT professionals such as database management, using the Internet, the web, and many other resources. ITS Education Services also offers workshops for staff members who serve as IT Trainers throughout the University as well as to students who need technical training to complete their coursework.

- Through its program of **Teaching Questionnaires** (TQ), the Office of Evaluations and Examinations (E&E) helps instructors and units to design custom questionnaires for use in evaluating teaching. Before the 2008-09 academic year, E&E each year printed nearly 500,000 TQ forms for more than 16,000 classes. Starting in fall 2008, the TQ program became a paperless, online activity for all courses on the Ann Arbor campus. Instead of in-class completion, students now fill out electronic forms on the web during the final week of the class schedule. The new structure also allows easier customization and data analysis of the evaluations.

Unit Specific IT Environments

Several of the schools and colleges manage their own IT environments, usually as a complement to University-wide IT services. A few examples are provided below.

- Perhaps the largest, most dynamic example of a unit-specific IT environment is the **Computer Aided Engineering Network** (CAEN), which provides the College of Engineering with a comprehensive set of computing technologies that support its instructional, research, administrative, and service missions. CAEN's high performance desktop computers, up-to-date data network, software library, and overall information and instructional technology environment enhance the quality of education and research throughout the college. CAEN-supported student computer labs provide over 1,000 desktop computers to students on a drop-in basis, 24 hours a day. CAEN also provides web services to the college community, as well as technology support for instruction and collaboration in many of the labs, classrooms, and conference rooms in the college.

- **LSA Information Technology** (LSAIT) serves approximately 70 academic and administrative units in LSA, with diverse computer platforms and computer support needs. LSAIT has five operational groups: the Computing Services Group, IT Security and Asset Management, Systems Group for Windows and Macintosh Services, Research Systems and Support for Linux and Cluster Computing, and the Network Systems group. All of the facilities of the college are now wireless.

- **Michigan Technology**, the IT office at the Ross School of Business, supports and stimulates the use of technology to enhance teaching, research, and information exchange. The office offers a wide variety of services to students, faculty, and staff, including help with personal accounts and networking as well as computer specifications, setup, networks, and use. Ross School of Business users may reserve many of the office's IT resources in advance.

Information Technology in the Classroom

- Faculty members are encouraged to enhance their teaching and students' learning with support from **Faculty Teaching Innovations Through Technology Grants** through the Center for Research on Learning and Teaching (CRLT). To date, faculty members have enhanced the teaching of large undergraduate courses with the use of multimedia materials, integrated instructional technology into their teaching, developed their own technological skills, and explored the effective use of technology in the classroom. Additionally, individual schools and colleges promote innovation. LSA, for example, offers faculty members innovation funding through its Instructional Technology Committee grants program and provides a wide range of "Teaching with technology" workshops and consultation services for faculty members and graduate student instructors through its Instructional Support Services organization.

- As stated in CRLT's Occasional paper, **Teaching with Clickers**, since the 1980s the use of clickers has proliferated on college campuses. Faculty from various disciplines such as physics, chemistry, geology, history, mathematics, political science, law, and psychology have introduced clicker systems into their classrooms. Faculty members use clickers for various purposes, depending on their course goals and learning objectives. Common uses of clickers include assessing students' prior knowledge and identifying misconceptions before introducing a new subject, checking students' understanding of new material, using peer instruction and other active learning strategies, starting class discussion on difficult topics, administering tests and quizzes during lecture, gathering feedback on teaching, and recording class attendance and participation. The CRLT website provides recommendations, suggestions, examples of using clickers in the classroom, and more.

- **LectureTools**, an interactive educational technology system developed by two faculty members at the University of Michigan, uses a web-based interface to connect instructors and students in large introductory lecture classes. The environment facilitates a richer array of interactions than traditional clickers and creates a more engaging and active learning space. This open-source program is available to all academic users, and in summer 2009 the University announced plans to make LectureTools available as a campus-wide service that will be integrated with the CTools course management system.

4.5.4
General and Off-campus Facilities

Earlier we mentioned the role of the Public Goods Council in the educational environment, whose members represent some of the units highlighted in this section of the report. Below we will describe a sample set of libraries, museums, observatories and planetariums, performance venues, and off-site learning environments, all of which play a crucial and enriching role for students and faculty in the teaching and learning that takes place at the University.

University Library

Consistently ranked as one of the top ten academic research libraries in North America, the University Library makes available an extraordinary array of resources and services. The University Library comprises 19 libraries on the Ann Arbor campus and offers a wealth of resources in traditional and, increasingly, digital formats. The Library's expert faculty and staff members help students, faculty, and other patrons to access the full potential of its information resources and provide a spectrum of assistance for research and teaching. They also help students at every step in their educational career and work closely with faculty members and graduate students to support their research needs.

Print collections number over 7 million volumes, covering thousands of years of civilization, from papyri to reports of the latest advances in science and medicine. The Library's primary commitment in building collections is to meet the research and instructional needs of University of Michigan faculty and students. In doing so, the breadth and depth of subject, date, and language coverage makes the University Library's collection an international resource in support of virtually all fields of scholarly endeavor.

In addition to the impressive array of print resources, the University Library's digital library creates and makes available text, image, and other online collections to scholars and readers around the globe. These curated digital resources complement and extend the traditional holdings of the library.

The collections that comprise the Ann Arbor campus library system, as well as the catalogs of some of the independent campus libraries and UM-Flint and UM-Dearborn libraries, can be accessed through the University's on-line catalog, Mirlyn. Mirlyn contains more than 31 million citations available through indexes, catalogs to 19 additional libraries (for example, Northwestern University, Purdue University, Wayne State University, and the University of Wisconsin), and access to articles from hundreds of journals. A complete list of University Library system libraries and other independent libraries at the University and links to their websites is available on the University Libraries website.

Many of the University Library operations mimic those at other research institutions, so rather than describing in detail the rich collection of libraries on campus, we will focus instead on a few special activities that are part of the transformative Michigan Digitization Project and other online library resources.

- The University of Michigan and Google, Inc. have entered into a groundbreaking partnership to digitize the entire print collection of the University Library. Digitized copies of the library's collections are searchable through the library catalog, Mirlyn. Works digitized by Google are also searchable through Google Book Search. Full text versions of works that are in the public domain can be read online. The Library's copies, as well as digitized works provided from other libraries, are held in the **Hathi Trust Digital Library**, a collaborative venture of the Committee on Institutional Cooperation, the University of California Digital Library, and several other university libraries, led by the University of Michigan libraries. There are currently over 4.5 million volumes held by Hathi Trust, and the number is expected to grow to over ten million within the next year. The University of Michigan embarked on this partnership for three key reasons:
  - The project creates new ways for users to search and access library content, opening up the University's library collections to our own users and to users throughout the world.
  - Only through partnerships can we achieve such large-scale (preservation-based) conversion to digital collections.
  - This transformative activity enables the University Library to build on and re-conceive vital library services for the new millennium.

- Formed in 1996, the **Digital Library Production Service** (DLPS) of the University Library provides infrastructure for campus digital library collections, including both access systems and digitization services. DLPS provides access to over 200 text, image, and other collections that collectively provide access to over a million digital objects.

Museums

The University's ten museums, including the merged Nichols Arboretum and Matthaei Botanical Gardens, provide another rich set of resources for campus constituents and the general public. Brief descriptions of a few of the University's museums are provided below.

- The **Exhibit Museum of Natural History** has the goal of promoting people's understanding and appreciation of the natural world and our place in it. The museum contains exhibits on prehistoric life, including Michigan's largest display of dinosaur fossils, Michigan wildlife, geology, and anthropology, and houses a planetarium with a new digital projection system. It also offers educational programs for the benefit of the University community and the broader southeastern Michigan community, highlighting the latest scientific research at the University. Science Cafes are regularly hosted by the museum to provide the public an opportunity to discuss current science topics with University experts and visiting scholars.
- The **University of Michigan Museum of Art** (UMMA) helps to present, interpret, and preserve the world's visual arts heritage, serving as a teaching and research arm of the University and as a lively and welcoming resource for campus, community, and beyond. In March 2009 the UMMA re-opened after an expansion and renovation project that more than doubled its size and dramatically expanded its exhibition, research, and program opportunities. The museum is a reimagining of the University art museum as a new "town square" for the 21st century. With new galleries highlighting works drawn from the museum's collections of more than 18,000 artworks (representing over 150 years of collecting at the University); special exhibition spaces; "open storage" galleries; a range of educational and event spaces; expanded open hours; meeting spaces for campus and community organizations; new programs in music, dance, film, and the spoken word; and new spaces to relax all contribute to a place that brings the arts to the center of public life at the University and beyond.
- Initiated in 1837, the University of Michigan **Herbarium** collections include specimens from scientific expeditions made by University biologists, and many others have also entrusted the archival research materials that they collected from nearly every region of the world to the Herbarium's care. The 1.7 million specimens of vascular plants, algae, bryophytes, fungi, and lichens, combined with the expertise of the faculty-curators, students, and staff provide a world-class facility for teaching and research in systematic biology and biodiversity studies. Working collaboratively with faculty members and students, the goal of the Herbarium is to make the University a leading center for training and research in studies of the history, the change mechanisms, and the conservation of Earth's diverse life forms.

Observatories and Planetariums

Also supporting the University's educational missions are several Observatories and Planetariums, including the Angell Hall Planetarium and the historic Detroit Observatory.

Performance Venues

The various performance venues at the University provide performance space for students in the School of Music, Theatre & Dance, which offers more than 450 performances per year, many of which take place in the two concert halls in the Earl V. Moore Building housing the school. Such venues are also important to students who pursue performance opportunities outside their regular course of study. One example is through MUSKET, a student organization in which theater and non-theater majors alike participate, which has been producing musicals for almost 100 years.

- The **Charles R. Walgreen, Jr. Drama Center** includes more than 97,000-square feet on two floors, classrooms, studios, Department of Theatre & Drama offices, wardrobe and scene-building space, the Penny J. Stamps Auditorium, and the 250-seat **Arthur Miller Theatre**, named after the late Arthur Miller, a University alumnus. In March 2009 the Walgreen Drama Center and Arthur Miller Theatre received the Architecture Merit Award from USITT, the Association for Performing Arts & Entertainment Professionals.
- **Hill Auditorium**, which seats more than 3,700 and was dedicated in 1913, has been an integral part of the University and the community ever since. Designed by Detroit architects Albert Kahn and Ernest Wilby, the auditorium was built primarily with funds bequeathed to the University by Arthur Hill, a regent of the University from 1901-1909. Extensive renovations completed in 2002 preserved the history of this architectural and acoustical gem, and brought about improvements that enhance the experience of performers and audiences alike and that has addressed the building's aging infrastructure.
- Located within the Michigan League building on central campus, the **Lydia Mendelssohn Theatre** opened in 1929. Renovations in 1995 added new carpeting, seats, lighting equipment, and curtains to the facility, which

seats 642. The theatre is one of the few in the United States to have a "cyclorama," a curved wall at the back of the stage that improves sound in the theater and can be used for creative lighting effects.

- Opened in 1971, the **Power Center for the Performing Arts**, which seats 1,368, is the University's most techni-cally sophisticated performance space. The audience's seating area is modeled after the Greek theatre at Epi-darus, while the stage was an experimental combination of proscenium arch and thrust. No seat in the Power Center is more than 80 feet from the stage, creating an unusually intimate performance setting.

Off-site Learning Environments

Concluding this section on the University's learning resources, we briefly describe the University's Biological Station and Camp Davis, two rich venues for field experiences by University students and faculty members.

- Founded in 1909, the University of Michigan's **Biological Station** (UMBS) is dedicated to education and research in field biology and related environmental sciences. In a world undergoing unprecedented changes in land use, climate, resource extraction, and species distributions, the UMBS plays a significant role in prepar-ing graduates to understand, deal with, and solve environmental problems. Founded on cleared land acquired from lumber barons, the station's 10,000 acres have been reforested via natural processes. Student and faculty researchers study the biota of a landscape ravaged by catastrophic logging and subsequent fires, allowing them to learn first-hand how land exploitation affects the natural environment. UMBS students engage in and learn about biology and environmental science by studying directly in the field and by developing relationships with leading researchers.

- **Camp Davis**, the Department of Geological Sciences' Rocky Mountain Field Station, provides an unparal-leled field learning experience for students each summer, and has done so since 1929. Camp Davis hosts such courses as Introductory Geology, Geological Mapping, Ecosystem Science, Energy, and occasionally the History and Literature of the West. Located within the Greater Yellowstone Ecosystem and just south of Grand Teton National Park, Camp Davis provides an ideal outdoor classroom that offers scenic and educational geology and ecology. Lower-level undergraduate students from the University of Michigan earn natural science credits in a tight-knit and engaging academic environment, while upper level undergraduate students receive hands-on learning experiences that are required for degree completion in geology and environment programs. The University recently completed the first phase in the renewal of camp facilities.

4.6
LOOKING FORWARD

The University of Michigan is widely recognized for outstanding achievements and contributions in the domains of research and teaching/learning. However, we have not yet made a comprehensive, institutional commitment to understanding the interconnections between how faculty members teach and how students learn, so that these processes might be improved. By building on the kinds of activities identified in this chapter, providing additional infrastructure to support ongoing and new work, and creating a sustainable set of incentives for individuals and programs, the University is well-positioned to make important advances in this area.

The recommendations below represent the thinking of a faculty working group that carefully considered our learning environment and the possibilities for continued improvement at the University of Michigan. These recommendations are presented to stimulate further conversation and thought, and do not convey institutional commitments at this time.

Our examination shows significant volume and variety of activity in the area of educational assessment; however, these efforts are by nature often isolated and partially disconnected from centralized administrative and evalu-ation processes at the University. To focus and scale up these efforts, it would be useful to enhance our capacity to create connections, coordinate resources, and seed the development of additional processes. In addition, we may choose to address the perceived need to have access to appropriate infrastructure related to data access from various University data warehouses, and the need for ready access to technical and academic expertise related to assessment methodology and student learning measurement.

Establishment of an institutional research or faculty-led academic assessment resource center could address this concern. Existing University processes that already support the University's educational and assessment efforts, including CRLT and the Office of Evaluations and Exams (E&E), could be adapted. Electronic student evaluations, academic program review, and faculty promotion processes could all be modified in ways that provide opportuni-ties to systematically utilize assessment results to a greater degree than currently exists.

4.6.1
Identify Our Common Goals

An important first step in focusing our educational and assessment efforts would be a shared set of educational goals or competencies against which progress could be measured and achievement assured. A number of academic units on campus, such as the engineering college and most professional schools, have developed outcome statements that can be used by both faculty members and students to guide development and selection of educational experiences and assessment methodologies. In fact, a recent study of the institutional membership of the Association of American Colleges and Universities (Hart Research Associates[4]) shows that 70 percent of research universities have a common set of intended learning outcomes for all of their undergraduate students.

Based upon principles suggested by national associations and institutions similar to the University of Michigan, the AWG has developed a statement of such goals, called the "Statement on Learning Outcomes" (see below), which would prove useful in assessing current and new educational programs, identifying assessment approaches, and creating common language and expectations for the University's educational communities. Program committees could find utility in a common list of intended outcomes as a benchmark against which to map current and new course offerings, while individual faculty members would have a guide to help focus design and delivery of course content. Students would benefit from having a structure to guide their selection of courses and out-of-class experiences.

4.6.2
Draft Statement on Learning Outcomes

The Accreditation Working Group has recommended that the University articulate and embrace a set of undergraduate learning outcomes to guide educational decisions of individual students, faculty, and professional staff, and to inform decision-making at the program, department, school/college, and institutional levels. As a starting point for the creation of a working list of such learning and developmental outcomes among our students, the AWG, guided by the Association of American Colleges and Universities (AAC&U) Liberal Education and America's Promise (LEAP) Initiative and other statements created by institutions such as the University of Minnesota, has offered this draft statement.

Intended Learning Outcomes
for Undergraduate Students at the University of Michigan

As a result of their studies and experiences at the University of Michigan, by the time of graduation students will be able to demonstrate:

1. General knowledge of diverse philosophies and human cultures, the arts and humanities, and the physical and natural world.
2. Mastery of a specific body of knowledge and mode of inquiry.
3. Engagement in the generation of new knowledge in a specific field of inquiry.
4. Effective oral and written communication, teamwork, and problem-solving skills.
5. Capacity to work effectively across diverse philosophies, cultures, and challenges in a global society.
6. Skills for effective citizenship and leadership, and for assuming personal and social responsibilities in a diverse and global society.
7. Ability to set personal learning goals, to critically self-monitor learning styles, and to make adjustments based on progress and achievement.
8. Commitment to pursue lifelong learning and critical inquiry through postgraduate studies and participation in informal educational settings.
9. Ability to address issues of societal concern and human needs through civic engagement.

The University of Michigan will facilitate student efforts to achieve these outcomes by encouraging the development of courses and other educational experiences that promote student progress in these domains, and by developing and supporting assessment methods that assist faculty and students in measuring progress toward these outcomes.

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[4] Hart Research Associates (2009). Trends and emerging practices in general education. Washington, DC: Association of American Colleges & Universities.

4.6.3
Adaptations of Existing Processes

Several existing University processes and activities of campus units could be adapted to further the University's educational and assessment efforts. In particular, electronic student evaluations, academic programming, program review, and faculty tenure/promotion processes could be modified in ways that provide new opportunities to systematically generate and utilize learning assessment results to a greater degree than currently exists. The recommended adaptations are briefly described below.

Course Evaluations

The University's electronic course evaluation system (E&E) could be adapted in ways that further support the collection of data useful for student assessment activities. By incorporating student self-assessments of learning gains, which ideally would be aligned with the intended learning outcomes (see above), faculty members could readily gauge what students think they are learning from their classes. This information would illuminate how well faculty and unit intentions are being realized, and would also support other forms and institutional uses of student learning assessment.

Learning Committees

Schools and colleges have curriculum committees focused on ensuring that individual courses are developed and offered within a larger sequence of learning experiences. Given that courses reflect only a portion of the educational experiences of students at the University, the AWG has suggested it would be useful to re-cast curriculum committees as *education* or *learning* committees, thus broadening their mission and responsibilities. This would provide faculty members a deeper exposure to the developmental progress of students and the educational mission of their units.

Program Review

The academic program review process at the University, similar to that at other research institutions, has a nearly exclusive focus on standard measures of academic quality, and on the depth and breadth of academic and research programs. By adapting the external review teams to include expertise in learning , and charged with considering teaching and learning issues in the particular program area, the review process could be explicitly tied to issues of teaching and learning, and could expand the current programmatic emphasis on research and professional service.

Tenure and Promotion

The tenure and promotion process at the University of Michigan asks its faculty to include information on the quality and goals of their teaching, but could be adapted to include better evidence of student learning and achievement. This would expand the current focus on the required course evaluation responses (Q1: Overall, this was an excellent course; Q2: Overall, the instructor was an excellent teacher) to a broader consideration of student learning evidence, including the student self-assessment information. For example, the required course evaluation questionnaire of the College of Engineering (2007 form) specifically includes student learning outcomes.

4.6.4
Organizational Enhancements

Three recommendations for new organizational efforts that would promote the student learning experience and its assessment at the University of Michigan involve the need for systematic institutional research, coordinated assessment support, and information on multi-format capstone experiences that are captured in electronic student portfolios.

Institutional Research Office

At present, there are a number of campus support structures that contribute to our understanding of learning (for example, Center for Research on Learning and Teaching, Office of Budget & Planning, and the Office of Student Affairs Research), but they are often doing so in an uncoordinated fashion that may even foster competition rather than collaboration, and outcomes are often disconnected with the academic assessment activities of units. Creating a full-service institutional research (IR) office that is charged with coordinating assessment efforts, including facilitation of access to warehoused data, would offer an important step forward. An intentional decision to create this office would help campus constituents to refine their assessment activities in ways that benefit the University as a whole, and support faculty and student development. More generally, as individual campus units enhance their learning assessment and evaluation capacity, a central office would play an important coordinating and supporting role, much like the Office of Budget and Planning works with a network of unit-based budget administrators.

Assessment Resource Center

There are issues of supporting infrastructure and resources, both in terms of coordinating access to data and ensuring the availability of professional assessment expertise, that are not systematically funded or coordinated by the University. Establishment of a faculty-led academic assessment resource center would begin to address these needs. There are important technical and practical considerations that need to be addressed when undertaking student assessment activities at any level, and while expertise in this area exists on campus it tends to be under-utilized and not well positioned to assist individual faculty members seeking advice and units seeking outcome measures. Just as the Center for Statistical Consultation and Research is a centrally-funded unit that services the entire campus community, an assessment-focused center led by faculty experts could enhance the quality of ongoing and planned assessment across campus as well as attract new faculty members into this important area.

Electronic Portfolios

Increasingly, students complete activities that are not readily captured by the traditional college transcript, yet they are often defining experiences of students at the University of Michigan. Independent research, creative work, and engagement activities are typically part of the undergraduate experience, yet they are not part of the credentialed University record. Other evidences of learning may also be preserved with today's technology, such as art performances and installation outcomes of overseas experiences, engineering designs and others, collectively suggesting a growing need to capture such endeavors. This would be met through the flexibility and media-friendly structure of today's Internet and long-term archiving potential of student portfolios and learning management systems, as illustrated on the University's MPortfolio website, and integrated into the CTools environment of the University, as recently piloted.

4.7
CONCLUSION

Many consider the U.S. system of higher education as the best in the world, and there is evidence to suggest that such a belief is warranted. Students and faculty members from around the world come in large numbers to study at U.S. colleges and universities, as do higher education scholars and practitioners seeking to better understand and emulate the best parts of our system. This reputation, perhaps ironically, is built largely on successes in the realm of research, not on demonstrated expertise in teaching and learning. However, excellent teaching certainly does exist within our system of higher education, because of intrinsic faculty motivation to teach well as opposed to systematic institutional intentions to ensure that this is the case. Moreover, faculty members, especially in research institutions such as the University of Michigan, understandably spend more time on research endeavors in their specific disciplines in order to advance their career and research interests, as opposed to efforts focused on improving their teaching. It might also be the case that faculty members do not have adequate access to the resources necessary to study, systematically and comprehensively, how and what students are learning in their classes.

The issue of learning goals and outcomes is also important because institutions of higher education are increasingly encouraged to be more accountable for the quality of their offerings by our students' families, taxpayers, corporations, and government agencies that fund the enterprise. Put simply, we are being asked to provide evidence of our success in helping students develop the knowledge, skills, and attitudes to become productive and successful members of today's society. Such a mandate requires a consistent, evidence-based approach that enables institutions to measure the quality of their programs and achieve specific learner-related outcomes, while recognizing the range of learning cultures and learning goals among units in an intellectually diverse institution such as the University of Michigan.

There are several major challenges to developing evidence around issues of teaching and learning, and their assessment. The current scholarly reward structure encourages a clear distinction between teaching and research activities and differentially rewards them. Talented faculty members in many of the finest universities pursue research primarily, rather than teaching, despite having a natural interest in understanding how to teach well. Reintegrating teaching and learning through research *on* teaching and learning would be one way to address this division. Given the history and structure of the University of Michigan, it is the general sense of the AWG is that the most progress would be made through leadership initiatives that emphasize the involvement of the faculty for coordination and consultation, rather than centralizing such operations. The University already has most of the elements in place that would allow this to happen; the challenge is one of adapting an infrastructure that would help foster partnerships among University constituents and provide evidence-based support and expertise related to teaching, learning, and assessment.

MUNIVERSITY OF MICHIGAN

ACCREDITATION 2010

5. ACQUISITION, DISCOVERY AND APPLICATION OF KNOWLEDGE

5. ACQUISITION, DISCOVERY, AND APPLICATION OF KNOWLEDGE

5.1
INTRODUCTION

Criterion 4: The organization promotes a life of learning for its faculty, administration, staff, and students by fostering and supporting inquiry, creativity, practice, and social responsibility in ways consistent with its mission.

We begin this chapter with an overview of the University's knowledge environment, broadly defined, and some of its unique strengths in this regard, before addressing Criterion Four and its core components. This introduction draws heavily from the report of the Accreditation Working Group on the University's Knowledge Environment and Roles of Research, Professional, and Creative Activities. This group explored what is distinctive about the knowledge environment at the University of Michigan, how understandings of the University's research mission among faculty, students, and others are consistent or varied across campus, and how research, professional, and creative practices are integrated into the educational experiences of our students.

5.1.1
Framework

If we understand our institution as a research university in the broadest sense, as defined by its many ways of doing knowledge work, then virtually no aspect falls outside this realm. Research is not just one of many activities of the University, but is at its dynamic core. Everything we do, therefore, affects "the knowledge environment." We recognize that understanding and definitions of the research mission vary; it is illuminating to discover how differently people think and how differently things are done across campus. Two points emerge in our examination that present a common foundation.

First, the University of Michigan is an intellectually exciting, generative place for its faculty. The high rankings that the University receives in the various systems for evaluating higher education, such as those by U.S. News and World Report and the Global Languages Monitor's MediaBuzz, are complemented and fleshed out by the stories across campus about the enabling qualities of our knowledge environment. The very fact that the University has the capacity to serve an intellectually rich and diverse group of faculty members so well is a substantial achievement.

The second commonality is a shared sense of vulnerability, as the continuation of today's remarkable knowledge environment is insecure. The changes underway in higher education are many and profound, and the sources of our success seem so inadequately understood. We are by no means the only ones thinking about these kinds of things; other faculty groups and administrators are constantly considering policy issues. There are units whose research mission or daily work focuses on topics discussed below. But the reaccreditation process offers an unusual opportunity for individuals from widely separated corners of campus to gather and take stock, without a need for immediate decisions.

The risks that the University faces are often not unique or even distinctive, although our opportunities for addressing them may be. Whatever time frame we choose, looking back shows us profound transformations in higher education, and looking forward suggests that the pace of change is unlikely to slow. At the end of the nineteenth century, fewer than three percent of the population of the United States had ever attended college; today 29% have a bachelor's degree. More than half of today's colleges and universities were founded after 1940. Clearly, both the place of postsecondary schooling in the lives of Americans and the nature of the system have changed fundamentally. Even more directly relevant for our examination of research activities is that in 1920, only 615 Ph.D.s were awarded by American institutions, while in 2008 that number exceeded 55,000, with the University of Michigan alone awarding more than 700 degrees. The immense growth of sponsored research has added acres to our campuses, the massive volume of scholarship has filled our libraries, and a vast range of other activities has

been added to institutions like ours--from providing student conflict resolution services and running medical clinics to managing trademarked identities and supporting start-up companies. Recent decades have brought the increased emphasis on development and technology transfer activities, a decrease in public funding, and a seemingly growing public skepticism about universities in general, although most people's loyalty to specific institutions is undiminished.

5.1.2
Research

An extraordinary volume and quality of research goes on at the University of Michigan. One measure is research expenditures, which grow continually, from $545 million in 2000 to $753 million in 2004, and to $876 million in 2008; see figure below. Most recently, the University exceeded $1 billion in research expenditures.

2000-2008 Research Expenditures
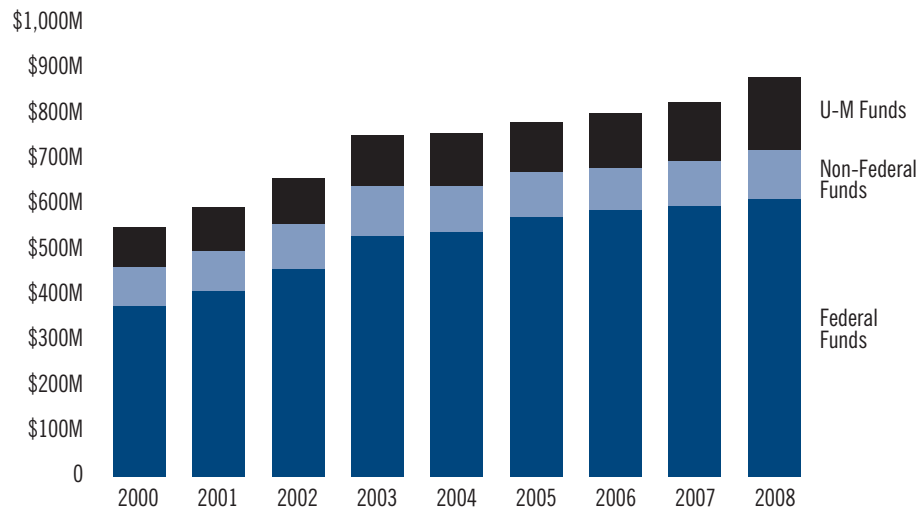
From: OVPR's FY2008 Report on Research and Scholarship at the University of Michigan

These numbers make us consistently one of the top three public universities with regard to research funding. The federal government is currently the source of about 70% of those funds, while private industry, foundations, and state and local governments contribute about 12% (see Research at UM for detailed information on the research enterprise). There have been missed opportunities, as clearly it is not always easy for such an enormous institution to respond to a changing funding environment. However, the recent initiative to strengthen University partnerships with industry, for example, through the Business Engagement Center, helps to address this problem. Also, the sense that it takes too long for applications and contracts to get through our system continues to be heard, but efforts to make the process more efficient continue.

There is a significant amount of internal funding for research as well--in 2008, 18% of total research expenditures. Fields like the humanities and arts, where external funding is sparse, benefit especially from these funds. The AWG on the knowledge environment considered it vital that the University has allocated resources that enable our own collective choices about what areas of research should be funded, rather than depending only upon directions set elsewhere.

From the perspective of many in higher education, our success in sponsored research is itself a challenge. The liberal arts college is subsumed into a much larger institution, much of which has only a distant or indirect connection with undergraduate education. The scientific, medical, and engineering components of universities have become especially larger, so that the balance of activities has changed. Our surprises often come from exchanges across this divide. Issues like the impact of the 1980 Bayh-Dole or University and Small Business Patent Procedures Act need more discussion; to some this act seems a sensible measure to encourage technology transfer and a promising avenue to increasing university revenues, whereas to others it seems a controversial privatization of intellectual property, as patent-holders claim the accumulating results of research done by many (often with federal dollars).

Whether we are considering the dialogue among scholars or public dissemination, publication is key. We cannot do our knowledge work without a way to circulate new knowledge. But the system of publication generally, and specifically for higher education, is broken and many parts seems to be facing collapse; the closing of newspapers,

including the local Ann Arbor News, provides a prominent, current example. Some notable elements in the current state of publishing in higher education include:

- Journal prices in the areas of science, technology, and medicine are extraordinarily high, with individual titles sometimes reaching tens of thousands of dollars per year, and prices growing at more than double the rate of inflation. This trend exacerbates the divide between those who have access to libraries that can afford to subscribe, and those who do not.
- Current models of publishing scholarly monographs have ensured that shorter print runs are produced for every title, resulting in narrower distribution. Again, most of our publications reach increasingly smaller audiences. We also face the related threat of a reduction in titles being published.
- Access to published literature, what librarians call "discovery," is made challenging by the high walls or silos created by the specific systems of publishers and their distributors. Competent technology users are frequently unable to make their way through this maze of systems, and the types of places they tend to look are far from comprehensive. As a consequence, much goes unread and unrecognized. To ensure that the scholarly activity of the University is available across boundaries, Deep Blue was developed as a University of Michigan service to provide electronic access to the University's full scope of research and creative activity, including all Ph.D. dissertations in all fields of study.

5.1.3
The Undergraduate Connection

Far from the University's research mission detracting from undergraduate education, the two are integrated to an admirable degree. This happens in a number of different ways. The Undergraduate Research Opportunity Program (UROP), for example, places first- and second-year students to work on research projects with faculty members, including members of the research faculty. UROP is open to all University of Michigan undergraduates, a good example of cross-campus connection, and since it began in 1989 over 7,000 students have participated. Students also participate in research through their courses, through their concentration programs, and through employment. In a set of conversations, University Alumni and parents spoke passionately about the value of these research experiences at the University. And indeed there is ample research documenting the many benefits in terms of student outcomes.

What the AWG learned about student engagement in research dovetailed exactly with the group's more abstract conversations about knowledge. Students are exhilarated and changed by joining the University's community of inquiry. The University does not simply impart knowledge to them; rather, we create an environment that encourages and enables inquisitiveness and investigation. The conventional vocabulary of creating, preserving, and disseminating knowledge represents it as something that might be heaped up in an ivory tower, or passed from hand to hand without a transformative connection between human beings. Within the University, knowledge is perceived in much more active terms--not as a product, but as a process. The notion of inquiry is a touchstone for the University community, and among faculty members whose work is usually spoken of as creative rather than as research, a similar commitment to project- and process-based practices is easy to recognize. The strong demand for courses in the arts and music from students outside those schools marks the fact that these students, too, recognize the power of open-ended investigation into the arts.

5.1.4
Focus on Inquiry

The "touchstone of inquiry" helps us to identify the forward direction for the campus's knowledge environment. For example, University buildings and structures profoundly shape our work. This is a complex subject, but the principle to be followed is that new and renovated spaces should be designed to support exchange, echoing earlier points in Chapter Four. For example, large lecture or presentation spaces should follow the amphitheatre model with tiered seating (allowing unobstructed views) and be supported by smaller-group meeting spaces (e.g., the new Ross School of Business building). Here again there is a productive consonance between different areas of campus; there is a resemblance between the studio culture of the School of Art & Design as well as the Taubman College of Architecture and Urban Planning and the increasingly open design of scientific laboratories (for example, in the building that houses the Life Sciences Institute).

Another topic where the touchstone of inquiry is powerful is the role of ethics in the University's knowledge environment. The University shares with other universities and other sectors of society the need to negotiate an ever more complex landscape of choices that bumps up against busy schedules, making it difficult to find time for reflection; this is an ongoing challenge. But when we think, for example, of problems with student plagiarism,

or the challenge of making sure graduate student researchers are sufficiently thoughtful about human subjects research, it becomes clear that it's not enough simply to teach protocols for proper behavior. Members of the University community need to be sophisticated thinkers about these issues. Undergraduates are coming to adulthood in an environment of constantly accessible information, and understanding when they are misappropriating someone else's knowledge is not a simple matter. Once again, the principle is that University faculty members do not simply convey information; they also foster inquiry. And here, too, that principle converges with the importance of engaging in purposeful reflection and dialogue about the ways in which faculty and students work together.

One of the most important advantages of an inquiry-based model is that it enables us to think about the University community in a flexible way, recognizing the complexity of the roles that people play. In a community of inquirers, individuals are not always, or only, defined by their roles in a formal hierarchy; everyone is contributing their perspective and investigative energy to the inquiries at hand, and everyone is learning. Graduate students are ever-present, necessary, and vital contributors to University research projects, and they are also teachers for our undergraduates. Indeed, the way they hinge between different roles shows how a dynamic understanding of the creation of knowledge merges teaching and learning at the University. Doctoral study must, by its nature, be specialized. However, in a common first-year curriculum for all Ph.D. programs in the health sciences, in interdisciplinary humanities departments, and also in value-adding certificate programs, more and more of our students are negotiating multiple sites and paradigms in ways that prepare them for the fluid knowledge environment of the future.

5.1.5
Faculty and Staff

Not only are the roles of campus community members fluid, but individuals constantly move in and out of the University as well, while information and activities are also constantly crossing its borders. Colleges and universities have always been complexly interconnected with other sectors of society. Nevertheless it seems clear that the increased permeability of the University and of higher education in general demands our attention. As mentioned above, there is increased scrutiny, and even skepticism, directed towards higher education from policy-makers and the public. The turn to public scholarship at many colleges and universities, including ours, is also an element of this increased pressure for greater permeability and accountability. Incorporating boundary-crossing work into the faculty reward system presents a challenge; just as we have been getting better at evaluating teaching and at evaluating interdisciplinary scholarship, we can also get better at recognizing the distinctive value of producing knowledge through collaboration. Indeed, such intellectually substantive assessments are a kind of purposeful reflection, and they mesh with the AWG's other recommendations for further strengthening the University's knowledge environment.

We also recognize the enormous, indispensable support that University staff members provide for our knowledge environment. Their dedication, resourcefulness, and generosity are palpable, which is reflected in University programs that honor staff contributions. Our decentralized institution gives many staff members considerable autonomy, which contributes to the University's overall strength, but it also means that the University must work deliberately to share good ideas across campus.

5.1.6
Engaging with Society

Many of today's concerns converge on the relationship between the University and the public. The University has a strong sense of our public mission, but it is no simple matter to decide how to translate this commitment into activities and priorities. The criticism that scholars are largely "talking to themselves" has been voiced more or less since universities came into existence, but it seems louder now than ever. It is an important part of the University's mission to provide practical knowledge and resources that are useful to Michigan and the region, as well as to the nation and the planet, and furthermore to engage in related dialogue on all these scales. At the same time, the University is committed to basic inquiry, to pursuing knowledge for its own sake, and to maintaining high academic standards, which implies the need for intense internal dialogue, as well. We must do both. Without basic research, there is little to translate into applied research. Without attention to liberal education and to students as multi-dimensional individuals and citizens of many different communities, we have no way of deciding what is important. The model of knowledge as a static entity does little to help us discuss and address these concerns; the model of inquiry and exchange serves as a "compass of principles," and directs our attention to the specific places within the University in which knowledge and creativity are produced.

In many discussions, the meaning of the term public applies to regional and national spheres, but also increasingly to an international framework . Universities have always made connections across time and space; today, as the topic of the reaccreditation self-study recognizes, the need to manage the international nature of the Uni-

versity enterprise, and to extend our connections in this regard, is both urgent and demanding. Here again the focus on inquiry serves the University well. If knowledge were something inert that could be translated neutrally, internationalization would be much simpler--but at the same time less rewarding and productive. Rather, knowledge is created and moves through networks of individuals and institutions. The kinds of connections being built through study abroad, research collaborations, and partnerships with overseas institutions offer immense opportunities for cognitive enrichment. And whether considered from an international perspective or within the boundaries of our multilingual nation, knowledge is profoundly linked to language. The 2007 Modern Languages Association's Report on Foreign Languages and Higher Education advocated a shift from a goal of near-native fluency to a goal of translinguistic and transcultural competence, thus implying the need for a change in the current two-tiered model that separates how colleges and universities teach language from how we teach literature and culture. This recommendation implies a need for curricular change at the University. In Chapter Seven, the internationalization special-emphasis study, these points and many more are examined in detail.

5.2
RESEARCH AND CREATIVE MISSION

Core Component 4a: The organization demonstrates, through the actions of its board, administrators, students, faculty, and staff, that it values a life of learning.

To show some of the ways in which the University of Michigan meets this criterion for reaccreditation, we focus this section on four types of actions that its faculty, students, staff, administrators, and Board of Regents take: through policies, the commitment of funding, the use of space and facilities, and through recognition.

5.2.1
Policies

The University publishes policies about both the rights and responsibilities of members of the University community with regard to our commitment to a learning environment in which inquiry is respected and people have certain articulated rights.

Fundamental Tenets Statement

In 1990 the Senate Assembly adopted a statement that articulates the fundamental tenets of the University as a community of learning—both the rights and responsibilities of its members. In view of the statement's importance and how closely it links to this core component, we provide it here in full. Although not official policy, this statement is testimony to the University's commitment to creating a community and environment of continuous learning. The statement also appears in the Faculty Handbook.

"The University of Michigan is a community devoted to learning. Members of our community advance, preserve, and transmit knowledge through study, teaching, artistic expression, research, and scholarship. As a public university, we have a special obligation to serve the public interest.

All who join the University community gain important rights and privileges and accept equally important responsibilities. We believe in free expression, free inquiry, intellectual honesty, and respect for the rights and dignity of others. We respect the autonomy of each person's conscience in matters of conviction, religious faith, and political belief. We affirm the importance of maintaining high standards of academic and professional integrity. In defining the rights we enjoy and the responsibilities we bear, we must keep those basic principles in mind.

All members of the University have civil rights guaranteed by the Bill of Rights. Because the search for knowledge is our most fundamental purpose, the University has an especially strong commitment to preserve and protect freedom of thought and expression. Reasoned dissent plays a vital role in the search for truth; and academic freedom, including the right to express unpopular views, is a cherished tradition of universities everywhere. All members of the University have the right to express their own views and hear the views of others expressed, but they must also take responsibility for according the same rights to others. We seek a University whose members may express themselves vigorously while protecting and respecting the rights of others to learn, to do research, and to carry out the essential functions of the University free from interference or obstruction."

Statement on Freedom of Speech and Expression

A key policy related to the topic of an open and welcoming University environment is a statement the University's Civil Liberties Board adopted in 1988: the Statement on Freedom of Speech and Artistic Expression: The Rights and Obligations of Speakers, Performers, Audience Members, and Protesters at the University of Michigan.

This policy affirms the University community's commitment to freedom of speech and artistic expression in support of people who represent the entire spectrum of opinion in the community and out of a desire to create a truly open forum in which diverse opinions can be expressed and heard. Through these guidelines, the University seeks to maintain an environment in which the free exchange of opinions can flourish and where the learning that such exchange makes possible can occur, with the expectation that members of the community will observe the limits of mutual tolerance that the guidelines embody.

Openness in Research Agreements

Supporting openness in research agreements, the regents adopted the Regents' Policy Concerning Research Grants, Contracts, and Agreements (Standard Practice Guide 303.1) in 1987 to guide the University when considering any secrecy stipulations by a research or scholarship sponsor. This policy is another example of our commitment to a community of learning—in this case ensuring that others outside the University can, within reason, benefit from the work that University faculty, students, and staff undertake.

This regents' policy states that the mission of the University is to generate and disseminate knowledge in the public interest, based on two fundamental principles: open scholarly exchange and academic freedom. Normally, these principles are mutually supportive. When they conflict, the University follows a balanced approach by taking into account both the University's mission and the public interest. The University also has a longstanding tradition of conducting research aimed at enhancing human life and the human condition. Given these principles and continuing tradition, the regents' policy governs the acceptance of research grants, contracts, or agreements by the University.

Faculty Members' Outside Employment

As expressed in Regents' Bylaw 5.12 *Outside Employment* the University encourages faculty involvement in outside activities, including consulting, when the work enhances the faculty member's value as a teacher or scholar in ways that he or she could not accomplish inside the University, when the work is of a public nature, or when for any reason the University supports the faculty member's involvement in outside activities. However, the work must not constitute a conflict of interest or a conflict of commitment. Bylaw 5.12 assigns responsibility for creating specific guidelines for outside employment to the governing faculties. This policy also reflects the University's commitment to lifelong learning by encouraging the faculty to stay engaged with others outside the University, an important factor in their continuous learning and renewal.

Sabbatical Leaves

Standard Practice Guide 201.30-2 *Sabbatical Leave* governs such leaves for the University's tenured faculty members. The function of sabbatical leaves is to give faculty members an opportunity for an intensive program of research and/or study, thus enhancing their effectiveness to the University as teachers and scholars. Here, too, the University's commitment to lifelong learning for its tenured faculty is clear.

Staff Development Philosophy

Another example of the University's commitment to lifelong learning is the Staff Development Philosophy that the University's executive officers have adopted, which includes the text below:

> *"To enhance the ability of staff members to contribute to their departments and to provide career satisfaction for productive employees, we are committed to supporting ongoing staff development for any staff member. Staff development is defined as growth in an individual's knowledge, skill, and personal effectiveness. Our goal is for all staff members to make the maximum contribution to their departments, while having opportunities to develop their talents, to acquire and use new skills, and thus to achieve greater career effectiveness and satisfaction. Career development opportunities include mentoring as well as informal and formal training."*

Standard Practice Guide 201.69 Tuition Support Program provides tangible support for this staff development philosophy. The goal of this policy is to increase the career opportunities available to staff members at the University of Michigan, to enhance the performance of staff members and their units, and to encourage professional growth. In addition to partial tuition support, the policy also encourages supervisors to make reasonable efforts to make appropriate work schedule accommodation to allow staff members to enroll in courses when the courses they need are scheduled only during regular work hours. This policy, too, demonstrates the University's commitment to lifelong learning for its staff.

Although not governed by a specific policy, the University also supports the professional development of staff by paying for and allowing staff members to attend the rich array of workshops and presentations, including those offered by the Office of Human Resources Development, which cover a wide range of topics.

5.2.2
Research Funding

For faculty members to engage in a wide variety of research, scholarship, and creativity, in collaboration with students, postdoctoral fellows, research scientists and staff, they depend on one or more sources of funding, both external and internal. As indicated above, federal funds are the largest source of research funding at the University. Over 10% of this funding is from non-federal support (i.e., from industry, foundations, and the state of Michigan), and nearly 20% is from the University of Michigan. Each year, the vice president for research presents the "Annual Report on Research, Scholarship, and Creative Activity" to the Board of Regents. This report details accomplishments in research, changes in research funding, potential problems, opportunities for future work, and the goals of the Office. Annual Reports dating back to 1994 are available online.

In allocating University funds for research, a major goal of the Office of the Vice President for Research (OVPR) is to support new initiatives, and to provide cost sharing and seed funding that make faculty proposals to external funding entities more competitive. OVPR also provides support to faculty who conduct work in areas not typically funded by federal agencies or other groups. In FY07, this spending totaled $4.5M, with the majority of the funds matched by the proposing faculty member's school, college, or department.

A primary source of OVPR support is the Faculty Grants and Awards program. In addition to providing bridging funds for externally supported but lapsed projects and seed funding for junior faculty members, as well as for more senior faculty members who are changing research directions, the office also strongly supports projects in the arts. In FY07, one-third of the total funding from this program alone was directed at supporting the arts and humanities, although the total external funding brought in by these fields is less than 1% of the University's total research volume. That year OVPR provided funds through this program to 48 humanities and arts projects, from support for the production of a publication or recording, to larger grants that allowed faculty members to put on performances, conferences, and exhibits.

5.2.3
Recognition

Another critical aspect of creating a life of learning is to recognize the academic and professional achievements of faculty, students, and staff. In this way, the University affirms its values and spotlights people who embody them. Below are descriptions of a sample of such awards.

Faculty Recognition

Collegiate and Endowed Professorships

The ability to bestow collegiate and endowed professorships is a critical means for the schools and colleges, and the University as a whole, to recognize, recruit, and retain a world-class faculty that is the core of a vibrant academic community. To this end, the University has established guidelines for creating endowed professorships in six categories: deans, department chairs, visiting faculty, research faculty, and for faculty development and collegiate professorships. As of July 2009, there were a total of 1,104 professorships in place at the University: 743 endowed professorships and 361 collegiate professorships.

In her annual address to the Senate Assembly in 2006, President Mary Sue Coleman issued a President's Challenge to raise funds for 20 fully endowed professorships. When a donor provided a gift of $1.5 million, the president matched it with $500,000 to reach the $2 million needed to create an endowed professorship. In May 2007, the University Record announced that nineteen of the 20 professorships had already been created.

> *"The new professorships are critical to the University's ability to recruit and retain the highly accomplished scholars and teachers whose talents and creativity enable the University to fulfill its mission. Top quality faculty offer students the very best educational experience and engage in the leading edge research that opens new opportunities in every area of the human endeavor."*
> Teresa A. Sullivan, Provost and Executive Vice President for Academic Affairs

Faculty Awards

To recognize and showcase the achievements of its faculty, the University has established an assortment of faculty awards. These awards are bestowed by central units that include the Office of the Provost, the Rackham Graduate School, and the Office of the Vice President for Research. The schools, colleges, and some other units also offer such awards. Information about the full range of faculty awards is available in the Faculty Handbook.

At the University-wide level, the Office of the Provost, the Office of the Vice President for Research, and the Rackham School of Graduate Studies bestow several awards on faculty and staff members:

- Considered one of the University's highest honors for a senior member of its active faculty, the **Henry Russel Lectureship** is awarded annually in recognition of a scholar's exceptional achievements in research, scholarship and/or creative endeavors, and an outstanding record of teaching, mentoring, and service.
- The **Distinguished University Professorship** award recognizes exceptional scholarly and/or creative achievement, national and international reputation, and superior teaching skills. Created in 1947 by the Board of Regents, this award aims to give its recipients the opportunity to pursue scholarly or creative activities that ensure their greatest contributions to the University and the nation. In consultation with the dean, each recipient selects a special name for his or her professorship. Each professorship also provides annual salary and research supplements. Distinguished University Professors retain their titles for as long as they retain their active University appointments, and they may also retain them after they retire.
- The University bestows the **Faculty Recognition Award** on faculty members who, in the early phase of their careers, have contributed significantly to the University through outstanding scholarly research and/or creative endeavors; excellent teaching, advising, and mentoring; and distinguished service. For awards that include external funding, the appropriate University-wide office undertakes a selection process to decide which proposals to put forward.
- There are several **Research Faculty Awards** at the University. Collegiate Research Professorships are awarded to full research professors whose exceptional scholarly achievements have advanced the knowledge in their academic fields of study. Research Faculty Achievement Awards are bestowed on research professors and research scientists at the full or associate levels who have demonstrated outstanding scholarly achievements through significant contributions to an academic field of study over time, who have made a specific outstanding discovery, or innovative technology. Research Faculty Recognition Awards are given to research professors and research scientists at the assistant and associate levels with exceptional scholarly achievements.
- **School and College Awards**. Most of the schools and colleges have established several awards to honor the many achievements of their faculties.

Student Recognition

Recognizing students' academic achievements is important in creating an environment that celebrates excellence. Both undergraduate and graduate awards are offered by the University; examples are described below.

Undergraduate Awards and Honors

- To be admitted to the **LSA Honors Program**, a student's application must show that he or she is well suited for the program's challenging and stimulating academic environment, and is a person who seeks out academic challenges and has a strong desire to be part of a vigorous intellectual community.
- The **University Honors** designation is awarded to students who have earned, within designated criteria, a 3.5 grade point average or higher during a term. Students who achieve the University Honors designation for both winter and fall terms, and seniors who achieve University Honors designation for either of these terms are recognized at the University's Honors Convocation held each spring.
- Established in 1960 to promote and recognize academic excellence, the University awards the **William J. Branstrom Freshman Prize** to all first-term freshmen who rank in the upper five percent of their class. A notation with this honor is posted on the students' transcripts by the Office of the Registrar.
- To be named **James B. Angell Scholars**, LSA students must earn all A+, A, or A- grades for two or more consecutive terms in a calendar year, within designated criteria. Angell Scholar Honors are posted on a student's transcript, and recipients of this honor are invited to attend the annual Honors Convocation.
- The College of Engineering bestows several **leadership awards** and **college honors awards and prizes** on students at the annual Student Leaders and Honors Brunch. For example, the Harry Benford Award for Entrepreneurial Leadership is presented to an undergraduate or graduate student who has exhibited entrepreneurial flair and leadership ability, and who has capitalized effectively on technological and engineering resources. In addition, the Roger M. Jones Fellowship Abroad supports an outstanding graduating senior to pursue studies in literature and humanistic disciplines at a British university so as to broaden and deepen his or her undergraduate technical education.

Graduate and Professional Student Awards

- The Rackham Graduate School provides the Rackham Predoctoral Fellowship to outstanding doctoral students who have achieved candidacy and who are actively working on their dissertation research and writing. The fellowship provides three terms of support, including a stipend, health insurance, and candidacy tuition and fees for a maximum of twelve months. During 2009-10, Rackham plans to award more than 70 of these fellowships.

- The Outstanding Graduate Student Instructor Award recognizes instructors who have demonstrated exceptional ability, creativity, and continuous growth as teachers who serve as outstanding mentors and advisors to their students, colleagues, and others, and who have shown growth as scholars over the course of their graduate studies.

- The Distinguished Dissertation Award recognizes exceptional and unusually interesting work produced by doctoral students in the last phase of their graduate work, as well as overall academic accomplishment. Each year, the Rackham Graduate School bestows approximately eight such awards.

- **School and College Awards for Students**. All schools and colleges make special efforts to recognize the outstanding work of their students. For example, the Medical School has a rich history of honoring its students for attributes such as outstanding scholarship, achievement, or leadership. Each year at commencement, through numerous awards the school recognizes the distinguished members of the graduating class and the faculty members who have shaped their educational experience. For example, the school bestows the George R. DeMuth Medical Scientist Award for Excellence on a member of the graduating class who has demonstrated outstanding accomplishments in research and exhibited the personal and professional qualities desired in the complete physician. The Andrew J. Zweifler Award for Excellence in Clinical Skills is given to a graduating senior who has consistently demonstrated outstanding care and competence in verbal communication with patients, interviewing, counseling, and excellence in physical diagnosis.

Staff Recognition

As conveyed in the introduction to this chapter, staff members at the University play many important roles in the creation of a vibrant environment that promotes life-long learning. There are both central and many unit-specific awards for staff, a few examples of which are provided below.

- There are several Staff Recognition Awards at the University. The Distinguished Service Award honors an individual University staff member who has provided distinguished service to the University and to the community. The Outstanding Leadership Award honors an individual University staff member who has demonstrated outstanding leadership, vision, and initiative. The Exemplary Team Award honors a group of University staff members who have functioned as an exemplary team, whether formally or informally designated.

- The Distinguished Research Administrator Award is one of two awards given by the Office of the Vice President for Research (OVPR) to recognize exceptional and distinguished contributions or performance in the support of the research mission of the University. It honors individual staff members who have demonstrated, over a number of years, distinguished service that exemplifies the goals of professional research administration. Each winner receives an honorarium and an award plaque.

- The Staff Recognition Award in LSA is an example of a school-based initiative to recognize the achievements of its staff. Each year, the dean's office awards an Outstanding Individual Employee Award, the Kay Beattie Distinguished Service Award, and an Outstanding Staff Team Award.

5.3
EDUCATIONAL GOALS

Core Component 4b: The organization demonstrates that acquisition of a breadth of knowledge and skills and the exercise of intellectual inquiry are integral to its educational programs.

As examples of how the University, through its programs, encourages students to engage in intellectual inquiry and to acquire a breadth of knowledge and skills, in this section we will focus on academic program requirements, including distribution requirements; opportunities for students to engage in research; interdisciplinary offerings; and a sample of the range of opportunities that invite students to expand their intellectual horizons.

5.3.1
Academic Program Requirements

College of Literature, Science, and the Arts

In the fall of 2008, more than 16,000 undergraduate students were enrolled in LSA, which represents two-thirds of the undergraduate population. To complete the basic requirements for a Bachelor of Arts (B.A.) or Bachelor of Science

(B.S.) degree in LSA, students must complete 120 credits of course work, of which 100 credits must be from LSA courses. In meeting the minimum 120 credits, they must complete the following requirements: Introductory Composition, Upper-Level Writing, Quantitative Reasoning (QR), Race & Ethnicity (R&E), Fourth-term proficiency in a language other than English, a 30-credit Distribution Requirement, the requirements for a concentration (major) program, the requirements of a minor program (optional), and additional elective credits to reach the credit minimum.

Through its 30-credit Distribution Requirement, LSA adds intellectual breadth and diversity to the academic experience of the majority of University undergraduates. By meeting this requirement, students come to better understand and appreciate the major disciplinary areas of learning--the natural sciences, social sciences, and the humanities. The college's aim is that through this coursework, students develop a coherent view of essential concepts, structures, and intellectual methods that characterize these disciplines. Another goal is for students to begin to develop the skills and experiences necessary to consider how developments in one area of endeavor have an impact on another.

Since the college uses its Distribution Requirement to give students greater intellectual breadth, to fulfill this requirement they must enroll in courses outside their concentration department--above and beyond the courses they must take to meet their concentration requirements. Students must complete seven credits in the Natural Science (NS), Social Science (SS), and Humanities (HU) areas of study, for a total of 21 credits, plus three additional courses in any three of the following five areas: NS, SS, HU, Mathematical and Symbolic Analysis, or Creative Expression, for a total of nine credits. Interdisciplinary courses may also be applied toward meeting LSA's Distribution Requirement.

The remaining course requirements focus on the specific skill areas of writing, reasoning, and an appreciation and understanding of diversity. In addition, the option of fulfilling both a major and a minor provides students with the opportunity to broaden their knowledge base and intellectual exposure during their undergraduate studies at the University.

As described in Chapter Four, LSA provides a full array of academic advising services to its students through the Newnan Academic Advising Center to help its students navigate through the many choices they must make about their academic programs.

College of Engineering

In the fall of 2008, more than 5,000 undergraduates were enrolled in the College of Engineering, or about 20% of all undergraduates at that time--the second largest population of undergraduates at the University. The college offers fifteen undergraduate degree programs, each of which includes a common set of core requirements plus requirements unique to the major or field of specialization. A first-year student may declare an engineering degree program as early as his or her second term.

Two of the undergraduate learning outcomes that the College of Engineering has articulated for its students are particularly relevant to this section of the report. These two outcomes are a broad education necessary to understand the impact of engineering decisions in a global-social-economic-environmental context, and a recognition of the need for and an ability to engage in life-long learning. The college gears some of the content of the courses it offers to these learning outcomes. In addition, the college requires each of its students to enroll in 16 credit hours of humanities or social science courses. Students may pursue combined degree programs between the College of Engineering and four other schools and colleges: LSA, the Ross School of Business, the School of Music, Theatre & Dance, and the School of Art & Design.

Other Schools and Colleges

Four other schools admit first-year students: the School of Art & Design, the School of Kinesiology, the School of Music, Theatre & Dance, and the School of Nursing (see undergraduate admissions website). Generally speaking, first-year students who enroll directly into programs in one of the schools and colleges have already chosen their focus of study. Nonetheless, to varying degrees these students also enroll in courses outside of these academic units for greater academic depth. Several other schools admit students with more advanced standing, including the schools/colleges of business, public policy, education, dentistry, and pharmacy. The Schools of Natural Resources and the Environment and Information collaborate on undergraduate majors with LSA. In summary, nearly the entire University dedicates significant faculty resources to the instruction of undergraduates.

As would be expected, LSA provides the greatest amount of instruction to students who are enrolled in other programs. In 2007-08 LSA generated more than 570,000 undergraduate student credit hours (SCH), with nearly 100,000 of these hours of instruction to students outside the college. For graduate student instruction, the percentage is higher (~14,000 hours of a total of ~50,000 student credit hours taught by LSA to students enrolled in other programs).

5.3.2
Students Engaging in Research

Undergraduates

Undergraduate Research Opportunity Program

The Undergraduate Research Opportunity Program (UROP) is a nationally recognized program that provides opportunities for first- and second-year students to be directly involved in research with University of Michigan faculty members, postdoctoral research fellows, and graduate students. During the 2008-09 academic year more than 1,100 students participated in UROP. Since faculty members in all schools and colleges can act as UROP research sponsors, students have a wealth of research topics from which to choose. First-time UROP students complete assignments under the supervision of designated research sponsors and also participate in mandatory research seminars.

The UROP program provides funds to help cover the cost of research supplies, travel to conduct research, and travel to present research at a conference or to participate in a creative performance. For University sponsors and community sponsors, the program may provide research support for undergraduate research assistants, supplementary funding for out-of-pocket expenses that the sponsoring units incur, and funds for student wages, along with options for students to earn academic credit.

UROP also encourages students to continue their research experience by participating in a summer research fellowship. Summer Research Fellowship Programs are designed for students seeking an intense research experience in traditional laboratory settings and in the community. These fellowships give students a chance to undertake individual research projects, learn firsthand about the life of an academic researcher, think about academic and post graduate careers, and develop strong mentor relationships. Summer programs are available throughout the United States and are funded by government and private agencies. Most are hosted by U.S. colleges and universities, pay a stipend and travel costs, and provide housing. In many cases, students will use the summer to conduct work that forms the basis for an honors thesis or that contributes to a published article. In the summer of 2009, UROP worked with 75 summer research fellows who were selected from a competitive pool. The fellowships require students to work 40 hours per week on a research project for 10 weeks, attend research seminars, and present their research findings at a symposium in the fall.

In addition to UROP, the University runs more than 20 summer research experiences as part of Rackham's Summer Research Opportunity Program for undergraduates. Many of these programs offer an intensive introduction to research methods, research ethics, and opportunities for future graduate study.

Student Research Experiences

The results of the survey of 2008 graduating seniors showed that almost half of the students who responded said they had a research experience on campus. While participation in UROP played an important role, a full 87% of students engaged in some form of research through their classes, and 61% undertook some research of their own initiative. Most of the respondents worked in partnership with faculty members, and slightly over 25% reported that they worked on research with a graduate student. More than half of the respondents reported that they worked in laboratories, while others did research analysis, fieldwork, or statistical analysis (see below).

What type of work did you perform? (n=689)

Type of work	Percentage
Lab work	53%
Summarizing research	26%
Field research	19%
Statistical analysis	18%
Creative activity	10%
Library work	9%
Other	13%
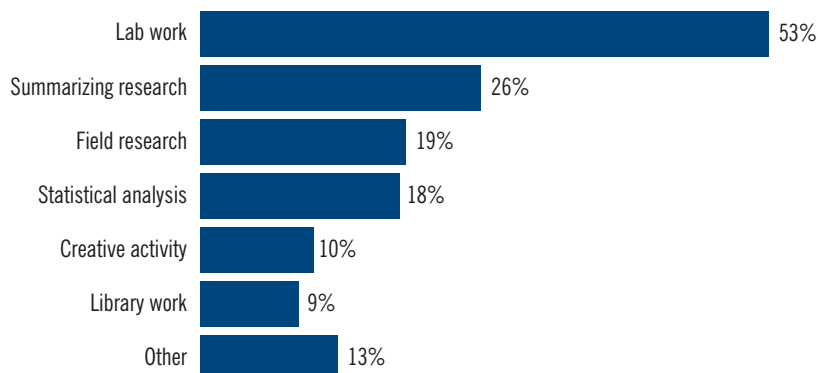
Participation in UROP accounted for about a third of the research conducted by students, typically for one or two terms. Almost as many students reported doing their research through other campus research opportunities. The most common origin for collaborative research was coursework, with nearly a quarter of this group completing research in every term. About half of the respondents reported conducting research through independent study.

Source and frequency of research experiences (n=684)
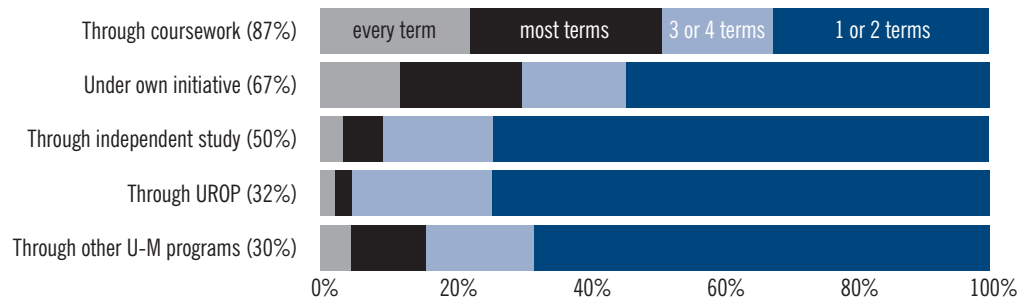
The role of research experiences was echoed by alumni cohorts that were surveyed in 2009, who responded similar levels of participation (2009 Alumni Report). These outcomes, collectively spanning more than 10 years of graduates, demonstrate the tradition of research as a key component of the experiences of University of Michigan undergraduate students.

Research Theses and Dissertations

Another research activity that students engage in is the thesis or dissertation. A select number of undergraduates write a thesis, many Master's degree students prepare Master's thesis, and doctoral students either produce a dissertation or another significant body of work relevant to the field of study.

Honors Program Thesis

Although undergraduate students who are not part of the LSA Honors Program may pursue an undergraduate thesis, we offer the Honors Thesis as an excellent example of the importance of this opportunity. With a few exceptions, such as in the Departments of Math and Computer Science, graduation "With Honors" requires the completion of a Senior Honors thesis. This thesis consists of detailed, original research that the student completes in the senior year in his or her field of study. Typically, students conduct their research and writing under the direction of a professor who shares the student's area or areas of interest.

Students may use their Senior Honors theses to fulfill the Upper Level Writing Requirement in LSA. In line with LSA Honors Program guidelines, students must draft and rewrite their work on a regular basis. A faculty advisor helps the student bring the thesis into its final form. In all, each student produces at least 50 pages of closely edited writing.

Doctoral Dissertation

Education in a Ph.D. program, which the Rackham Graduate School oversees at the University of Michigan, consists of two distinct stages. First, graduate students in doctoral programs take coursework to prepare for advance research. When a doctoral student successfully completes this coursework, meets other program requirements, including preliminary exams, and demonstrates readiness to do original and independent research, the department admits him or her to candidacy.

The doctoral candidate then forms a dissertation committee that must meet the guidelines of the Rackham Graduate School. The dissertation committee consists of at least four members, three of whom must be regular members of the Graduate Faculty, as defined by Rackham, two of whom must be from the doctoral candidate's home program, and one of whom is a cognate member who is familiar with the campus standards for doctoral research and holds at least a half-time appointment in a Rackham doctoral program outside the student's home department or program. Dissertation committee members are expected to have specific and complementary knowledge of a student's area of research, and to provide guidance and support throughout the research and writing process.

5.3.3
Interdisciplinary Activities

Interdisciplinary activity is one of the great strengths of the University of Michigan, which has long promoted and supported cross-disciplinary efforts of faculty members and students. As part of the University's reaccreditation report in 2000, we completed a self-study on advancing collaborative, integrative, and interdisciplinary research and learning. As noted in that report,

Michigan's distinction as a great public research university may be attributed both to the great pluralism and quality of its academic departments and professional schools, and to the way in which its faculty and students cross these borders and make a whole of its many parts.
[2000 Reaccreditation report; p. 4]

Interdisciplinary research and learning is advanced through a number of programs and initiatives. The Office of the President, the Office of the Provost and Executive Vice President for Academic Affairs, the Office of the Vice President for Research, the Horace H. Rackham School of Graduate Studies, and other offices promote and facilitate interdisciplinary activities and nurture efforts by faculty members and students who work at and across disciplinary boundaries. A sample of those activities that touch upon degree programs, teaching, structured collaborations, and faculty appointments is below. Examples of other interdisciplinary programs that draw on faculty members in several schools and colleges include the Organizational Studies Program, the Department of Biophysics, the Program in American Culture, the Program in the Environment, and the Center for the Study of Complex Systems.

Interdisciplinary Junior Faculty Initiative

A major effort mentioned earlier in Chapter Three is the Interdisciplinary Junior Faculty Initiative that President Mary Sue Coleman launched in 2007. Under this initiative, the University plans to hire up to 100 interdisciplinary scholars into junior faculty positions, supporting salary and start-up expenses. Thus far about 40 positions have been approved, based on more than a dozen successful cluster proposals.

Life Sciences Institute

The Life Sciences Institute is another key example of interdisciplinary activities at the University. The institute is a hub for collaboration among scientists from a variety of life science disciplines focusing on the biological problems of human health. By bringing scientists with different backgrounds and approaches together in an open-laboratory facility, the institute sparks new ideas and projects that accelerate our understanding of life and our progress toward treating disease. The institute creates opportunity for all University faculty members and students to engage across fields and other academic boundaries, and to actively participate in the regional community of life sciences industry to promote economic development through the development, licensing, and spin out of new technologies and discoveries.

Student-initiated Degree Programs

Students increasingly have intellectual goals that encompass a combination of fields but that do not exist formally as a degree program at the University. The Rackham Graduate School encourages and supports students who seek cross-disciplinary exploration and training, and allows well-qualified students to design their own Ph.D. programs as student-initiated degrees. A student-initiated Ph.D. program combines studies in two departments or programs that lead to a single Ph.D. degree citation (e.g., a Ph.D. in Anthropology and Near Eastern Studies).

Multidisciplinary Learning and Team Teaching Initiative

In 2005 the president committed $2.5 million to support team-teaching efforts and interdisciplinary degree programs at the undergraduate level over a five-year period. An underlying premise for the Multidisciplinary Learning Team Teaching Initiative was that to prepare for a life of productive endeavor in the 21st century, undergraduates at the University of Michigan must learn to solve problems across disciplines and to launch inquiries in uncharted territories of knowledge and practice. They must also examine the assumptions in any single academic discipline and integrate material from outside the patterns they learn about. Finally, they must locate issues within larger frameworks of thought, negotiate multiple perspectives, and develop habits of critical questioning and creative problem solving.

To help address this need, the president's Multidisciplinary Learning and Team Teaching (MLTT) initiative provided substantial support for several new high enrollment courses or course sequences as well as three new degree programs. Through funded courses and programs, a variety of team teaching models have surfaced that support long-term sustainability. Diminishing levels of support will be provided by MLTT as home departments absorb these courses and programs. Below are two examples of initiatives: a course and an academic program that benefitted from the MLTT initiative.

- Creative Process is a four-credit course open to all University of Michigan students that provides an experiential and conceptual foundation for cultivating creativity across academic fields. Through the course material, students recognize and demystify creativity--to become more confident and creative makers and doers. Students learn that creative expression in any field is not an event but a process that involves the interplay among creative impulse, media, modes of expression, and shared meanings. The course also allows students to develop a conceptual and contextual foundation for understanding the creative impulse and the processes of creative work.

The course is taught by interdisciplinary teams of faculty members from the School of Music, Theatre & Dance; College of Engineering; College of Architecture and Urban Planning; and the School of Art & Design.

- The **Program in Informatics** is an innovative interdisciplinary undergraduate concentration that draws on the expertise and disciplinary breadth of faculty members in the School of Information, the Computer Science and Engineering Division in the College of Engineering, and LSA. Informatics deals with the structure, behavior, and interactions of natural and artificial systems that allow users to collect, analyze, process, and communicate information for specific and explicit sets of goals, such as effective decision making or scientific analysis. Faculty members and students in the informatics program help design new uses for information technology that reflect and enhance the way people create, find, and use information--taking into account the social, cultural, and organizational settings in which people will use the solutions.

Rackham Graduate School Interdisciplinary Workshops

The Rackham School of Graduate Studies sponsors an ongoing program of interdisciplinary graduate student and faculty workshops. The program has two goals: to encourage students and faculty members who share intellectual interests but who do not necessarily have an easily available common forum to exchange ideas and collaborate, and to help advanced doctoral students create working groups that support them in developing research projects and writing their dissertations.

The groups are self-organized by the participants, have an ongoing core membership, meet regularly throughout the academic year, and have an interdisciplinary goal or end product. Groups may apply for funds to support group activities and compensate coordinators. Workshop topics have included American Politics, Human Microbiome Symposium, East Asian Gender Forum, Networks across Disciplines, and Visual Culture Workshop.

Interdepartmental and Dual Degrees for Graduate Students

In addition to doctoral programs located in a single department, school, or college of the University, the Rackham Graduate School offers a number of Interdepartmental Degree Programs. These doctoral programs, leading to a single degree, bring together faculty members from two or more departments, schools, or colleges. Faculty members across the University have initiated more than 20 Ph.D. programs that integrate different disciplines and fields, and that have been officially approved by the Rackham Executive Board. Some of these have been in existence for more than 50 years.

The graduate school also administers dual degree programs. Students in a Rackham dual degree program pursue a course of study leading to two degrees in two areas of specialization. These degrees may be either both in the graduate school, or a degree in a graduate school program plus a master's or professional degree administered by another school or college in the University.

Many of the University's professional schools also have dual degree options available for students who wish to pursue two fields of study. For example, the Law School offers 10 formal options for a dual degree with the J.D., and the Ross School of Business offers 24 options for a dual degree with the M.B.A.

GROCS Student Research Awards

The College of Engineering's Grant Opportunities-Collaborative Spaces (GROCS) gives grants for student-initiated research projects that use digital media in an academic activity. Project teams must be interdisciplinary, and one project goal must be to enhance collaboration.

5.3.4
Examples of Other Intellectually Enriching Opportunities

In addition to the examples of practices and structures above, the University engages in many activities that provide students with the opportunity to branch out beyond the boundaries of their own fields of studies. These include theme semesters, lecture series, offerings in institutes at the University, and other collaborative, interdisciplinary opportunities, a few of which are described below.

- **Theme Semesters** connect the intellectual and cultural strengths of the University of Michigan to the issues that define the world today. Through special courses, guest speakers, performances, and other public events, as well as a common reading program for all entering first-year students, faculty members and students from across campus explore complex issues in ways that promote new perspectives and greater insight. The roots of the theme semester concept reach back to 1980 when LSA and the School of Music collaborated on the program *Experiment in Education: the Eighteenth-Century Semester*. Theme semester topics since then have included *The Environmental Theme Semester*, *Detroit 300 Theme Semester*, *Cultural Treasures of the Middle East*, *ChinaNow*, *Energy Futures*, and, in the winter of 2009, The Universe: Yours to Discover.

- The Lurie Institute for Entrepreneurial Studies in the Ross School of Business provides various grants. The **Business Design Grant**, which is available to all University students regardless of their degree program, is for students who have developed a brand new technology or an idea for a product or service, or who have identified a market need but aren't sure if a business can be created around it. The relatively low-barrier application process encourages students from across the University to apply for the chance to engage in formal business development activities. Students examine the product, technology, or market need to see what potential business can be proposed to exploit the opportunity. This stage of the program is managed by the Center for Entrepreneurship. Additional grants are available to business school students and to teams that include at least one Ross School student to undertake feasibility studies and company start-ups.

- The College of Engineering's Center for Entrepreneurship, in partnership with units and organizations inside and outside the University, hosts the contest **1,000 Pitches** to encourage ideas about new businesses, inventions, and non-profit organizations. University of Michigan students, staff, and faculty may submit pitches, each of which consists of a video clip no longer than three minutes. In fall 2008 the categories were social, environmental, high tech, health, global business, local business, and green campus.

- Established with support from School of Art & Design alumna Penny W. Stamps, the **Distinguished Visitors Series** brings emerging and established artists and designers from a broad spectrum of media to the school to conduct a public lecture and engage with students, faculty members, and the larger University and Ann Arbor communities. All programs, which are free of charge and open to the public, take place on Thursdays at the Michigan Theater in downtown Ann Arbor. The fall 2009 Schedule provides a snapshot of the nature of these events.

- In 1995 the Department of Physics in LSA began sharing some of the latest ideas in the physical sciences with the public in the **Saturday Morning Physics** lecture series. Designed for general audiences, the lectures offer an opportunity to hear scientists discuss their work in easy-to-understand, non-technical terms. The multimedia presentations include hands-on demonstrations of the principles discussed, along with slides, video, and computer simulations.

- **Institute for the Humanities Lecture Series**. The University's Institute for the Humanities is a center that fosters innovative, collaborative study in the humanities and arts. Each year the institute provides fellowships for Michigan faculty members, graduate students, and visiting scholars who work on interdisciplinary projects, as well as an array of public and scholarly events, including weekly brown bag talks, public lectures, conferences, art exhibits, and performances. Information about the 2008-09 Brown Bag Lecture Series can be found online.

Student Organizations at the University

Maize Pages, the University's directory of student organizations, lists more than 1,100 student organizations. These organizations run the full gamut of interests. By nature, they are connected to academics (often discipline- or academic field-based), student governance, politics, service, social activities, recreation, athletics, religion or spirituality, Greek Life, race and ethnicity, personal identities, the media, performance and entertainment, or are otherwise linked to a wide variety of interests. Student organizations are a prime example of the ways in which students take the lead in expanding the academically- and personally-enriching opportunities available to University students.

5.4
EDUCATIONAL IMPACT AND INTEGRITY

Core Component 4c: The organization assesses the usefulness of its curricula to students who will live and work in a global, diverse and technological society.
Core Component 4d: The organization provides support to ensure that faculty, students, and staff acquire, discover, and apply knowledge responsibly.

The previous chapters have included descriptions of the University's main efforts to hear from students and alumni about their impressions of the impact of a University of Michigan education on them and on their lives, including the University's 2008 survey of graduating seniors, our 2009 survey of alumni, and the National Survey of Student Engagement (NSSE). To speak to the usefulness of the University's curricula, in this section we will highlight the feedback we've received from students and alumni about the overall quality of the educational experience. We will also touch on their responses to items specific to their ability to live and work in a global, diverse, and technological society. In addition to data from the surveys mentioned above, we will draw upon information from instruments not yet mentioned in the report, such as the "Survey of Doctoral Recipients" and the University Career Center's First Destination Survey. In addition, we will touch on institutional rankings, school and college advisory boards, and some of the important feedback we received from alumni and donors who participated in a series of focus groups as part of the University's preparations for the reaccreditation review.

5.4.1
Survey Instruments

Graduating Senior Survey

The survey of graduating seniors that the University conducted in the spring of 2008 was described in Chapter Three (see summary report and full report). Of the 4,950 seniors the University invited to participate, 1,673 of them chose to respond, for a 34% response rate. The survey posed questions about students' career and graduate school plans; acquired skills; debt and costs; and research, international, and community service experiences.

With respect to their educational experiences, most respondents (87%) reported having gained research experience through their coursework, lab work, or participation in the Undergraduate Research Opportunity Program. About 70% of the respondents studied a foreign language for more than three terms, 75% had enrolled in a class with an intentional focus, and just over 50% traveled abroad as undergraduates. The vast majority (83%) of respondents also participated in some kind of community service or outreach activity.

With respect to their immediate and future plans, of the 60% of respondents who said they planned to work right after graduation, half of them (or 30% of the total) had secured a job by the time they completed the survey. Compared to the 89% who expressed plans to get an additional degree at some point, another 33% of respondents were headed to graduate or professional school right away.

With regard to respondents' perceptions about how well their University experiences had prepared them for life after graduation, there were several key findings (see figure below). The respondents said the University helped them, in particular, to improve their intellectual skills, particularly critical thinking, and their ability to apply knowledge from their majors, acquire new skills on their own, and to judge the value of information. Responding seniors were also very positive about their ability to work in teams, and their ability to get along with people from all backgrounds. The respondents also indicated that the University prepared them live and work in a global, diverse, and technological society.

How well did the university prepare you to: (n=1535)
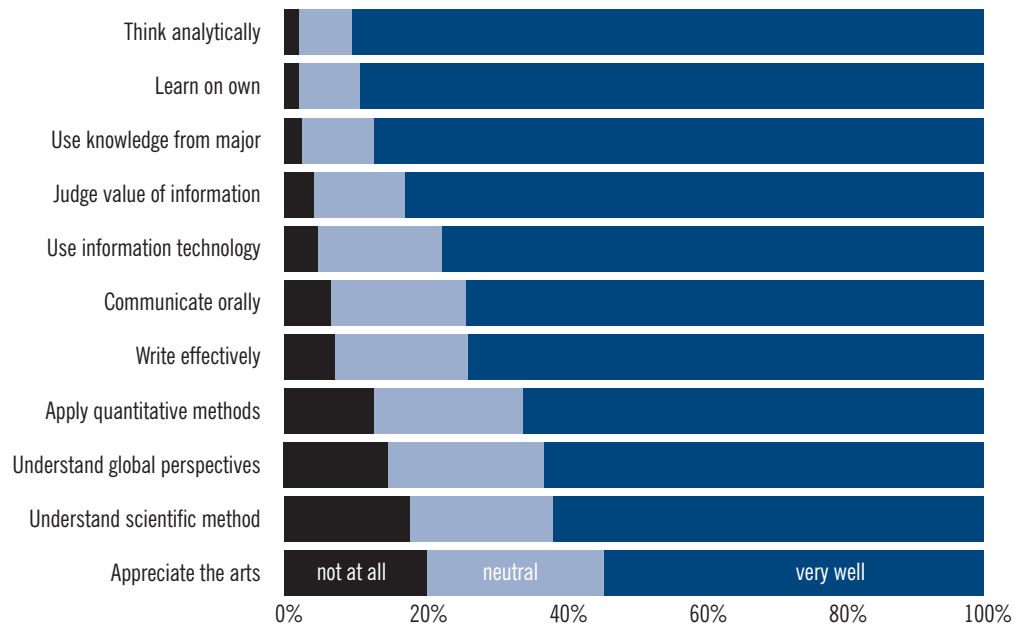
College Senior Survey

As mentioned earlier in this report, in the spring of 2008 the Division of Student Affairs conducted the College Senior Survey for the second year in a row, with plans to administer it annually. This survey is a complement to the First Year Student Survey the University has administered for many years through the Cooperative Institutional Research Program (CIRP). The College Senior Survey asks students about their college experiences, including whether they feel prepared to live and work in a global, diverse, and technological society.

With respect to survey items related to students' ability to live and work in a diverse society, results of the University's 2008 survey of graduating seniors show that the majority of graduating students socialized with someone of a different racial or ethnic group (55.7%), took an ethnic studies course (58.3%), or had a roommate of a different race or ethnicity (58.9%). In addition, some respondents participated in a racial or ethnic student organization (24.1%). With regard to the students' satisfaction with their University experience, most respondents were also satisfied with leadership opportunities (72.2%), the relevance of their coursework to their future career plans (62.6%) and career counseling (50.5%), and 43.5% were satisfied with the University's job placement services for students. With regard to the degree to which the respondents felt they had acquired knowledge and skills since high school, substantial portions of the respondents reported "much stronger" skills in the areas of critical thinking (49.8%), preparedness for graduate education (42.2%) or employment (36.7%), knowledge of people of difference races or cultures (34.6%), and understanding of global issues (29.4%). In addition, some said that their professors frequently provided them with opportunities to apply their classroom learning to "real-life" issues (20%). Overall, over 90% of the respondents said that if they could make their college choice over again, they would enroll at the University of Michigan.

National Survey of Student Engagement

The National Survey of Student Engagement (NSSE) is administered periodically by the Office of Budget and Planning to freshmen and seniors in an effort to gauge students' experiences in college, inside and outside the classroom. In 2003, approximately 750 University freshmen and seniors participated in the survey. Overall, the respondents were quite satisfied with their educational experiences. Compared to the survey averages at similar research universities and all participating institutions, University of Michigan students gave significantly higher ratings to their experience. Specifically, 51% seniors and 43% of freshmen reported that they had an "excellent" educational experience at the University. An additional 47% of freshmen and 39% of seniors had a "good" education experience. More than 85% of seniors and freshmen stated that they would "definitely" or "probably" enroll at the University of Michigan if they were to start over again.

University Alumni Survey

In spring of 2009, the University conducted a survey of six cohorts of undergraduate alumni: The classes of 2004, 2005, and 2006, representing a 3-5 year timeframe since graduation, and the classes of 1998, 1999, and 2000, representing a 9-11 year timeframe. Just over 3,000 alumni chose to participate, who appear representative in their distribution across the schools and colleges from which they graduated (see 2009 Alumni report). After 9-11 years out, 86% of the University of Michigan alumni respondents were employed. Of this group, over half of them worked in private industry (56%), about 19% worked in the public sector, and 17% worked for private non-profit organizations. Another four percent were self-employed or working in their own businesses.

When asked to assess how well the University prepared them for their chosen career, respondents reported positively, with 85% saying "very well" or "generally well" (see below). This positive assessment was true among both groups of alumni, those who graduated more recently as well as those who had been out about a decade.

Preparation for Career (n=2379)

	3–5 years out	9–11 years out
Very/generally well	85%	86%
Neutral	11%	10%
Inadequate/very inadequate	3%	3%
Not relevant	2%	1%
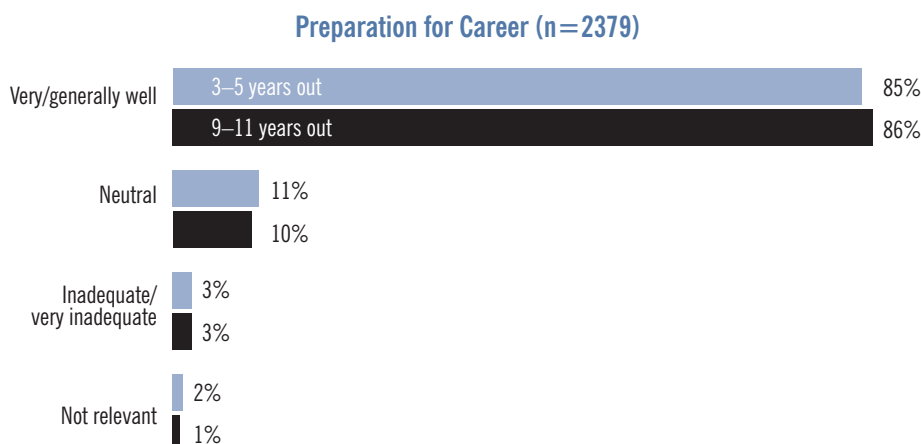
Similarly, when alumni who had continued with further study were asked about the preparation provided by the University, 87% reported that they were well prepared for graduate or professional school (below).

Preparation for Graduate/Professional School (n=1749)

Very/generally well prepared	87%
Adequately prepared	9%
Inadequately/not at all prepared	2%
Not relevant	2%
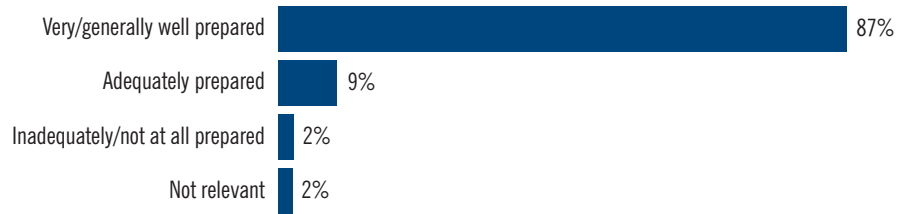
Focus Groups with Alumni, Parents, and Donors

Out of a commitment to hear from the University's constituencies as part of its preparations for the reaccreditation review, the Accreditation Team convened multiple discussion groups of University parents, alumni, and donors. Discussion topics included internationalization; outreach and service; research, professional, and creative activities; and student learning. People in these discussion groups responded to questions about the involvement of undergraduate students in research and creative activities, ways the University should prepare its student to become global citizens, and how best to integrate international and intercultural dimensions into the curriculum.

Among other items, the parents commented positively on the University's effect on their children's ability to choose a career direction, be global citizens, develop social skills, engage in leadership, receive both a practical and broad education, and experience the rewards of being involved directly in research. The alumni discussion group on research, professional, and creative activities commented on the importance of students being constructively engaged, having their viewpoints challenged and exploring new ones, learning through hands-on activities, being informed about faculty members' activities outside the classroom, making professional connections with faculty members, and benefitting from the overall package of what students learn during their time at the University. In discussions with donors on the same topic, discussion participants commented enthusiastically on the research experiences their children had as University undergraduates. A number of them offered specific examples of the benefits their children received, including winning an award, how committed the faculty members were, the interdisciplinary nature of the work, the opportunity to interact with faculty, and the ways in which the students' involvement in research grounded them for the entire University experience. Other benefits mentioned were the chance to connect with prestigious professors, the effect of research opportunities on the University's ability to recruit high quality undergraduates, and the ways in which such involvement transforms students' perceptions and their career plans.

Survey of Doctoral Recipients

Each year the Rackham Graduate School solicits the views of its students who are completing their doctorates to learn about the quality of their academic and student life during their time at the University. Rackham then groups their responses into multi-year cohorts by the four divisions: Biological and Health Sciences, Physical Sciences and Engineering, Social Sciences, and Humanities and the Arts. For the cohort of doctoral graduates who completed their degrees between August 2003 and April 2008 (the 2004-2008 cohort), the overall response rate was 61% (from a total of 3,642 doctoral recipients during this time period).

Responses of the cohort to the question, "All things considered, how satisfied are you with your experience in graduate school at U-M?", show that a strong majority of doctoral recipients (80%) expressed satisfaction with their experience, and only a very small percentage (4%) said they were dissatisfied. Below is a table that shows responses from this cohort to the same question by division, which reveals only minor differences.

	Biological and Health Sciences	Physical Sciences and Engineering	Social Sciences	Humanities and the Arts
Satisfied	81%	80%	80%	78%
Neutral	12%	13%	14%	14%
Dissatisfied	4%	4%	4%	4%
No Response	2%	3%	3%	4%

These results show strong levels of overall satisfaction among recent doctoral recipients. Comparisons with the 1999-2003 cohort show slightly higher levels of overall satisfaction among doctoral recipients in the 2004-2008 cohort (e.g., 76% satisfied and 6% dissatisfied in the 1999-2003 cohort).

First Destination Survey

Each year, six to nine months after commencement, the University Career Center administers its First Destination Survey to recent graduates from the College of Literature, Science, and the Arts and the Taubman College of Architecture and Urban Planning, and to the Schools of Education, Music, Theatre & Dance, Nursing, and Social Work. These schools participate in this survey because they do not conduct a first destination survey of their own. The survey, which elicits on average about a 35% response rate, helps the University to better understand what students have chosen to do following graduation. The survey questions address issues such as each respondent's chosen field, geographic location, career potential and continuing education. The resultant data is shared with individual departments, employers, students, and the media.

5.4.2
Advisory Groups

Central administrative offices and the schools and colleges have various advisory boards to communicate with and hear from current students, and from employers and people who have a vested interest in the nature and quality of the education that our students are receiving to prepare them for future employment and life activities. A few examples of advisory groups that provide students with an important voice in working to continually improve the University's education and experience for students are below.

College of Literature, Science, and the Arts

The college provides students in the LSA Student Government with the opportunity to help enhance the undergraduate experience through housing the organization in a new, permanent office in the college's largest classroom complex, and through active collaboration with several LSA Student Government groups, including those below.

- The **Academic Affairs Committee** within LSA Student Government provides students a means for communicating with the dean's office and the possibility to enhance the academic experience for the college's students. This committee works on a variety of projects, including collaborating with faculty members on theme semesters, integrating the academic and campus climates, encouraging dialogue between students and faculty members on academic issues, and fostering communication with the Career Center. The Student Advisory Board, a subcommittee, works with LSA's Office of Instructional Support Services to improve classroom facilities, tools, and technology.
- The **Student Advisory Panel to Academic Advising** serves to improve the quality of undergraduate advising services and brings the specific concerns of students to relevant administrators. In fulfilling its mission, the panel often collaborates with academic departments, the Newnan Advising Center, the Career Center, concentration advising, and the Office of New Student Programs.

Ross School of Business

The Ross School of Business has numerous advisory groups that help to connect students, faculty, and staff so they can work together in the interest of students. Two examples are:

- The **Student Government Association** (SGA) represents the needs and interests of all Ross School students through involvement in the school's decision-making, with the goal of protecting student's rights and driving positive change by helping to ensure that students and graduates acquire the skills and aptitudes that will position them to meet the needs of employers and other external constituencies.
- The **Ross Leadership Initiative** offers distinctive action-based learning programs that immerse students in real-world contexts to apply the analytical skills they learn in the school's broad-based management curriculum. A Student Advisory Board made up of MBA students who are passionate about leadership and leadership development help to guide this initiative. The goal is to prepare students to lead globally diverse teams, consider the role of business in society, and build organizational cultures that foster innovation.

College of Engineering

The College of Engineering has several advisory groups that include or are made up of students, a few of which are described below:

- The **University of Michigan Engineering Council** (UMEC) represents and connects College of Engineering students, engineering societies, and other members of the college community. Through the activities of its committees, UMEC links students to the educational environment in ways that benefit the future careers of all engineering students. For example, the Leadership Committee holds regular workshops and retreats to teach leadership skills and improve collaborative efforts between UMEC member societies and the College of Engineering. In addition, the Student Affairs Committee organizes events and meetings to connect students, faculty, and staff and to provide open forums where students can pose questions of deans, department chairs,

and other leaders in the college. First year engineering students are represented through the Freshman Council Subcommittee, to which the college provides dedicated resources. Other committees organize service events to promote community service and social action among all engineering students.

- The Undergraduate Student Advisory Board (USAB) provides a voice for undergraduate students regarding academic, social, and campus community issues. The USAB facilitates the engagement of undergraduate students in the improvement of their living and learning environments by working closely with the college administration, with student societies and groups, and with University and college offices to identify and implement solutions to critical problems. The board is sponsored by the dean's office, but is independent.

Student Involvement on Other Advisory Groups

In addition to advisory groups established by the schools and colleges, advisory groups also exist at the central administration level (provost and other executive officers), often with a more outward focus on societal needs.

5.4.3
Institutional Rankings

The University of Michigan receives high marks from publications and organizations that have methodologies in place to rank universities, as shown by the example rankings below:

- 26th National Universities Rankings (2009), U.S. News and World Report.
- 4th Best Colleges: Public Schools National Universities (2009), U.S. News and World Report.
- 6th Annual College Rankings – National Universities (2007), Washington Monthly.
- 1st in MediaBuzz' College Rankings (2009), Global Language Monitor (GLM). The GLM documents, analyzes, and tracks global trends in language, with a particular emphasis on global English. The GLM ranks the nation's colleges and universities according to their appearance on the Internet, throughout the blogosphere, as well in the global print and electronic media. Operating in a different sphere than the rankings above, this process offers a new look at how to assess and rank universities in an increasingly online and connected world.

The Office of Budget and Planning provides a summary of the University's institutional rankings for the University overall and for its departments. Most of this information is from sources that use the results of surveys of university administrators and/or the faculty as the basis for rankings of academic reputation of institutions and programs. This indicator of academic quality is commonly used by publishers of college rankings.

5.4.4
Intellectual Responsibility

Chapter 2, on institutional integrity, described many policies that also apply to matters of intellectual integrity addressed in this section of the report. Below we will highlight key University policies that are related to the University's expectations for its faculty and students to act with academic integrity; we will also describe the general process by which the University identities and resolves questionable actions, instances of noncompliance, and policy violations. We end this section with a focus on resources for educating, resolving, monitoring and, where necessary, disciplining members of the community in such situations.

Policy Statement on the Integrity of Scholarship

Integrity in scholarship and teaching is a fundamental value upon which the University is founded. The Policy Statement on the Integrity of Scholarship describes the principles underlying the University's commitment to integrity in scholarship. It emphasizes the responsibilities of faculty, staff, students, and administration in this regard, and describes major offenses in misconduct. It also includes the companion "Procedures for Investigating Allegations of Misconduct in the Pursuit of Scholarship and Research."

As stated in the policy, it is a fundamental responsibility of members of the University community to maintain the trust of the public, to effectively address cases of academic misconduct, and to preserve the University's high standards of scholarly integrity, and, in this way, its reputation. Misconduct in the pursuit of scholarship and research includes the fabrication of data, plagiarism, abuse of confidentiality, falsification in research, dishonesty in publication, deliberate violation of regulations, property violations, failure to report observed major offenses, or taking punitive action against an individual for having reported alleged major offenses. The procedures document provides the steps that the University takes when an alleged case of misconduct surfaces.

Academic and Professional Integrity

The Rackham Graduate School's Academic and Professional Integrity Policy applies to all Rackham students, who make up half of all graduate and professional students at the University. This policy articulates the key principle

that a clear sense of academic honesty and responsibility is fundamental to the University's scholarly community and that, to this end, the University expects its students to demonstrate honesty and integrity in all their academic activities. Students do so by maintaining high standards of conduct while engaged in course work, research, dissertation or thesis preparation, and other activities related to academics and their profession.

The policy also describes some of the key roles that graduate students hold: scholar/researcher, teacher, supervisor of employees, representative to the public (of the University, the discipline, and/or the profession), professional colleague, and provider of client services. Because students take on multiple roles in multiple settings, some types of conduct are both academic and professional in nature--hence, the inclusive nature of the policy. The policy also emphasizes the responsibilities that faculty members and administrators have for holding students accountable for the high standards of integrity the policy articulates, and for serving as role models in this regard. This expectation applies in courses and in all research settings.

Offenses against the standards of academic integrity include cheating; plagiarism; falsification or improper representation of data; dishonesty in publication; abuse of confidentiality; misuse of academic records, computer facilities, human subjects, or vertebrate animals; illegally or carelessly obtaining, using, or providing dangerous substances; obstruction of academic activities; attempting, aiding, or abetting academic misconduct; and other forms of academic misconduct that are commonly accepted within the scientific community.

Finally, the policy states that violations of these important standards may result in serious consequences for students, including immediate disciplinary action and future professional disrepute. The policy refers to the companion "Procedures for Reporting and Investigating Allegations of Academic and Professional Misconduct by Graduate Students."

Other Honor Codes or Academic Integrity Policies

 All schools and colleges have honor codes and/or integrity policies in place that are available online; a summary list is maintained on a website managed by the Center for Research on Learning and Teaching.

5.4.5
Ensuring Act with Integrity and Responsibly

To ensure that the University's faculty, staff, and students act with integrity and responsibly, a multi-layered system is in place for identifying and responding to questionable activities, alleged instances of non-compliance, or alleged violations of policy. There are five basic stages in this process:

1. **Information arises about a questionable activity, a possible point of non-compliance, or a possible violation of University policy**. The sources of such information can include an individual who discovers an unintended or uninformed point of non-compliance and brings it to the attention of another person (e.g., a supervisor, unit head, or compliance officer). In other cases, someone files a concern or complaint about a faculty or staff member, or about a University unit or office. In yet other cases, the information may come from a person or entity outside the University. Although the University considers talking to one's supervisor as an important first-line approach for reporting questionable activities, it also provides the means for people to raise such concerns anonymously. The University offers a compliance hotline (by telephone or online), which provides an anonymous online option for reporting allegations of hate crimes or bias incidents, and also an anonymous online reporting mechanism for concerns about possible noncompliance with University policies for the humane care and use of laboratory animals. On its Compliance Hotline site, the University also refers people to offices on campus to which people should direct other types of concerns.
2. **Gathering information and assessing the situation**. The appropriate person, group, or office at the University gathers more information to assess the circumstances and decide on appropriate next steps, possibly working in triage with others at the University. Assessing the degree of potential risk in the situation (e.g., to a person, to people, or to one or more animals) is a crucial factor at this point in the process. Whether and to what degree people or animals are at risk will determine the speed and aggressiveness with which the person or office will take action steps to resolve the situation.
3. **Resolving the situation**. When it is decided that the situation warrants follow-up, the appropriate person, group, or office, often in conjunction with others, takes the necessary steps to resolve the situation.
4. **Monitoring the situation and addressing systemic issues**. Where warranted, the appropriate person, group, or office monitors the situation to be sure it is fully resolved and is unlikely to reoccur, and also addresses any systemic issues. This stage of the process may involve notifying others who may be or have been affected, educational efforts for persons or the unit, taking steps to address procedures or policies at the University that may have contributed to the problem, or putting limits into place.

5. **Taking disciplinary action**. Due to the significant emphasis the University places on identifying and resolving questionable activities and instances of noncompliance, it is only in very rare cases that issues of noncompliance (generally when they are serious or continuing) that the University takes disciplinary action. Such action can result in disciplinary sanctions up to or including dismissal from the University.

University Resources

The resources the University provides to educate faculty, staff, and students were described in detail in Chapter Two, so only a list of these activities is provided here.

- **Educational Resources:**
  - Conflicts of interest and conflicts of commitment tutorials for faculty and staff.
  - Program for Education and Evaluation in Responsible Research and Scholarship (PEERRS).
  - Academic integrity: Resources for the University of Michigan.
- **Monitoring:**
  - Health and Behavioral Sciences Institutional Research Boards.
  - Medical Institutional Research Boards.
  - Office of University Audits.
  - Office of Internal Controls--Business & Finance.
- **Conflict Resolution and Grievance Processes:**
  - Student ombuds.
  - Rackham Graduate School dispute resolution.
  - School and college faculty ombuds.
  - University Faculty Ombuds.
  - Mediation Services for Faculty and Staff.
  - Faculty and Staff Assistance Program (FASAP).
  - Formal grievance procedures for faculty, staff, and students.

5.5
LOOKING FORWARD

As part of the reaccreditation process we convened an accreditation working group (the AWGs were introduced in Chapter One) that was asked to examine the meaning and value of the University's knowledge environment, and to include a distinctly forward-looking approach in its deliberations. The AWG examined ways in which the University could build on its current strengths and considered possible areas for future improvement. Each AWG produced a set of recommendations that have been incorporated into this report. Since each group consisted of a relatively small number of engaged faculty or staff members, it is likely that the University community will review the recommendations and suggest changes to this list through revisions, additions, and possibly deletions. Especially during a time of fiscal constraints, the University is proceeding deliberately and leadership will work closely with the University community before deciding on next steps.

The comments below do not attempt to summarize the University's knowledge environment or reflect all the points that were made earlier in this chapter. Rather, they are a few key efforts that seem important for the University of Michigan as we move forward. These recommendations are presented to stimulate further conversation and thought, and are not intended to convey institutional approval or commitment at this time.

5.5.1
Reflection and Dialogue

Decentralization is a key strength of the University of Michigan; at the same time respectful, serious conversation across our differences is possible, and strengthens our community and our sense of common mission. One of the recommendations, therefore, is that we continue the current program of campus forums on issues in higher education and support the offering of follow-up programs in units.

- **Encourage purposeful reflection and thoughtful dialogue across the different sectors of the University**. The University values the creativity that has resulted from the University's decentralized structure, but the AWG suggests that we might do more to improve the exchanges among units—by establishing, for example, a knowledge inventory, electronic suggestion boxes, and more opportunity for cross-unit interactions. We suggests that the provost sponsor programs for discussion of issues in higher education, modeled on the provost's forums and the Provost's Seminar on Teaching.
- **Invest in scholarship that addresses the changing knowledge environment**. The AWG concluded that the University needs to expand its efforts to understand the changing knowledge environment and, specifically, the situation and responsibilities of public universities. Changes in technology during the next decade are likely to have an immense impact, and it is crucial to invest in understanding this transformation.

5.5.2
An Evolving Funding Environment

The University of Michigan is an institution with an extraordinary volume of research and creative activities, but it must remain able to respond to a continuously, and sometimes rapidly-changing funding environment. The proportion of discretionary funding administered through the Office of the Vice President for Research, therefore, seems relatively low for the size of the enterprise. The ability to experiment, to sponsor emerging and high-risk areas of research, seems vital. So does the ability to fund activities that may not attract external funds, but that the community finds valuable--for example, creative performances or research into technologies for underserved groups with high social return but little profit potential. One of the AWG's recommendations is that the University consider increasing and perhaps decentralizing seed grant funding.

- **Seed innovative, high risk, and socially valuable research and creative activities**. We suggest a follow-up study assessing how much discretionary funding is available on campus, and where decisions are made. Should the University, including OVPR, have more discretionary funding? Should there be more funding programs outside of OVPR? Are multiple models of knowledge making accommodated in the process? Given that inter-disciplinarity is a distinctive strength of this University, is there sufficient internal funding for interdisciplinary projects that may not easily be funded externally?

5.5.3
Knowledge Sharing

The University of Michigan holds one of the world's largest research libraries. However, as the systems of publication break down the University will not only find itself increasingly challenged to acquire and discover knowledge but will face even greater challenges in sustaining a dialogue with those outside the walls of the institution. Leadership in this field implies both studying these issues, and intervening. In response, the University should consider investing in research on the ways in which new information technology and media are changing, and how knowledge is created and conserved. Universities have an opportunity to contribute to the reshaping of publication in our world. The recent partnership between the University of Michigan and Google, Inc., to digitize our libraries' holdings, and the related development of the Hathi Trust Digital Library, represents a seismic shift. The decision to move the University of Michigan Press into the University Library offers one platform for creating new, more viable publishing models. The University should also challenge itself to lead in the creation of new processes of peer review while still ensuring value and authority. Together with similar institutions of higher education, we could create new outlets for scholarship that are either open access or have more sustainable economic models.

- **Maintain and extend our leadership in exploring new forms of knowledge sharing, including scholarly publication**. Changes in the economics of the publishing industry along with technological advances in communication are having serious effects on various aspects of professional development. However, new forms of publication and creative expression continue to emerge, and the University has the potential to be a leader in this effort.

5.5.4
Students and Staff

Undergraduate and Graduate Student Research

Undergraduate research is not unique to the University of Michigan or to research universities in general. While it increasingly happens at liberal arts colleges as well, University of Michigan students have opportunities to participate in the creation of transformative, leading-edge knowledge. In the discussions mentioned earlier, University alumni have said forcefully that we should make a research experience available to as many students as possible, across all the disciplines. One of the recommendations, therefore, is an increased focus and increased funding for undergraduate research opportunities in the curriculum and other research-based opportunities. Given that undergraduate students increasingly select projects that involve non-LSA programs, such growth of the program should involve all participating units. In some cases, increased support for research would apply to graduate student experiences as well, as in the Grant Opportunities/Collaborative Spaces (GROCS) program based in the Digital Media Commons, for example.

- **Make activities that involve students in research collaborations a priority**. At both the undergraduate and graduate levels, student involvement in research, especially collaborative and interdisciplinary research, greatly enhances the University's knowledge environment. Current programs, such as UROP, could be expanded, but also other forms of research activities could be promoted and recognized as part of the educational experience at a research university (perhaps involving electronic portfolios that were mentioned previously).

University staff

The AWG expressed concern about how many experienced staff persons are scheduled to retire in the near future, within a relatively short time frame. These individuals represent an enormous amount of institutional knowledge, and the University needs to have a process in place to deal with this transition. We also need ways to enhance communication among the staff.

- **Enhance the appreciation for the work of University staff and ensure their continued strength**. Faculty members and students rely on the successful selection, development, and retention of staff to create the "Michigan Difference." Staff leaders could be involved in the development of programs at many levels, with particular attention to making sure that staff knowledge is preserved in key areas of distinction, such as the support of interdisciplinary research and teaching.

5.5.5
Accountability and Assessment

The AWG was persuaded by arguments for a greater need for institutional accountability and assessment, and taking charge of creating effective measures for student learning (see Chapter Four). An inquiry-based orientation enables immediate recognition of the importance of having sophisticated measures that can demonstrate growth in students who are already high achievers when they enter the University, and that focus less on the knowledge students possess than on what they can do. The University also needs to consider measures that enable faculty members who have gained public recognition to reallocate time to take advantage of (often short-lived) opportunities to disseminate knowledge. Faculty members in all fields would benefit from greater institutional support for connecting with communities outside the University, so that the distinctive public work of artists and architects, for example, is accommodated.

- **Create more sophisticated area and unit-specific mechanisms for assessment**. In a changing knowledge environment, successful instruments for evaluating education and research, such as publications and societal engagement, may not remain sufficient, so the University would benefit from expanding its existing assessment mechanisms.

5.6
CONCLUSION

Everyone benefits from wide conversations about matters of shared interest and common concern at the University. For example, linguists' views of the language politics of the classroom are perhaps surprising to many and deserve discussion. So, too, do such questions as these: What will students do with their English majors, or their sociology majors, or their art degrees? Interestingly, the disciplinary major itself first entered the undergraduate curriculum at Johns Hopkins, as part of the shift to today's research university model. The separation of activities into many units, schools, colleges, and their departments, enables the University's rich variety, but also calls for continued conversation. Our community already engages in more dialogue than at many institutions. For example, the University's system of layered review recognizes that specialization and integration need to be balanced in the evaluation of faculty and academic programs. The University's strength in interdisciplinary scholarship also reflects our culture of open dialogue. Interdisciplinarity is not an alternative to specialized disciplinary investigation, but fully complementary of it. The campus community has many contrasting opinions, but also a deeply shared commitment to academic values of rigorous inquiry and openness at the University of Michigan.

UNIVERSITY OF MICHIGAN

ACCREDITATION 2010

6. ENGAGEMENT AND SERVICE

6. ENGAGEMENT AND SERVICE

6.1
INTRODUCTION

Criterion 5: As called for by its mission, the organization identifies its constituents and serves them in ways both value.

The reaccreditation criterion on engagement, outreach, and service reflects the growing interest in engagement in higher education as expressed, for example, in the emergence of service-learning as an approach to teaching, the advance of community-based research approaches, and publications that assess and recommend ways that faculty and universities can become more engaged. It also reflects the ethical view that, especially in light of considerable federal and state resources received, universities owe a great deal to society and that our work should significantly benefit the wider citizenry.

This introduction provides a conceptual framework for service and engagement activities at the University of Michigan, a definition of what the University means by these terms, brief summaries of the types of such activities and the people and organizations the University serves through them, a conceptual diagram of constituencies, and descriptions of the basic forms of service and engagement activities that University faculty, students, and staff undertake.

6.1.1
Framework

The University typically defines engagement and service as activities in the context of partnerships that meet certain criteria. These activities do not include all interactions with those outside the University, nor do they include all the ways the University's actions might serve those outside the University. The criteria are:
- **Connection with non-University people and organizations**. Engagement and service involve the interaction of University students, faculty, and staff with people and organizations outside the University.
- **Mutual benefit**. The faculty, staff, or students and the community partners all gain from the engagement. They learn from each other, build capacity, and/or advance work consistent with their missions.
- **Proximate outcomes**. The benefits of engagement and service derive from the direct interactions of University students, faculty, and staff with people outside the University. These benefits occur in a relatively short-term period, although often in different time periods for different participants. For example, students and faculty members working on a new commercial venture may learn a great deal in a short time, but the non-University partner may not realize commercial results for up to a decade or more.
- **Intentionality**. The intention of engagement and service is to produce mutual benefits in a reasonably short time.

We also identify the kinds of interactions that that this working definition of engagement and service does not include:
- **The incidental impact of University activities outside the realm of engagement and service**. Many of the University's activities have a significant impact on people and entities outside the University—but not as a result of deliberate engagement and service. For example, when students rent housing in the community or when the University constructs new buildings, these activities stimulate and benefit the local economy. But such activities don't fit the definition of engagement.
- **Diffuse, indirect or long-term effects**. For example, as a result of their education students contribute to the health of our democratic society. But this diffuse and long-term benefit doesn't mean that all the University's educational activities constitute engagement and service.
- **One-way interaction**. When individuals have a passive role in University activities, such as attending sporting events, the University doesn't consider this type of activity to be engagement.
- **Service to a professional organization**. Work with a professional organization (society, foundation, funding agency, etc.) may help to create infrastructure that supports engagement and service, but is not by itself engagement and service.

Through its service and engagement activities, the University provides a wide variety of educational opportunities (e.g., online courses, continuing education, lecture series, workshops, conferences, symposia, online information, interactive websites, training, and portable educational resources), research, student internships, exhibitions and performances, financial assistance, consultation and advice, brown bag lunches, guided tours, community forums, political forums, efforts tailored to individual needs, networking, and a wide variety of public events, among others.

In engaging in this wide variety of activities, the University serves and learns from students; citizens and communities of the state of Michigan, the nation, and the world; specific populations of people (e.g., the underserved, the elderly, migrant workers, the homebound, and prisoners); childcare centers; students in K-12 schools and community colleges; government agencies; business and industry; non-profit agencies; foundations; philanthropic organizations; legislatures; health care providers; and faith-based organizations, among others.

Taking into account the definition of engagement and service provided above, the types of benefits that can accrue to the University and to its faculty, students, and staff through such activity include the ability to attract prospective students, to enrich our teaching and advance our research, to address issues of social justice, to stimulate economic activity, to enhance democracy, or to achieve a range of other possible goals.

Engagement can include many kinds of activities and involve numerous constituencies. Faculty members and graduate students may partner with those outside the University in research and creative work. Students may collaborate with those outside the University through student organizations. Faculty members and students engage with those outside the University through courses that involve service-learning, and through practica and other hands-on experiences. Faculty, staff, and students create programs with organizations that involve young people who could become University students in the future. Faculty, staff, and students may also engage with alumni through research projects and through partnerships involving student learning in settings that advance alumni goals. The chart below provides a conceptual diagram of the ways in which engagement partners interact with each other.

Conceptual Diagram of Constituencies in Engagement and Service
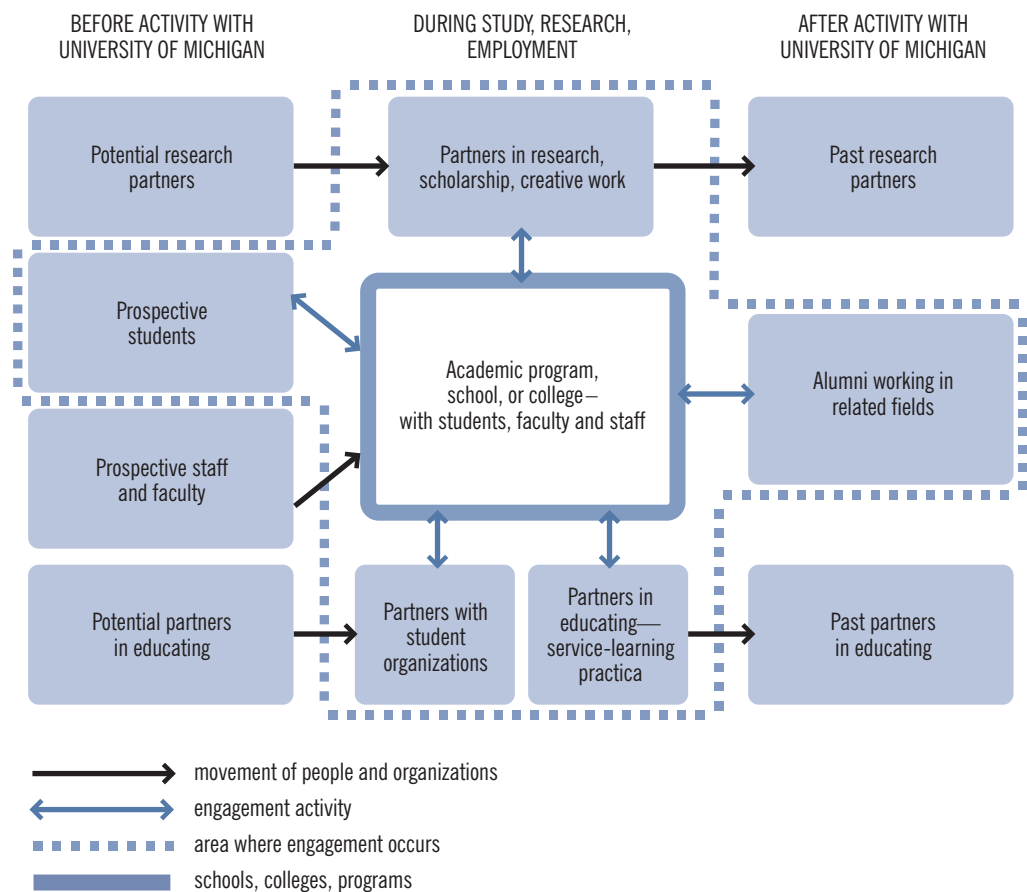
The process of planning an engagement activity involves strategic planning about who the partners are and what mutual goals they might achieve. It also involves discussion and negotiation to establish relationships for engagement activities. Following implementation, the partners reflect on and assess the activity or activities to determine how to make engagement activities more effective in the future.

6.1.2
Types of Engagement and Service Activities

Brief descriptions of the major types of engagement and service activities that faculty, students, and staff engage in at the University of Michigan are provided below.

Academic Service-learning

In nearly every college and school, faculty members offer courses where students can engage in service. However, since no systematic way exists to track this activity, estimates of levels of activity are approximate. Based on a survey of activities by the Ginsberg Center, at least 180 course sections per year, in which ~3,500 students enroll, involve service-learning. Thirty-four percent of spring 2008 graduating seniors reported that they had taken a service-learning course in at least one semester as an undergraduate, which means that the activity involved as many as 1,700 students of this graduating cohort (2008 Graduating Senior Survey).

Service-learning courses take various forms, such as undergraduate courses in which students meet to discuss and reflect on their experiences. In Project Outreach, offered by the psychology department, students engage in work to help communities meet their needs. Working in small groups led by an undergraduate, students explore careers and significant social issues, while graduate students and the faculty member guide the group through the learning cycle and work to make the experience both educational and enjoyable.

Other service-learning courses feature small classes that require such assignments as final course projects involving work that benefits designated organizations, writing reflective papers about the project, or focusing the entire semester's work around a community partner's project that enables students to gain skills and knowledge in a particular area.

Service-learning courses are also important in graduate and professional programs, where they provide students with opportunities to practice their professions while producing work that is important to community partners. This work can include multi-term team projects that lead to a final report, or clinical courses in which students get hands-on experience through simulations and other experiences.

Internships, Practica, and Placements

Many graduate and professional programs and some undergraduate programs require internships or other kinds of work in settings that relate to students' studies. The School of Social Work, for example, estimates that their students provide tens of thousands of hours of service to hundreds of nonprofit organizations in the region, while the graduate students gain experiences that enable them to integrate classroom learning and social work practice. The Master of Public Policy program at the Ford School requires policy-related internships that allow students to apply knowledge and skills acquired through the first year of coursework to significant problems in the public, private, or non-profit sectors, and to areas of students' professional interests.

Student Engagement and Service Outside the Classroom

A large share of University students participate in engagement and service activities through both student organizations and connections outside the University. Based on a recent survey by the Ginsberg Center, about 15,000 students in any given academic year participate in about 100 student organizations whose major activity is service.

For undergraduates at the University of Michigan, engagement and service are important aspects of their lives. Many arrive at the University with considerable prior experiences in this area. Eighty-three percent of graduating seniors said they were involved in significant service activities during their undergraduate years when they responded to a survey in spring 2008. Sixty-eight percent reported that they had participated in service through the University outside of classes. Forty-seven percent said they had been involved in service through an organization not associated with the University, and 31 percent had undertaken service independently. Percentages of involved students in the largest undergraduate college (LSA) were even greater.

Students in graduate and professional schools similarly engage in service outside the classroom, but no survey has gathered information on this, and student organizations do not distinguish graduate students from undergraduates. An example of this kind of activity is BLUELab, where students work on engineering solutions to needs in the developing world, using appropriate technologies. Another is the Quito Project, founded by an undergraduate anthropology major, which sends medical, social work, dentistry, education, and nursing students to a community in Ecuador, to deliver a range of services related to their professional fields, where they also learn about the circumstances facing people who live in poverty in a developing country.

Engagement with Future Students

Several University units work with middle and high school students who might not otherwise attend college or enter certain fields. These programs establish relationships that help these students to gain a strong enough background to become students at the University of Michigan. The College of Engineering, for example, runs an extensive and coordinated program of this type. Staff, students, and faculty work with people in the Ypsilanti Public Schools to provide a range of academic support activities.

Community-based Participatory Research

In several fields, notably public health, nursing and social work, community-based participatory research is an important way of building bodies of knowledge and producing community benefits. Faculty members work with community partners to identify topics for research, address issues of concern to community partners, develop the research design, carry out the investigation, analyze results, and disseminate findings. For example, the Detroit Community-Academic Urban Research Center has operated since 1995 as a partnership of three University schools, the Detroit Department of Health and Wellness Promotion, eight community-based organizations, and the Henry Ford Health System to conduct community-based participatory research on factors contributing to urban health outcomes and to design interventions to eliminate health disparities.

Research That Grows Out of Engagement

In teaching service-learning courses and in responding to requests for information and advice from people outside the University, faculty members in many fields see the need for research that benefits others and that fills gaps in their disciplines' or professions' bodies of knowledge or creative work. However, community partners do not necessarily see advantages in working on research with faculty members, often because the research would take a broader perspective than they need, or it might not address their immediate concerns. Thus, numerous faculty members work with those outside the University to bring research to community-identified challenges, although they do not undertake research together. A share of the activities undertaken through the National Poverty Center, the Urban and Regional Research Collaborative, and the Center for Local, State, and Urban Policy are examples of this type of research.

Bringing Research Discoveries to Bear on Societal Issues

Research findings with implications for society often need considerable development and translation before they can be applied. Faculty, staff, and students associated with the Zell Lurie Institute for Entrepreneurial Studies in the Ross School of Business, for example, work to bring discoveries in engineering, medicine, and other fields to commercialization, which can lead to new companies, employment, and economic growth. Students learn about business creation as they work to identify promising ideas, make investments, and create new companies with entrepreneurs.

6.1.3
What We Hear From Our Students

In the 2008 Survey of Graduating Seniors, more than 80% of the Class of 2008 reported significant community service and outreach experiences (and more than 90% of students in LSA). Over two-thirds of the respondents participated in a service project sponsored by a University club or organization, while nearly half participated in a service activity that was sponsored by an organization not affiliated with the University. A third had completed service learning for academic credit through a University course. More than 40 % of the students who participated in service activities through the University and its affiliated organizations had done so for most terms or every term (see below).

Source and frequency of service experiences (n=1192)

Service activities sponsored by or through U-M (68%)	every term / most terms / 3 or 4 terms / 1 or 2 terms
Service activities through a non-U-M organization (47%)	
Service learning done through U-M course (34%)	
Service initiated independently (31%)	

0%   20%   40%   60%   80%   100%
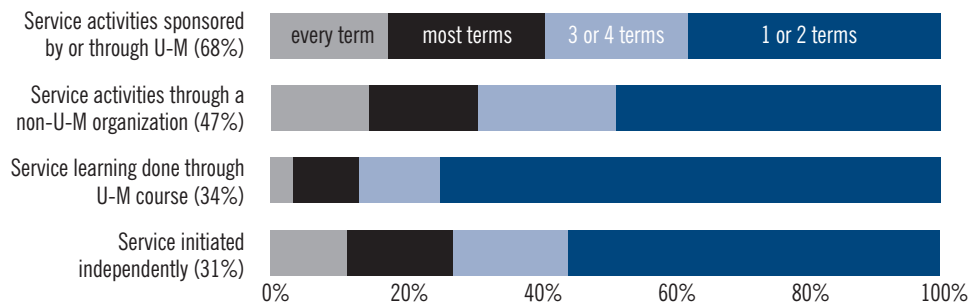
Of the activities that students described, tutoring or teaching was the most common, usually involving area schoolchildren. Fundraising, such as that undertaken in the Dance Marathon or Relay for Life, was the second most common. Mentoring and coaching included leading youth sports teams, aiding in science projects, or working with youth. Student responses to the survey also provided a window into the types of causes that their activities served. Community service that benefitted those with physical problems like illness or limited mobility comprised almost a quarter of the total, mostly reflecting the opportunities presented by University hospitals, and established links to various University service organizations. Children and teens were another target group for outreach and service activities, with nearly one in five projects aimed at youth (see below).

Causes served by community service (n=1192)

Cause	Percent
Ill/Elderly/Disabled	23%
Children & teens	19%
Non-profit organizations	15%
Community	12%
Underprivileged	7%
Homeless	5%
Environment	4%
Third-world inhabitants	4%
Foreigners & immigrants	4%
Prisoners	2%
Animals	1%
People with mental illness	1%
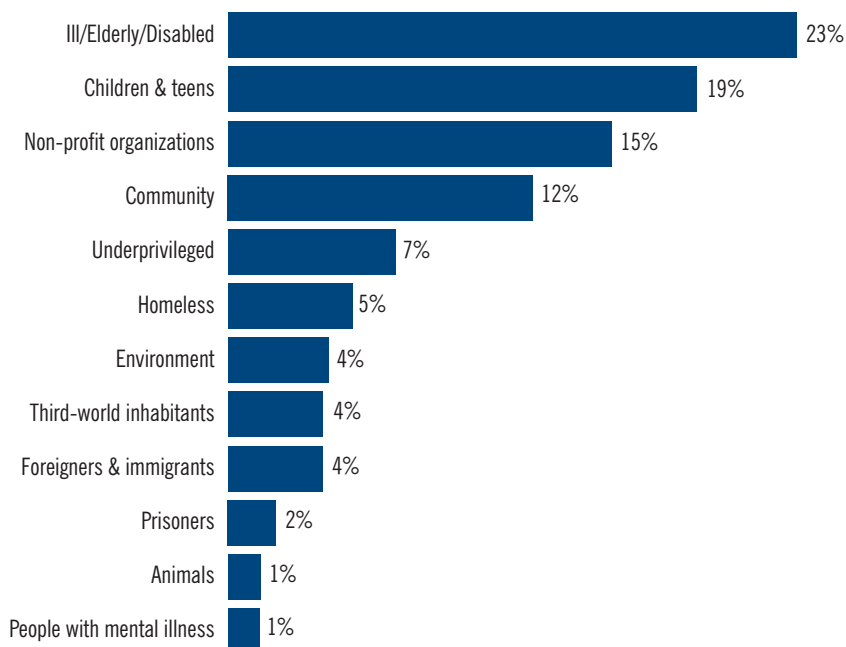
A comparison of survey responses from the two alumni cohorts show how community service and outreach at the University Michigan have increased over the last decade (see 2009 Alumni survey report). Alumni who graduated around ten years ago were less likely to report community service activities (at 69%) than the younger group in that cohort (at 75%), which is in turn less than 2008 graduating seniors (83%). The high rate of participation among our students appears to continue after they receive their undergraduate degrees. Alumni were asked about their participation after graduation, and 80% of respondents reported engaging in community service since that time (figure below). Over 7% participated in various kinds of full-time service positions, such as Peace Corps, Teach for America, or AmeriCorps, a tradition that remains very strong among today's graduates.

**Have you done any volunteer and community service work since getting
your undergraduate degree? (n=2833)**

No 20%

Yes, but not currently 50%

Yes, currrently engaged
in volunteer or community
service work 30%
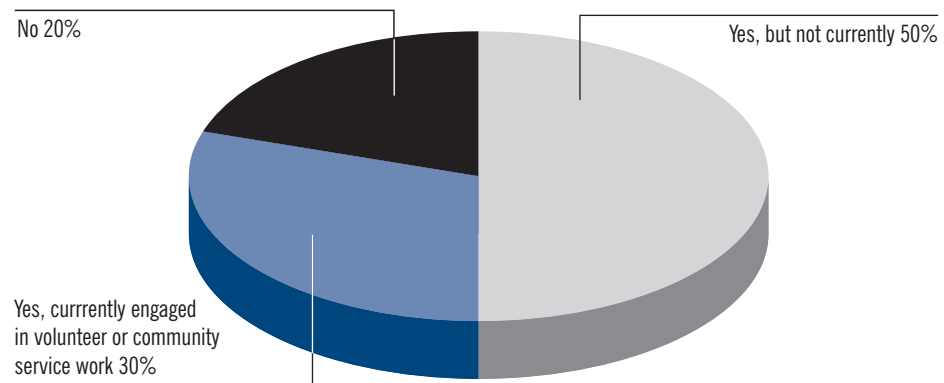
In this chapter, we will address the four core components in three sections: *(1) capacity and commitment, (2) a sample of University service and engagement initiatives and programs,* and *(3) determining the value of and learning from service and engagement activities.*

6.2
CONSTITUENT NEEDS AND EXPECTATIONS

Core Component 5a: The organization learns from the constituencies it serves and analyzes its capacity to serve their needs and expectations.
Core Component 5b: The organization has the capacity and the commitment to engage with its identified constituencies and communities.

Our impetus for developing and sustaining community service and engagement activities comes from four primary sources: the schools and colleges for which service and engagement is a part of their academic missions, central units and campus groups whose primary function is outreach and engagement, individual and group initiatives among faculty, students, and staff, and external collaborations with other institutions. In this section we will address each of these sources separately.

The University of Michigan's capacity for engagement and service is enhanced by several key strengths, identified below.
- **Decentralized structure**. The University's decentralized structure means that schools and colleges, departments, programs, faculty, staff, and students develop engagement activities that fit their interests and their goals. A remarkably large amount of activity occurs under this model, enabling anyone to pursue ideas and initiatives.
- **National and international recognition**. Many faculty members have received national and international recognition for this work, as described below in the section on recognition. This recognition as a national leader in engagement and service further aids faculty, students, and staff in continuing and furthering our efforts.
- **Engagement and service are embedded in many units' academic missions**. The leadership of the schools and colleges articulate a range of views on the connection of engagement and service to their missions. Each unit's perspectives on engagement and service are captured in a supporting report that examines the value and role of these activities (see the report on "Engagement and Service"). The units specify the mutual benefits they expect from engagement activities and encourage their faculty members and students in this work.
- **Campus-wide support**. Campus support for engagement comes in the form of training, advice, and connections with community partners. Units that provide support include the Ginsberg Center, the Community Assistance Directory of the Office of the Vice President for Government Relations, and the new Center for Educational Outreach.
- **Strong relationships between engagement partners and the University's faculty and staff**. These relationships enable faculty and staff members to continue to work together and, in addition, to smooth the way for others to establish partnerships. Good reputations pave the way for others' engagement.
- **Alumni and donors care deeply about the University's commitment to engagement and service**. This support was evident in discussions with alumni focus groups held in fall 2008 to prepare for the 2010 reaccreditation process. The alumni network is a valuable resource of potential partners in engagement work. In

addition, alumni and other donors are often prepared to make gifts to support such work.

- **Commitment to diversity**. The University's commitment to diversity (see also Chapter 2) leads to valuing engagement that focuses on diverse communities and diverse forms of knowledge, intercultural and multicultural learning, and educational access. Depending on the kind of engagement, students and faculty members often interact with people who are not like themselves, so they learn about issues of privilege and cultural difference, social inequity, and racial discrimination.
- **Promoting higher education**. Through several mechanisms, the University seeks to encourage young people to consider higher education who might not otherwise do so. Many University students and faculty members work with children and youth in tutoring and mentoring programs. Engagement in international settings furthers student and faculty experience of and contributions to diverse cultures.
- **Promoting interdisciplinarity**. Engagement and service promote interdisciplinarity because to meet partners' concerns often requires crossing disciplinary boundaries in the University. Students and faculty members often recruit participants from other fields to address aspects of partners' needs and issues.

6.2.1
Schools and Colleges

As part of the University's preparation for the reaccreditation review, we asked each of the schools and colleges to respond to four questions about service and engagement at the University of Michigan. Their responses (see Units on Engagement and Service) describe the ways in which the schools and colleges commit themselves to and engage in such activities.

1. *Please express your unit's view and conception of engagement and service as it links to your unit's various missions. What relationship do the concepts of engagement and service have to the goals, programs, and activities in your unit? Which key communities and constituencies do the people in your unit serve? (People in your unit include students, faculty, and, in some cases, staff.)*
2. *Please provide 3-5 key examples of your unit's engagement and service activities that illustrate the perspectives articulated in response to the first question. In selecting examples, you might consider the areas of civic engagement, service learning, scholarship and creative work, outreach, and co-curricular activities, among other types of efforts.*
3. *Please describe the ways you would like to broaden and/or strengthen your unit's involvement in engagement and service, if any, and the goals you seek to achieve in broadening or narrowing your unit's engagement and service.*
4. *(Optional) Please share any additional thoughts or ideas about the role of engagement and service in your unit or more generally across the University.*

Schools and colleges embed service and engagement into their goals and activities, through, for example, a commitment to service, outreach, or engagement in their mission statements; through a service and engagement requirement in the curriculum; through making joint faculty appointments; through school- or college-wide days of community service; through establishing collaborative and long-term relationships with entities outside the University (e.g., with specific schools); through fund-raising activities; and through the many types of service and engagement activities they undertake, some of which were described above. Some examples are provided below.

- The Taubman College of Architecture and Urban Planning established the **Detroit Community Design Center** to provide ethical, participatory, aesthetically innovative and implementable design and planning solutions to public, private, and institutional clientele in primarily, but not exclusively, underserved urban communities.
- Each year Master's of Business Administration (MBA) students in the Ross School of Business undertake about 85 team projects in corporate, entrepreneurial, and non-profit settings as part of **multidisciplinary actions projects** (or MAPs).
- The student-run organization **Better Living Using Engineering Laboratory** (BLUELab) in the College of Engineering works toward sustainable solutions to development problems at home and abroad. Toward this goal, BLUElab coordinates project teams that develop environmentally, culturally, and economically sustainable technologies. BLUElab also organizes educational events to raise awareness of development issues and the critical role engineers play in tackling these technical problems in a socially responsible way.
- Students working in the Law School's fourteen **Law Clinics** represent real clients under the watchful eye of permanent clinical faculty members. The students generally represent needy individuals, including persons arguably wrongfully convicted of crimes, children or parents involved in custody termination proceedings, and persons trying to create small businesses.
- The **Center for Local, State and Urban Policy** (CLOSUP) of the Ford School of Public Policy conducts, supports, and fosters applied academic research that informs people and organizations involved in local, state, and urban policy issues. Its major programs consist of research projects run by CLOSUP, as well as sponsoring collaborative interdisciplinary research projects directed by other members of the University of Michigan faculty under the CLOSUP Policy Research Grants Program. The Center enhances educational opportunities for

students by sponsoring internships with state and local government units, employing students on center-run projects, and connecting students with policymakers, practitioners, and others involved in state and local policy issues. CLOSUP also sponsors conferences, seminars, workshops and other events that bring together researchers from across the University--along with scholars from off campus, policymakers, and the public--to focus on various policy issues at the state and/or local levels.

These activities are examples of the sizable amount of engagement and service that University faculty members undertake, which by itself, although not featured heavily in this chapter, represents an important form of service the University provides to many different constituencies.

6.2.2
Central Units and Campus Groups

"As a public university, the University of Michigan has a special responsibility to serve the needs of society. Our commitment to economic development is central to our core commitment to the future of our region, and the nation."
President Mary Sue Coleman

This section of the report focuses on the central offices or units for which service and engagement are integral to their work, and whose main purpose is to support the University in its service activities.

Office of the Vice President for Government Relations
The Vice President for Government Relations is the University's senior officer in charge of planning, coordinating, and supervising the University's liaison activities with local, state, and federal governments, which constitute the three main areas of activity within the office, as described below.
- **Federal relations**. Staff members in the University's Washington, D.C. office, located three blocks from the Capitol, serve as liaisons between the University and the federal government, public policy makers, and national organizations. The office monitors legislation of interest to universities; facilitates congressional or federal appointments; issues briefings for faculty members and administrators; provides office space for University people on business in Washington; and serves as a clearinghouse for information on government activities, places, people, and employment opportunities. The office also handles congressional inquiries about the University's academic and research activities, and its views on pending legislation.
- **State relations**. Staff members in the U-M Lansing Service Center, located in the state's capitol, monitor legislation of interest to the University, arrange legislative meetings for members of the University administration and faculty, and communicate with policy makers on appropriations and other issues affecting higher education. Similar to the federal relations office, staff members handle legislative inquiries about the University's academic and research activities, and inquiries from legislators' constituents.
- **Community relations**. The director of this area coordinates activities that involve community organizations and local government officials in the greater Ann Arbor area and southeastern Michigan.

Ginsberg Center
Established in 1996, the Ginsberg Center was named after Edward Ginsberg, a 1938 graduate of the University whose family "…*hopes that the Ginsberg Center will inspire generations of young people to make service and compassion toward others a part of their own lives.*" The Ginsberg Center is one of the largest, most comprehensive service-learning centers in the nation. Each year, close to 1,900 students take part in at least one of its programs, including one of the largest Alternative Spring Break programs. Students engage in community service and learning, for example, by tutoring for America Reads, joining the Michigan AmeriCorps Partnership, and volunteering through one of several student-led programs through SERVE. Students can also enroll in Project Community, a Sociology course through which they provide community service to numerous community organizations. Students participate in Semester in Detroit through which they live, work, and study in the city for a term. They also work in internships in community-based organizations. Faculty members, students, and community partners can share their public scholarship in the arts and humanities through the Arts of Citizenship program, which helps faculty members to strengthen and expand their public scholarship.

The goals of the center are to help students learn and develop leadership skills through community service and civic participation, to help faculty members do research and teach in ways that strengthen students' learning and that help communities to develop, to assist people in communities by working in partnership with them to improve quality of life and also enhance student learning, to increase the numbers of University students who learn through civic and multicultural engagement, and overall to enhance the Center as an institutional vehicle for civic, multicultural, and leadership learning.

Ginsberg staff and volunteers engage community members as partners whose voices and perspectives have a significant impact on training students, setting goals, planning events, and developing programs. In May 2006 (updated 2008), the center adopted a strategic plan. The center seeks advice and consultation from its four advisory boards. The 20-member National Advisory Board is made up of donors, alums, students, faculty, and community members who advise the Ginsberg Center on its direction and priorities. The 10-member Faculty Council offers advice about advancing service-learning, community-based research, engaged scholarship in the academy, and the center's direction. The Student Advisory Board, made up of about 15-20 University of Michigan students who have been involved in community service through the center and elsewhere at the University, provides input into Ginsberg Center activities and direction. The eight-member Community Advisory Board, with representatives from community-based organizations, insures that the center takes into account the community perspective in its planning and activities.

Center for Educational Outreach

An outgrowth of the 2007 Diversity Blueprints Task Force Report, the Center for Educational Outreach (CEO) has established as its mission to coordinate, synthesize, cross-fertilize, and strengthen substantive partnerships between the University and school systems in the state of Michigan. To this end, the center provides a clearinghouse for information and networking about University-sponsored and -affiliated programs, sponsors a Speakers Bureau of faculty and staff members, and administers a series of programs of its own--in collaboration with schools and community agencies.

Through partnerships and information sharing, the Center for Educational Outreach encourages students to plan for college attendance and to realize the value of higher education. At the same time, the center encourages colleges and universities to work collaboratively with schools and community agencies to provide access to higher education and financial aid in support of it.

Office of Technology Transfer

The mission of the Office of Technology Transfer is to effectively transfer University technologies to the market so as to generate benefits for the University, the community, and the general public. The office serves members of the University community by facilitating disclosures, patent requests, and other protections, and by providing assistance with start-ups, licensing, legal matters, and decisions.

Through these services, the University deploys the results of research to improve people's quality of life, expands research opportunities through commercialization efforts, augments classroom teachings with valuable educational experiences for students, and creates jobs for University graduates and positive economic development for the community, the state, and the general public. In 2008, for example, the Office of Technology Transfer licensed 13 new business startups and took in $25 million in licensing revenue. Since 2004 the University has helped launch 49 startups, more than 70% of which are located in the greater Ann Arbor area.

The tech transfer office's National Advisory Board provides strategic advice and guidance on the office's programs, activities, and services. Comprised of representatives from industry, the venture and entrepreneurial communities, government, and other university tech transfer offices, the board has tackled numerous projects: benchmarking best practices in technology transfer, enhancing technology marketing, establishing a mentoring program, and finding solutions to the shortage of early-stage funding. It was the board's work that led to the formation of Ann Arbor SPARK, a regional economic development partner, and it is the board's efforts that have enhanced the tech transfer office's strategic operations and provided a model of productive engagement with business and industry.

Business Engagement Center

In May 2008 the University created the Business Engagement Center (BEC) to help revitalize and diversify the state of Michigan's economy. The BEC is sponsored jointly by the Office of the Vice President for Research and the Office of University Development. The center's central office and its satellite office in the College of Engineering work together to create and expand partnerships with companies by linking business needs with University resources in the areas of research, technology, and education--including student talent--on the Ann Arbor, UM-Flint and UM-Dearborn campuses.

To help meet the needs of the center's business and community partners, the BEC provides a number of services. For example, center staff members connect partners with talented Michigan students and alumni through career centers, student groups, and student teams. They also provide partners with information about how they can boost their presence on campus and connect with qualified students by, for example, sponsoring student scholarships, fellowships, and projects.

The BEC also works to connect businesses and community partners with the University for assistance in such areas as product development, technical operations, and organizational strategy. The center informs partners about faculty members and research topics in the University's schools, colleges, institutes, and centers. The BEC staff also helps partners identify opportunities to use the University's state-of-the-art laboratories and research facilities. In addition, partners searching for continuing education programs can use the BEC's website to review programs offered by the schools and colleges. In its first year, the BEC assisted more than 100 businesses seeking University expertise, student talent, research partnerships, and professional development for employees.

University Corporate and Foundation Relations

University Corporate and Foundation Relations (UCFR) enters into partnerships with corporations and foundations to help them find ways to leverage the University's capabilities to address both their own business needs as well as societal concerns. UCFR services allow corporations and foundations to find ways to recruit and leverage research talent, transfer technology to the marketplace, diversify their workforces, find continuing education programs, sponsor events, identify partners in the goal of bettering lives and communities, and improve K-12 students' achievements in math and science.

During initial discussions between a prospective partner and UCFR specialists, they explore the partner's needs, priorities, and objectives. Subsequently, the specialist facilitates opportunities for the partner to connect with identified resources, introduces the partner to University faculty members and students, and showcases projects and facilities. After identifying areas of mutual interest and defining next steps, UCFR staff members then facilitate ongoing communications and services. Corporations and foundations seeking solutions not specifically addressed by existing offerings can work with UCFR to craft a custom solution or program focused on their specific needs.

Public Goods Council

The Public Goods Council (PGC) is made up of thirteen academic units at the University not affiliated with a school or college that are dedicated to the advancement of scholarship and culture. The purpose of the Council is to promote greater and more effective use of the extensive resources, programs, and leadership qualities that Council units have to offer, and to promote collaboration among PGC members and other University entities to enrich the educational and cultural experience on campus and in the community.

Through its collaborative efforts, the PGC brings together in synergistic ways a rich body of public cultural resources, or goods, including art, music, book and plant collections, historical archives, scholarly resources, performance programs, coursework and experiential learning, all to benefit the public. The 'public' that the Council serves goes far beyond the University's faculty, staff, and students. It also extends to public school students and teachers, residents of Ann Arbor and the state of Michigan, arts and cultural organizations, public-service units, and countless other community groups.

Council members include three arts organizations (Arts of Citizenship, Arts on Earth , and Arts at Michigan), four libraries (the University Library, the Bentley Historical Library, the William L. Clements Library, and the Gerald R. Ford Presidential Library and Museum), four museums (the Exhibit Museum of Natural History, the Kelsey Museum of Archeology, the Museum of Anthropology, and the Museum of Art), the Matthaei Botanical Gardens and Nichols Arboretum, and the University Musical Society.

6.2.3
Communication

A key element of the University's capacity and commitment is its ability to communicate with the general public and especially its external constituencies about the various programs and services it undertakes out of its service commitment. The University of Michigan Gateway, which includes a mirror Spanish edition, provides a central access point for information about the University. The University also hosts a large site on Facebook and streams information through YouTube and iTunesU channels. Several specific means of communication are described below.

Community Assistance Directory

The Community Assistance Directory (CAD) is maintained by the Office of State Outreach in the Office of the Vice President for Government Relations. The directory helps Michigan residents find information about the University's outreach projects and services from which they or their communities may be able to benefit. Directory listings include program descriptions, geographic location, online links, and contact information. The CAD listings

represent a diverse set of activities and organizations in fields such as the arts, communications, education, the environment, information technology, and social services.

The CAD includes over 30 different types of service and engagement activities. The listings can be sorted into more than fifteen types of target groups, including business and industry, health care, non-governmental agencies and associations, philanthropic organizations, and labor unions. The foci of projects and services cover a wide range, from information technology and workplace matters to health, and from wellbeing to citizenship and civic responsibility.

K-12 Outreach
The University has several outreach programs that focus on K-12. These include the initiatives below.
- The Center for Educational Outreach, which was described above, serves as a clearinghouse for information and networking about University-sponsored and -affiliated programs in the area of education. The searchable database includes programs focused on talent development, educational enrichment, leadership programs, and more, all for the K-12 population. In compiling this database, the CEO benefitted from a 2007 inventory that the School of Education completed of the programs and activities that faculty and staff members offered across the University at that time for pre-college youth, schools, and professionals. To collect these data, the school surveyed deans, administrators, faculty members affiliated with outreach programs, and program managers to identify K-12 outreach initiatives, program goals, target populations, funding sources, and evaluation practices.
- **Efforts to Improve K-12 Math and Science Achievement**. Lagging student performance in science, technology, engineering, and math (STEM) disciplines handicaps the nation's economic growth, the creation of a well trained workforce for today's fastest growing jobs, and the preparation for responsible citizenship in our modern democracy. The University Corporate and Foundation Relations website lists thirteen key outreach program and initiatives which focus on improving math and science teacher preparation and training, improving student learning in math and science, and conducting outreach to increase student awareness of STEM career opportunities and math and science preparation.

Michigan Road Scholars
Established in 1999 by the Office of the Vice President for Government Relations, the main goal of the Michigan Road Scholars Tour, which is an annual five-day traveling seminar for about 20 University faculty members, is to increase mutual knowledge and understanding between the University and the people and communities of the state. This educational tour across the state exposes participants to the state's economy, government and politics, culture, educational systems, health and social issues, history, and geography. It also introduces participants to the places the majority of University students call home, encourages University service to the public, and suggests ways the faculty can help address state issues through research, scholarship, and creative activity. In addition, this shared experience develops ties among the touring faculty members and is a catalyst for interdisciplinary discussion. In 2001 this program received a Circle of Excellence in Communications Award from the Council for Advancement and Support of Education (CASE).

Experts (News Service)
The University's News Service maintains a list of experts who are searchable by name or by topics, including the areas of Arts & Humanities, Science, Engineering & Technology, Health & Medicine, Politics, Law & Public Policy and Social & Behavioral Sciences. Under each of these topics, the contact information for between 10 and 50 specific topics is provided.

Library Resources
The University of Michigan's library system provides a richness of resources to the general public. This includes in-library access to shelved materials and access to the many digital holdings in Hathi trust, the Michigan Digitization Project that was described earlier in the report.

In addition, the Scholarly Publishing Office (SPO) in the University Library plays an important role in disseminating library collections. The office's mission is to serve the scholarly community by providing sustainable electronic publishing services, supporting local control of intellectual assets, and exploring opportunities to extend and disseminate library collections. The SPO publishes a range of material in many fields, including journals, books, online exhibits, digital scholarly editions, and much more.

Michigan Radio

Michigan Radio is a service of Michigan Public Media, the public broadcasting company at the University of Michigan. Radio service began in the early 1920s, and in 1948 Michigan Radio began broadcasting from the Ann Arbor campus on WUOM. The stations of Michigan Radio are licensed to the Board of Regents of the University of Michigan.

Michigan Radio was a pioneer in educational broadcasting, producing programs in the 1950s and '60s that were heard throughout the country on educational stations and some commercial ones. In 1971 the station became a charter member of National Public Radio. From its first days on the air, Michigan Radio's program service consisted of music, news, discussion programs, lectures, dramas, and documentaries, most of which were produced in the station's four large studios in the LSA Building. Michigan Radio, which regularly wins awards, has grown to become one of the largest public radio stations in the country, with hundreds of thousands of listeners tuning in each week.

Innovation Economy Website

The University of Michigan is committed to encouraging innovation, entrepreneurship, and business development in the region. To promote this goal, the Innovation Economy web site provides a portal to the many economic development activities across the University's large and decentralized campus. This site is intended to give business partners, civic leaders, government officials, and others a comprehensive and coherent view of University services and programs, and to encourage partnerships and collaboration. The site also supports greater connectivity among faculty, staff, students, and alumni who work in entrepreneurship, commercialization, industry oriented or sponsored research, community economic development, and business development.

6.2.4
Support and Facilities

An important aspect of the University's capacity to provide service and outreach to its constituencies is facilities dedicated to this purpose. For many service and outreach initiatives, the University supports these efforts through its general overhead costs (e.g., office use and staff support, where applicable). We highlight below some of these facilities, situated in off-campus in both state and national locations.

- Opened in 2005, the **University of Michigan Detroit Center** is located in downtown Detroit. The Office of the Provost shares the costs of running the center with 17 University units, including twelve schools and colleges. The facility provides a home for dozens of programs and research projects centered in Detroit and offers space for an increasing number of University programs involving Detroit citizens and organizations. While serving as a home base for students and faculty members working on projects in Detroit, the center also includes offices and space for classes, meetings, exhibitions, lectures, and collaborative work. The area surrounding the Detroit Center, which includes other educational institutions and cultural resources, is a hub for education, entertainment, and commercial and cultural activity in Detroit. The University envisions that more interdisciplinary work and activity will emerge, with other schools, colleges and programs making use of or located at the center.

- Established in 1993, the **Lansing Service Center** eases the way for greater collaboration and dialogue between the University and people and organizations in Lansing and in communities across the state. Through the center, University faculty and staff members link up with people in community agencies, state and local governments, the state legislature, and other groups to develop programs, technology networks, and other services that benefit Michigan citizens. Center staff members also apprise executive branch members, the legislature, and their staff about research at the University to help solve problems and develop policy, and they also facilitate officials' visits to campus. The center supports University faculty members who participate in seminars on critical issues or who testify before committees of the legislature. The University's Offices of Undergraduate Admissions and Financial Aid, the Career Center, the Public Service Intern Program, and the Political Science Internship Program receive support from the center, as does the Legislative Advocacy Program--an effort of the Alumni Association and the Office of the Vice President for Government Relations aimed to increase alumni involvement in advocating within public higher education.

- Opened in 1990, the University's **Washington D.C. Office**, located mere blocks from the Capitol, is one of the first university-affiliated branches in D.C. Office staff members work closely with the Michigan congressional delegation, other university representatives, and higher education and research associations to support and influence legislative decisions that may affect the University's educational and research missions.

6.2.5
Funding and Related Resources

As mentioned above, much of the funding for service and outreach activities is folded into units as part of the on-going planning and budgeting process. Some funding programs, however, exist as stand-alone efforts to support service and engagement activities among University faculty members and students. Below are brief descriptions of these programs.

Faculty

- Through the Ginsberg Center's **Faculty Grants**, the center allocates funds to individual faculty members or teams of faculty to support service-learning courses, including courses that involve students in a community-based research project. Once a year the center awards larger grants of up to $10,000; small grants are available on a rolling basis to support costs associated with involving students as part of a service-learning course. Funding for teaching enables faculty members to engage students in new course projects that involve community partners to address important community or civic issues and to develop curricula or courses that strengthen community service learning or civic education. Funding for research allows faculty members to bring students into community-based or other types of research projects that involve community partners. Grants awarded by the Center for Research on Learning and Teaching (CRLT) also support innovations in teaching that involve engagement and service.
- **Other Resources**. The Ginsberg Center also assists in developing new service-learning courses, reformulating existing courses to involve students in the community, identifying prospective community partners, and helping with other course-related matters. The center also provides faculty members with publications, including works that address service-learning course design and principles of good service-learning pedagogical practice. The center also offers a series of workshops, called Learning from the Community, that faculty members use for teaching their students about principles underlying strong engagement and service. Past workshops have addressed issues such as entering and exiting the community, working with Detroit community-based organizations, exploring social identity and its impact on community work, and working with "at-risk" youth. The Ginsberg Center also custom-tailors faculty workshops to address any aspect of service-learning, community-based research, or engaged scholarship.

Students

- **Resources for Individual Students**. For individual students, the Ginsberg Center offers such resources as workshops, educational resources such as articles and movies, a web-based volunteer matching and information service, meeting space, fellowships, scholarships, mentoring, and recognition opportunities.
- **Resources for Student Organizations**. To support student organizations that have a service mission, the center provides some of the same resources available to individual students, as well as advice and consulting, grants for recognized undergraduate and graduate student organizations, a Speakers Bureau, and help with transportation. Student groups may apply for funding up to $1,000 and use awarded funds to cover such project costs as hosting, printing, copying, materials, supplies, vehicle leasing, guest speaker honoraria, and community partner support. For example, the Student Chapter of the Society of American Archivists received a grant to recover cultural artifacts and legal records to help preserve the Gulf Coast region's cultural wealth and civic viability in the wake of Hurricane Katrina. In another example, the Zeta Sigma Chi Multicultural Sorority received a grant to support underprivileged youth by refurbishing a community center in Ypsilanti, Michigan, and converting it to a multicultural resources center with books, tapes, posters, games, and activities about different languages and cultures.

Recognition

Before describing a sampling of programs and initiatives at the University, we mention two examples of the University's recognition in the field of service and engagement activities.

- The University's collective commitment to service and engagement as described in this chapter has earned the **President's Higher Education Community Service Honor Roll** award each year this national recognition has been offered.
- In December 2008 the Carnegie Foundation for the Advancement of Teaching notified the University of Michigan that it has been awarded a **Carnegie Community Engagement Classification** in the designated areas of both Curricular Engagement and Outreach & Partnerships. This is an elective classification based on voluntary participation that involves additional data collection and documentation, with substantial effort invested by participating institutions. Elective classifications enable the foundation's classification system to recognize important aspects of institutional mission and action that are not represented in the national data.

The area of Community Engagement describes the collaboration between institutions of higher education and their larger communities (local, regional/state, national, and global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity. The Curricular Engagement area includes institutions where teaching, learning, and scholarship engage faculty, students, and community members in mutually beneficial and respectful collaboration. These interactions must address community-identified needs, deepen students' civic and academic learning, enhance community well-being, and enrich the scholarship of the institution. The category of Outreach & Partnerships includes institutions that provided compelling evidence of one or both of two approaches to community engagement. Outreach focuses on the application and provision of institutional resources for community use with benefits to both campus and community. Partnerships focuses on collaborative interactions with community and related scholarship for the mutually beneficial exchange, exploration, and application of knowledge, information, and resources (e.g., research, capacity building, and economic development).

6.3
SERVICE AND ENGAGEMENT ACTIVITIES

Core Component 5c: The organization demonstrates its responsiveness to those constituencies that depend upon it for service.

In the previous section, we provided information that demonstrates the University's capacity to identify its constituencies, to plan, and to undertake service and engagement activities. In this section we provide examples of the types of programs the University offers to some of its external constituencies, including broad-based activities, in many areas, such as K-12 schools, the arts, social justice, civic engagement and policy, business and industry, colleges and universities, continuing education, non-profit organizations, communities, health care, international initiatives, and student involvement on advisory boards. These categories illustrate the breadth of programs the University undertakes, many of which have overlapping goals that represent more than one category.

6.3.1
Broad-based Initiatives

- The Ginsberg Center's **SERVE** program is a cluster of student-run programs that give students the chance to help address serious social issues through community service, leadership training, social justice education, and social action. Student leadership teams and committees work together to plan and implement six different SERVE programs: Alternative Spring Break, Alternative Weekends, ISSUES Education & Awareness, North American Summer Service Team, Volunteers Involved Every Week, and Pangea World Service Team. As an example of these options, Alternative Spring Break (ASB) offers a community service learning experience during the traditional Spring Break on the academic calendar. During the academic year leading up to the ASB experience, students learn about the culture and history of the particular area, community, or issue. During spring break, groups travel to selected sites to engage in activities that help them to increase their understanding of the root causes of social issues. The goal is for students to become aware of community needs and resources, translate their experiences into a better understanding of the social problems at hand, and foster their commitment to becoming part of the long-term solution. Through ASB, students have delivered meals to AIDS patients in New York City, repaired homes damaged in natural disasters, engaged with urban youth in Chicago, worked with members of the Sioux nation in South Dakota, learned about sustainable agriculture in Texas, and participated in community non-violence programs in Detroit.
- The **Michigan Ross School of Business Enriching Academics in Collaboration with High Schools** (MREACH) brings Detroit and other Southeastern Michigan high school students (urban and rural) to the Ross School of Business for a series of action-based learning experiences. MREACH is a long-term action plan for recruiting and retaining talented underrepresented high school students in both a school-based and campus-based program to encourage them to attend college and to study business and accounting. Educational programming introduces high school students to basic theories of business disciplines, with a special emphasis on accounting as the fundamental building block. MREACH also offer students insight into the college planning process and information about business careers. The program also allows current Bachelor of Business Administration (BBA) students to facilitate the on-site program and serve as mentors during the periods between on-campus events.
- In September 2001, the **Center for Public Health and Community Genomics** (CPHCG) was formed through a cooperative agreement between the Centers for Disease Control and Prevention and the Association of Schools

of Public Health. The center received a 5-year National Center for Research Resources (NIH) Science Education Partnership Award to expand its activities to integrate information on genomics and public health into K-12 education. Through this effort, five high schools in Detroit and three high schools in Flint have developed and implemented a new curriculum addressing molecular genetics and genomics. Project participants have revised the curriculum based on teacher and student feedback, and have also developed professional education materials for teachers. Paralleling the curriculum activities, the schools engage parents and other community members in a series of activities. Through these activities they involve the community in helping to shape the curriculum to ensure its relevant to the lives of the students and their parents; in improving the community's awareness and appreciation for genomic science and research and its applications; and in strengthening students' learning and interest in science through joint activities in which students work together with their parents and other community members.

- Recognizing that a successful undergraduate support program is only possible after building the groundwork during students' pre-college years, the **Women in Science and Engineering Program** (WISE) runs an active outreach program to secondary schools. The Girls in Science and Engineering program brings 7th and 8th grade students to campus for one week during the summer. While at the University, students participate in hands-on projects in engineering, the Human Genome Project, chemistry, physics, and space science, as well as sessions on computers, careers, and ethics in science. In addition, WISE offers the ENGAGE program, a non-residential one-week program for 10th and 11th grade students, to encourage young women to consider careers in science and engineering. Students learn about women engineers and the contributions they make to society, the engineering process, and engineering problem solving.

- The **Multicultural Engineering Programs Office** (MEPO) in the College of Engineering serves students from all backgrounds. MEPO's outreach and recruitment programs reach K-12 students who are traditionally under-represented in the field of engineering. In conjunction with the Detroit Area Pre-College Engineering Program (DAPCEP), MEPO also offers a series of five Saturday classes per year to 7th and 8th grade students. Geared to this age group, the classes focus on confidence-building and hands-on activities. Various engineering departments sponsor courses. For example, The Glow Blue course, sponsored by the Department of Nuclear Engineering, introduces students to energy sources, exponential decay, hands-on reactor activities, spectroscopy, and virtual reality.

- The **Michigan Louis Stokes Alliance for Minority Participation** (MI-LSAMP) in the College of Engineering was initiated in 2005 with a grant from the National Science Foundation. Partners include the University of Michigan, Michigan State University, Wayne State University, and Western Michigan University. The goal of the program is to increase significantly the number of underrepresented minority students earning baccalaureate degrees in science, technology, engineering, and mathematics (STEM) fields from the participating universities, and to prepare them for entry into graduate programs. Support for students in the program begins with pre-first-year summer programs and continues through graduate school. As MI-LSAMP scholars, students participate in a variety of activities that include working with faculty members and professionals who conduct cutting-edge research in STEM fields, internships and co-op placements, and use of the various support services and programs on campus. The program also sponsors an All Students Day, where participants from all four campuses meet, network, and receive additional guidance for their first year of college.

- **Teach for America** is a national corps of recent college graduates who spend two years teaching in urban and rural public schools and become leaders in the effort to expand educational opportunities. Although this is not a University program, we include it here because University of Michigan students have historically been the largest number of graduates of any U.S. college or university to enroll in the program.

6.3.2
The Arts

- To foster public scholarship, the University's **Arts of Citizenship** program offers a set of programs that brings University faculty, staff, and students into projects as collaborators with educators, cultural and arts institutions, government, and community partners. Among other goals, these endeavors engage faculty, staff, students, and community partners in ever-greater numbers of sustainable opportunities to enrich curriculum, research, and creative work, and to expand the social capital of community collaborators. The program also provides grants to support research, creative work, and intellectual conversation to advance the roles of the arts, humanities, and design in public life. For example, each year University faculty members may submit grant proposals with budgets of up to $20,000 through the Arts of Citizenship Faculty Fellows Program. Arts of Citizenship faculty fellows pursue collaborative scholarly, creative, and/or cultural projects with community partners such as schools, advocacy or arts organizations, museums, and community-based organizations. The Arts of Citizenship program encourages interested faculty members to propose collaboration among mul-

tiple units, staff, and students. Proposals are also reviewed for their plans for scholarly publications, creative projects, and tangible public goods. Grant funding may be used to hire project staff (student or non-student), purchase research materials, travel, pay for faculty release time, cover summer supplements, and pay for events.

- Begun in 2000, **Detroit Connections** is an arts outreach program that connects undergraduate students in the School of Art & Design with the city of Detroit by providing high-quality arts education programming to a resource-poor elementary school in the city. Since the program was created, the curriculum has evolved to meet the partnering school's needs by working to support other areas of the school's programming, and also by providing a much-needed opportunity for participating children to bring their interests and lives into the classroom. The children participate in activities that promote creativity, free-form expression, one-on-one collaborations with college mentors, and multidisciplinary processes such as measuring, planning, and creative writing.

6.3.3
Social Justice, Civic Engagement, and Policy

- Created in 1995 as a domestic version of the Peace Corps, the federal **AmeriCorps** program is part of the Corporation for National and Community Service, which also oversees the Learn and Serve America and the Senior Corps programs. Through these programs, more than 2 million Americans of all ages and backgrounds engage in service each year. The Michigan AmeriCorps Partnership (MAP) began in 1995 as a partnership with the Michigan Neighborhood Partnership. It has since expanded to the point that students in seven graduate and undergraduate programs at the University annually serve over 30 non-profit organizations, most of them based in Detroit. MAP volunteers address the needs of local citizens through direct service in the areas of education, urban planning, social work, health, and economic development. By working on projects in partnership with nonprofit organizations, students and community members earn stipends and are eligible to receive educational awards.
- Founded by student activists in the 1960s, **Project Community** is one of the nation's oldest service-learning courses. Early members of this student organization traveled to the South to participate in the Civil Rights Movement. Initially volunteering at schools, prisons, and hospitals in the Ann Arbor area, these students sought out faculty members who could support their community practice with academic theory through independent study. In the 1970s, Project Community became a formal course, a partnership between the Department of Sociology and the Division of Student Affairs. Each year approximately 500 students combine academic learning with service to the community.

6.3.4
Business and Industry

In FY 2008, levels of industry sponsorships for University research reached $43 million, more than 11% over FY2007 and more than 25% above FY2006 levels. Beyond University research in conjunction with business and industry, this section of the report will describe a few examples of the ways in which the University serves this key constituency.

- **Ann Arbor SPARK** is a public-private partnership that advances innovation-based economic development in the greater Ann Arbor region. By identifying and helping to meet the needs of area businesses, SPARK aims to establish the region as a desirable place to locate and expand businesses. The University has an important stake in this partnership alongside the area's business, government, entrepreneurial, and community leaders. Reflecting the University's commitment to this initiative, the president of the University is a member of SPARK's Board of Directors, while the vice president for research and the executive director of the Office of Technology Transfer are members of the Board of Directors and Executive Committee. The founders of SPARK see the colleges and universities in the Ann Arbor region as the foundation for human capital in the area. Specifically, SPARK cites the Medical School, Ross School of Business, and the Office of Technology Transfer as economic engines and as accelerators of business innovation in the Ann Arbor area. Contributions from the University, such as attracting federal research labs and new biotech companies, are featured on SPARK's website, as are testimonials from the news media.
- The **University Research Corridor** (URC) is an alliance among Michigan State University, the University of Michigan, and Wayne State University to transform, strengthen, and diversify the state's economy. The URC disseminates information to key stakeholders, including people in the business community, researchers and students, policymakers, and other investors. The goal is to enhance outreach and collaborative efforts, speed up technology transfer and development, and convey the advantages of doing business in Michigan. The URC website provides numerous examples of partnerships in five designated areas: Talent Attraction and Retention; Economic Development; Research Partnerships; Joint Life Sciences, Biotech, and Healthcare Projects; and

Regional and Community Outreach Efforts. According to the "Second Annual Economic Impact Report," commissioned by the University Research Corridor, in 2007 the URC universities generated 69,285 jobs, educated more students than any of the nation's best comparable research and development clusters, and produced $13.3 billion in economic impact. The 2008 report, which was prepared by Anderson Economic Group, LLC, describes in significant detail the economic impact of the URC on the state.

- In 2001, Michigan State University, the University of Michigan, and Wayne State University established the Michigan Universities Commercialization Initiative (MUCI) to enhance technology transfer activities by working closely with venture capital and industry representatives. Since MUCI's inception, six other Michigan universities have joined this effort, along with the Van Andel Research Institute in Grand Rapids.
The MUCI Challenge Fund is a competitive, peer reviewed award program that provides essential gap funding for early-stage technologies with the potential for commercialization. An incubator liaison helped member institutions procure incubation space and facilities, which were not readily available prior to the SmartZone system's development. MUCI also disseminated technology transfer educational materials and shared best practices through newsletters, a website, publications, and joint meetings. The URC website lists 23 start-up companies that have benefitted from this initiative.

- **Collaborations with the Automotive Industry**. The University of Michigan plays a major role in using its research expertise to support collaborations with partners who represent a core component of Michigan's economy, the automotive industry. For example, General Motors has partnered with the University to conduct a wide range of automotive research from engine systems to manufacturing and materials processing. In addition, the University's Transportation Energy Center, Automotive Research Center, and Lay Automotive Laboratory conduct research on new energy conversion options and alternative fuel infrastructures.

6.3.5
Colleges and Universities

- In 2006, the Jack Kent Cooke Foundation selected the University of Michigan as one of eight institutions to be part of its program to increase the opportunity for high-achieving, low- to moderate-income community college students to earn bachelor's degrees from selective four-year institutions. With this support, the University reaches out to all 31 Michigan community college and tribal campuses to increase the number of transfer students. As one result of this effort, the Undergraduate Research Opportunity Program (UROP) has created the Jack Kent Cooke Summer Research Fellowship for community college students interested in transferring to the University of Michigan. The goals of the program are to increase participants' skills and knowledge in a specific field, and to explore areas of interest for potential graduate work.

- In response to an invitation from the presidents of the University Research Corridor, 24 public and private colleges and universities across Michigan founded the Michigan Higher Education Recruitment Consortium (MI-HERC) in the fall of 2007. The MI-HERC member institutions are particularly interested in recruiting diverse applicant pools, and in helping the spouses and partners of prospective and current faculty and staff members to find jobs. A vital aspect of the Michigan HERC is a web-based search engine, which is free and open to all, that features faculty and staff job postings at all member institutions.

6.3.6
Continuing Education

Continuing education, an activity that involves several units at the University, is also an important form of service, albeit generally not a free one, that the University provides to people across the globe.

- Through its Executive Education program, the Ross School of Business offers programs in seven topic areas: General Management, Leadership, Human Resources, Marketing, Sales, Operations, and Labor Relations. The Ross School's executive education programs is the action-based learning in which participants co-create with the faculty their own personalized learning experiences. Through this action-based learning model, program participants develop the insight and confidence to size up a business situation, generate alternative courses of action, implement a successful solution, and directly apply their learning to real opportunities and challenges. Senior faculty members in the Ross School serve as instructors, with a focus on high-impact ideas they draw directly from proven, real-world success. Fully engaged and actively involved throughout, the faculty members deliver programs in a highly interactive, hands-on learning style. This results-driven approach to executive education attracts thousands of executives from more than 70 countries around the globe.

- Created in 1959, the Institute of Continuing Legal Education (ICLE) in the Law School is a nonprofit continuing legal education organization. ICLE is co-sponsored by the State Bar of Michigan, University of Michigan Law School, Wayne State University Law School, Thomas M. Cooley Law School, University of Detroit

Mercy School of Law, and the Michigan State University College of Law. ICLE has a reputation for providing attorneys with high-quality, accurate, up-to-date, Michigan-specific products and seminars. Each year the Institute offers 70-80 individual seminars and more than 250 presentations. In addition to a regular staff that includes ten attorneys, ICLE has a network of volunteer speakers and authors who contribute to its publications and seminars. The ICLE also makes many of its seminars available to lawyers throughout the state as webcasts.

- The **Office of Continuing Medical Education** (OCME) in the Medical School annually plans and produces over 100 Continuing Medical Education (CME) activities for physicians and healthcare professionals. OCME provides services for planning and producing CME activities in a variety of formats. The office's eighteen full-time professionals have expertise in six topical areas: educational planning and research; managing business and industry relations; planning and producing meetings in local, regional, and national venues; designing, producing, and delivering promotional materials; financial management and accounting; and administering registration, records, and legal documentation. Annually OCME provides CME instruction for more than 2,000 University of Michigan Health System (UMHS) physicians and other UMHS clinical personnel, and also for more than 12,000 physicians and other health care professionals in the region and across the nation. In 2006 the Accreditation Council for Continuing Medical Education awarded the Medical School with its Accreditation with Commendation rating, reflecting the Medical School's commitment to providing high quality educational programs that meet the needs of the University and external constituencies.

- **Executive and Continuing Education** programs in the School of Public Health enable working professionals to stay up-to-date on the latest developments in their fields and to expand and further their professional interests. Programs include the Michigan Public Health Training Center, Continuing Industrial Hygiene Education, the Michigan Center for Public Health Preparedness, the biennial Public Health Symposium, and the annual Health Management and Policy Symposium.

6.3.7
Communities

- The **Nonprofit and Public Management Center** (NPM), a joint effort of the Ross School of Business, the Ford School of Public Policy, and the School of Social Work, links the nonprofit community to the University. The center develops educational opportunities for students, creates a research environment for faculty members and doctoral students, and forges long-term, practical relationships with nonprofit organizations. Participating students learn about how societies mobilize resources to address a wide array of challenges, and how nonprofits can increase their ability to effectively lead and manage their organizations toward meeting their missions. The center partners with nonprofits to bring about a mutually beneficial experience for both the nonprofits and the University's graduate students. Through hands-on experience, students have the chance to use the tools they've learned in the classroom and, in many cases, to be part of governance board discussions and decisions. Since 2002 the center has placed hundreds of students on the governing boards of more than 125 nonprofit organizations in southeastern Michigan. The center's Domestic Corps, which offers Ross School of Business students paid summer internship in nonprofit organizations, has placed hundreds of summer interns in more than a hundred nonprofit organizations across the country. Through these internships, students help organizations to develop marketing strategies and to engage in strategic planning, finance, and other management-level projects. In addition, the center's Student Advisory Board gives graduate students in the three sponsoring schools a chance to help the center set direction for student services.

- The **Making of Ann Arbor** project is a public collection of resources on the history and development of the Ann Arbor community that was created collaboratively by the Bentley Historical Library, the University Library, the Ann Arbor District Library, and local K-12 schools. These partners collected historical information and photographs for a narrative overview of Ann Arbor history, which is contained on the website of the Ann Arbor District Library.

- The **Semester in Detroit** program allows University students to put down roots in Detroit for a full semester, allowing them to become more deeply invested in the city in ways that aren't possible while commuting. While living at Wayne State University, students learn about such topics as Detroit history, urban planning, non-profit administration, community development, and arts and culture. Funded by the Office of the Provost, with additional support from LSA, the Ginsberg Center, and the Residential College, the program invites students to take courses through LSA, the School of Art & Design, and the Taubman College of Architecture and Urban Planning. In most circumstances, students also may enroll in classes at Wayne State University. The program supplements formal classroom studies with opportunities for students to interact with community leaders and activists. Program staff members match students with Detroit community and cultural organizations, where the students select community projects to which they will dedicate 16 hours per week throughout the semester.

6.3.8
Health Care

- The University of Michigan Schools of Public Health, Nursing, and Social Work have joined the Detroit Department of Health and Wellness Promotion, eight community-based organizations, the Henry Ford Health System, and others to form the **Detroit Community-Academic Urban Research Center**. Developed in 1995, the center seeks to identify problems that affect the health of residents on the east, southwest, and northwest sides of Detroit, and to promote and conduct interdisciplinary, community-based participatory research that recognizes, builds upon, and enhances the resources and strengths in those communities.

- The **Dance Marathon at the University of Michigan** (DMUM) is one of the largest student-run, non-profit organizations on the University of Michigan's campus. Through year-round events, the DMUM raises awareness about the needs of pediatric rehabilitation programs and also generates funds to support it. These creative and interactive therapies enrich the lives of children, their families, and their communities. Funds are used to support rehabilitation programs in C.S. Mott Children's Hospital in Ann Arbor and Beaumont Hospital in Royal Oak. The organization's work culminates in March when hundreds of students stand on their feet for thirty hours to show their dedication to the children, families, and hospitals they support. At this event, hundreds of individuals and groups from campus and the community come together to raise awareness about pediatric rehabilitation.

- Through the **Community Outreach Rotations** course in the School of Dentistry, dental students provide comprehensive and patient-centered oral healthcare to culturally diverse groups of people. In addition to providing oral healthcare to an underserved population, the course aims to help students appreciate the depth of unmet need in the underserved population and to have them work with practitioners who serve the underserved population; to "test drive" community healthcare clinics as a possible future career; and to get a feel for dental public health as a specialty. Students complete their assigned rotations at one of eleven community healthcare clinics, specialized programs, extramural rotations, or pilot programs.

- The **Patient Family Education Resource Center** (PERC) of the University of Michigan Health System links cancer patients to the most current information and resources. The center houses a full-service library with a comprehensive collection of print and audiovisual resources on all aspects of cancer, including disease and treatment information, coping and support resources, aids for discussing cancer with children, and information for survivors. Visitors may check out materials or use the center's computers to search for information online. Upon request, PERC staff members conduct professional searches on specific topics.

6.3.9
International

- In 2006 and again in 2008, the presidents of the University of Michigan, Michigan State University, and Wayne State University hosted their counterparts from China's top universities at the **Michigan-China University Leadership Forum** to explore ways to work together to advance trade, innovation, and economic growth. In both nations, research universities are major economic engines and creators of jobs. More than 25 members of the Chinese delegation, including university presidents, university council chairs, and officials from the Ministry of Education and National Academy of Education Administration visited all three Michigan research universities. Forum participants discussed numerous topics, including how to better contribute to their regions and communities, partnerships, research, strategic planning and governance, educating students, and developing and evaluating faculty. The forum strengthened Michigan's ties with a new generation of higher education leadership in the world's largest market and provided the means for the URC to give its faculty members and students greater access to China's academic and business communities. Another leadership forum is being planned for May 2010.

- In 1993, the University of Michigan Health System (UMHS) created the **Program for Multicultural Health** to give underserved multicultural populations greater access to quality health care. Providing quality clinical care to culturally diverse groups is a vital part of the health system's vision as a leading health care facility. The Program for Multicultural Health was created because of a growing awareness of the increasing diversity of UMHS patients and staff. The program has been recognized by local residents and nationally acclaimed health professionals for its innovative, theory-driven, and practical approaches to improving the health and health status of underserved ethnic and racial groups.

6.4
IMPACT

Core Component 5d: Internal and external constituencies value the services the organization provides.

The programs and initiatives described in this chapter are managed by several units across campus that handle their own assessments. The section of the report below focuses on information collected by four central units described above--the Office of the Provost, the Ginsberg Center, the Office of Technology Transfer, and the Business Engagement Center. The "value" of the activities undertaken by these units is represented in some cases by qualitative data and in the others by quantitative data.

6.4.1
Surveys

- Results of the University's **2008 Graduating Senior Survey** show that among the 1,673 respondents, more than 80% had significant service experiences to report. In the open comments section of the survey, more than 120 respondents commented about their community service experiences. In describing their experiences, students used such terms as those that follow: gaining new perspectives, feeling exhilarated and rewarded, personal satisfaction; profound effect on my world view, learning about social justice and how to pursue it, finding similarly dedicated people, and setting the tone for the undergraduate experience.
- The responses from the **2009 Survey of Alumni** cohorts demonstrate the University's long-term commitment to engagement and service. The results from alumni as far as 10 years after graduation are very similar to the results of the 2008 graduating senior survey, as mentioned in a previous section.
- In February 2008, the **Ginsberg Center** invited two cohorts of alumni to complete a survey about Project Community, one of the center's programs. The cohorts consisted of alumni who had begun their undergraduate careers in fall 1998 and fall 2002 and who had participated in this program at some point as undergraduates. Of slightly more than 1,300 such alumni, 234 responded – a response rate of 18%. When asked "How much of an impact has your participation in Project Community had on your life since college?" almost 36% of respondents answered "quite a bit" or "a lot," and another 53.3% said "some." When asked how they would evaluate those impacts, over 76% said "very positive," and 23% said "somewhat positive." A follow-up question asked for one or two examples of such positive or negative impacts. The comments below illustrate the main types of effect identified by those who felt the course had a positive or very positive impact:
  - "Project Community provided me with an opportunity to apply what I was reading about in the classroom to a hands-on experience."
  - "I became a Soc major because of Project Community. I pursued social justice jobs in my time off from school. I developed better leadership skills. Many, many pluses."
  - "I broadened my awareness of others' issues and became much less focused on my own troubles…"
  - "It was an incredible way to see firsthand the impact of the diaspora in public education. To this day improving the condition of public education is something I am deeply concerned with."
  - "Without Project Community and the mentoring [I received], I don't think I would ever have pursued a Master's degree in education or been so involved in service learning based education."
  - Since college, the lessons I learned in Project Community courses have informed my ability to think outside the box and continually question my own assumptions."
- Drawing from the results of a survey of students who participated in the **Michigan AmeriCorps Partnership** in 2007-08, 23 of the 24 respondents indicated that they were satisfied or very satisfied with their experience in the AmeriCorps program. In a separate survey, 18 out of 19 of the community partner organizations that were served by our student member indicated they were satisfied or very satisfied with the service provided by AmeriCorps member(s), and that they believed this service increased their organization's capacity to meet its mission.

6.4.2
Semester in Detroit

Semester in Detroit (SID) became an official University academic program in summer 2008; undergraduate students moved into a residence hall on Wayne State University's campus in January 2009. The results below are from surveys and reviews of both students and community partners that were conducted at the end of this pilot year.
- Over 85% of community partners surveyed reported a "balanced benefit between their organization and the student"; 71% of SID students felt the same way. These results suggest reciprocity – an important aspect of quality service-learning experiences.
- In rating the SID program overall, 9.2 out of 10 was the average rating from community partners; over 70% of

them gave their student interns a rating of 9 or 10 for their performance. Almost two-thirds (64%) of the community partners deemed SID better than programs at other universities.

- In rating the SID program overall, students gave it an average of 9.1 out of 10; 100% said they would recommend the program to a friend.

The community partners were asked to describe in one paragraph (or less) the essence of what the University student intern contributed (to the organization, community, etc.) during the internship. A few of the community partners' comments are provided below.

- "Our student intern was very helpful in providing support services as the department was going through transition (merger and staff reduction all at one time)..."
- "Having an intern within our organizations helped a great deal. When I received the intern my program was going through changes and the extra manpower was a great benefit. The fact that we worked with students and the knowledge she passed on reinforced our program's mission."
- "The intern provided a different intern perspective to the mix of social work interns that were already placed at the organization. Her fresh vantage point and opinion contributed to the overall mix very well."

6.4.3
America Reads

Through the service-oriented America Reads initiative, students learn to be mindful, effective tutors by learning how student achievement in the U.S. education system interfaces with issues of class, race, language acquisition, and other systems. Each year more than 300 children in area schools receive reading assistance from tutors through America Reads. Below are highlights of the evaluations that students and teachers completed at the end of the 2008-09 academic year.

- **Value to the Community**. The table below captures the responses of 54 teachers to a program evaluation at the end of the 2008-09 academic year. In response to the question, "In what ways have America Reads tutors contributed to your students' learning and/or classroom performance?" teachers made the observations captured below.

Literacy skills	69%
Overall	22%
Confidence	18%
Class participation	11%
Attitude/behavior	9%

- **Value to Students Who Receive Tutoring.** In addition, 106 students completed a program evaluation at the end of the 2008-09 academic year. Students were asked to rate their overall experience in America Reads on a scale of 1 to 5 with 1 being poor and 5 being excellent. The average score was 4.3, with 89% of students rating their experience in the program as very good or excellent, plus 11% rating their experience as average.
- **Value to University of Michigan Students.** The University students who served as tutors were also asked to describe how their involvement in the America Reads program enhanced their college experience, if at all. In response, they offered the comments captured below.

Learned about social issues	22
Helped individuals/communities	21
Provided purpose/something to look forward to	14
Learned about the process of teaching and learning	12
A defining college experience overall	11
Made a difference in the world	9
Developed gratitude	7
Worked toward a cause	6
Improved study habits	2
Developed leadership skills	2

6.4.4
Technology Transfer

Tangible measures of success in technology transfer include invention disclosures, license agreements, new business start-ups, and revenues. But intangible measures of achievement are equally important. For example, the quantity and quality of our engagement with researchers, students, and business and entrepreneurial partners, and the impact on the public of our transferred technologies are important indicators of success. The Office of Technology Transfer's website provide a set of "success stories" including recent success stories and an archive of success stories that offer a glimpse into some of the ways in which the users of the office's services value the services they receive. Below are a few select comments drawn from these stories, which we offer as expressions of how representatives of these companies appreciated the Office of Technology Transfer's help.

- **Vortex Induced Vibrations Aquatic Clean Energy** (VIVACE). A University Professor filed a patent relating to a device capable of harnessing the VIV energy generated by ocean and river currents. Tests in the University's Marine Hydrodynamics Lab proved that VIVACE was remarkably efficient at generating usable energy; more efficient than ocean-energy converters currently being used around the world. This "success story" notes, "*Tech Transfer has been immensely helpful at every stage: filing the provisional patent, finding test sites, locating funding sources, and starting and staffing the company*."
- **Metal Organic Frameworks**. A Professor of Chemistry has been producing structures from molecular building blocks by stitching together highly porous molecules of organic and inorganic materials to create containers on a nanometer scale. The resulting new materials are known as metal organic frameworks, or MOFs. As stated in the story, "*With the assistance of Tech Transfer, …. have patented designs and production protocols for hundreds of materials*."
- **HandyLab.** Over a period of seven years, chemical engineering students and their faculty advisors in the field of chemical engineering and human genetics have developed portable nano-devices that function as acid- and protein-based analysis systems. In 1998 these devices earned a place on Science Magazine's list of Top Inventions of the Year. Then in June 2000, HandyLab was launched. "*We're very pleased with the business relationship we've had with the University of Michigan*," HandyLab President and CEO notes, adding that "*Tech Transfer was absolutely crucial to the start of the company. Without their contributions, particularly in the areas of patent protection and business planning, there wouldn't be a HandyLab today*."

Business Engagement Center

As described earlier in the chapter, the University's Business Engagement Center (BEC) was established in May 2008. A good example of the center's success thus far can be seen in a YouTube video about Aernnova Engineering U.S., an international company that chose Ann Arbor for its U.S. headquarters after receiving support from the BEC.

6.5
LOOKING FORWARD

As part of the reaccreditation process we convened an accreditation working group that was asked to examine the meaning and value of the University's engagement, service, and outreach activities. In particular, the AWGs examined ways in which the University can build on its current strengths and considered areas for future improvement. Each AWG produced a set of recommendations that were incorporated in the preparation of this report. Since each group consisted of a relatively small number of engaged faculty or staff members, these recommendations are presented to stimulate further conversation and thought, and are not intended to convey approval or commitment at this time.

The leadership of schools and colleges offer a range of views about the connection of engagement and service to their missions. These perspectives on engagement and service were captured in a supporting activity that examines the value and role of these activities (see report on Engagement and Service). The units specify the mutual benefits they expect from engagement and encourage their faculty members and students in this work. Several campus-wide institutions, which include the Ginsberg Center, the Community Assistance Directory of the Office of the Vice President for Government Relations, and the new Center for Educational Outreach support engagement in the form of training, advice, and connections with community partners. However, none of these currently has the mission or the capacity to lead all aspects of engagement and service at the University of Michigan.

6.5.1
Strengthening the University's Engagement and Service

The University is already very active in the area of engagement and service, with broad participation and interest among our students. For the future, it is important to build on this success. We need to organize what we have done effectively and find resources to respond to increasing need. The recommendations for further strengthening our engagement and service activities are organized into three categories. First, we would benefit from knowing more about what we are doing in engagement and service on an ongoing basis. Second, there is room for growth in our capacity for engagement and service among faculty, staff, and students. Third, this aspect of the University's mission would be further strengthened through increased institutional support.

6.5.2
Catalog Faculty, Student, and Staff Activities in Engagement and Service

Knowing what we already do is a key step to broader assessment and identification of ways to strengthen activities' contributions to the University's mission. Information is typically collected *after* engagement has occurred. For example, the Ginsberg Center counts service-learning courses and student organizations involved in service at the end of each academic year, and the Office of the Vice President for Government Relations asks for updates of descriptions of engagement projects for their state-focused Community Assistance Directory each year. Using administrative processes already in place to identify engagement and service would make tracking activity easier. A better overview would allow for support of ongoing efforts, improve the quality and impact of these efforts, and guide new activities. The AWG recommended that relevant campus units consider the actions below.

- **Indicate that a course offering involves service-learning in the course registration system**. When a course is entered in the University system (Wolverine Access), a question could be asked whether the course requires service learning or offers this as an option to students. Ohio State University, for example, designates "S" courses that offer students service-learning opportunities. Knowing what courses include service learning helps in advising students, in communicating with faculty members who teach courses that involve service, and in articulating standards that service learning courses should meet.

- **Provide specific information in Maize Pages about student organizations**. Student organizations register in Maize Pages to become eligible for University funding. In the registration process they check categories of activities that reflect what they do. However, these categories are vague and do not identify which organizations are involved in engagement and service. Clearer information about student organizations would also enable faculty and staff members to contact student leaders about opportunities to receive course credit for service, funding possibilities, and course offerings that relate to their interests.

- **Create an electronic faculty activities report system**. Offer a records system that tracks information about the type of engagement, the number of faculty, students, and staff involved, and the location of engagement and service. Cornell University collects information in this way. Faculty, staff, and students could find out more easily about other projects in the same locations, which would also make collaboration possible. Community partners could also more easily obtain contact information about campus members working in their neighborhoods or on issues of interest. Collecting such information would also allow University communications to highlight the University's many contributions to places, people, and organizations.

- **Identify ways to document engagement and service not captured by current administrative processes**. Much engagement and service occurs with grants from internal sources or gifts from donors, or through programs that support engagement outside courses and without grants, but they are not typically recorded.

- **Use conflict of interest forms to collect information on the faculty's engagement and service**. The Medical School and College of Engineering offer examples of electronic reporting of activities that can involve conflict of interest. The activities documented in these forms include some that represent engagement and service.

- **Identify whether engagement and service are part of a proposal for external funding**. A basic check-off box on Proposal Approval Forms would allow for sorting of projects that involve engagement through our research funding databases.

- **Institutionalize surveys of students' engagement and service**. Continue and expand existing surveys (e.g., CIRP and the graduating senior survey) to track student interest activities in this area.

6.5.3
Increase the Capacity for Engagement and Service

Many ways exist to increase the capacity for engagement and service, especially if we find out more about what we already do. The following are recommendations in the areas of enhancing teaching that involves service learning, strengthening student organizations' and individual students' engagement and service, and advancing engaged research and creative work.

Teaching that involves engagement and service

- **Build faculty capacity for teaching service-learning courses**. Knowing what courses involve service-learning allows outreach to faculty members and graduate students who teach such courses and facilitates the offering of workshops for identifying ways to advance students' learning and community benefits. Faculty members could also showcase how to integrate research with service-learning teaching so that teaching further advances research and create standards that service-learning courses need to meet. While service-learning courses are not required, setting standards would strengthen the offerings.

- **Increase community benefits associated with service-learning classes**. Faculty members and graduate students often have little knowledge about how to assure that community partners benefit from the services provided. If community partners do not benefit, we may be exploiting them as assistants in teaching, especially those involved in small nonprofit organizations. Many faculty members and students would benefit from workshops that help to increase the benefits to community partners of engagement and service activities.

- **Create faculty fellowships for developing new service-learning courses**. Faculty members who have never included service learning need time to learn how to develop such courses. Outside most professional schools, many faculty members were never exposed in graduate school to service-learning as an approach to teaching and never had an opportunity to create such a course. A faculty fellowship would offer time to learn and to create courses with advice from others.

- **Provide support for departments working on curricular change that incorporates service learning**. Service-learning courses often exist in isolation in a department, but in some units faculty members have worked to integrate service learning into the curriculum--for example in the Schools of Nursing and Art & Design, and within the LSA, the Residential College, and the Program in American Culture. The Gilbert Whitaker Fund for the Improvement of Teaching offers some funding for such efforts but is not sufficient. The Ginsberg Center and CRLT can offer best practices in teaching support.

Student Organizations' and Individual Students' Engagement and Service

The approximately 100 student organizations that involve engagement and service as a major activity have a considerable impact on students' experiences, but most of these organizations have no formal connection with University programs, so students may not gain as much as they could from their involvement. Students need opportunities to learn about the systems that lead to the problems they address and the socio-political-economic context in which their community partners operate, as well as the potential outcomes of their involvement. They also would benefit from more opportunities to see how their work relates to future careers and life habits and to continue to pursue their passions in service activities after graduation.

- **Create courses that offer reflection and readings related to service**. Each department could offer at least one course oriented around understanding the systems and context of students' service learning. A few sections of the Department of Sociology's Project Community operate in this way for students working with youth who are not likely to consider college and for students working on the Young People's Project. The Semester in Detroit program similarly offers a course of this type.

- **Provide students with guidance about courses and faculty members that relate to their service interests**. If students did not have to hunt for information, they might be more likely to take courses that relate to, for example, fair-labor practices, international genocide, and many other social, political, and economic issues that concern them.

- **Support community partners in expecting benefits from students' service**. Community organizations often "let" students do engagement projects, but they have not always been involved in developing the idea for the work and they do not necessarily propose modifications that would result in advancing community agendas more effectively. Students have much to learn from the expertise of community partners but do not necessarily realize this if the community partners are not fully involved. Preparing community partners to work with students and to understand their rights in getting benefits from students' engagement would help achieve this.

- **Create e-portfolios to record and reflect on activities**. E-portfolio is an electronic tool to help students record activities that are not readily captured otherwise, to organize their reflections, and to connect what they learned across varied activities.

- **Strengthen students' understanding about how to engage in partnerships**. Steer students who are involved in student organizations toward the programs that help them to learn how to work with community partners. Such programs are offered by the Program on Intergroup Relations, Ginsberg Center, the new Center for Educational Outreach, and others. Some service-learning courses, such as the sociology department's Project Community and the psychology department's Project Outreach, mentioned earlier, also provide this grounding.
- **Offer online training for working with community partners**. In-person sessions are optimal for many students, but when these are not possible, more use of online training tools could help provide students with background about what to consider as they enter communities with which they are not familiar. Michigan State University, for example, has implemented online "Tools for Engagement" to help meet this need.

Students are very interested in engagement and service, as evidenced by the high percentage of graduating seniors and alumni who reported they had been involved in such activities during their time at the University. However, as students stated in a recent "fireside chat" with President Coleman and others, they cannot necessarily take time away from courses and employment in the current difficult economic times. The recommendation (above) to create courses that offer reflection related to students' service would help by offering credits that build on the service. We also recognize below other ways to enable students to meet multiple aims they have through their service activities.

- **Enable more students to do engagement and service through their work-study employment**. Certifying more nonprofit organizations in the Ann Arbor area to employ work-study students would increase the number of community-based positions available and provide students opportunities to offer valued service in many fields. Many students can work ten hours per week in such positions, enough hours to offer considerable benefit to the organizations.
- **Find more ways to offer course credit for volunteer internships**. Internships by themselves usually do not receive course credit, but if they are linked to systems for encouraging and monitoring reflection, perhaps through e-portfolios, they may merit course credit. Semester in Detroit has implemented such an internship.

Advancing Engaged Research and Creative Work

Many Ph.D. students are interested in learning about models for an engaged faculty career. The Rackham Graduate School's sponsorship of the Public Humanities Institute and the Center for Research on Learning and Teaching's workshops for the future professoriate support students in figuring out how they can do engaged research and creative work.

- **Continue and strengthen programs that enable Ph.D. students to learn more about engaged research and creative work**. Students would benefit from more opportunities to see a broad range of choices in the kind of work they can do in their careers.

As discussed above, faculty members in many fields carry out outstanding research in the area of service and engagement. The challenges that arise in some cases suggest areas for improvement. For one, grant requirements have meant that many of those who receive federal funds need to incorporate initiatives to assure that their findings will be applied, or to bring about societal benefit. Although much engagement and service associated with research and creative work is of high quality, some is not, as faculty members who are untrained in this kind of work seek to meet grant requirements at a potential cost to the people or organizations they intend to serve. Projects that alienate community partners cause difficulty for faculty members and graduate students working to implement projects in their wake. Faculty affected by problems with other projects say that service and engagement projects need to meet some standards. "No hit and runs," said one with long-term commitment to community-based participatory research. The University would further strengthen its capacity for engagement and service that occur through research projects through the efforts below.

- **Implement an online training program for principal investigators**. Offer a program to complete before implementing engagement and service associated with research grants. The training module would teach about principles of community engagement. This could potentially be integrated into the PEERRS training system for responsible research.
- **Offer a workshop for staff who implement engagement and service programs**. The workshop could be associated with faculty grants in this area. An online training program is not always sufficient preparation for this type of work.

Engaged scholarship, or public scholarship, can advance a faculty member's scholarship while also moving community agendas forward. However, many faculty members undertake service and engagement work as an aside project, participating in community development service projects that have little or no connection to their teaching and research. This makes engagement difficult to sustain and yields few rewards for faculty members in their University careers, leading them to miss opportunities to enrich both their research and their teaching. In other

situations, faculty engagement leads to knowledge production in forms that are unusual in a given discipline, such as policy documents, performance works generated by humanists, or oral histories carried out by artists. Faculty assessment practices are often ill suited to judging the quality and contribution of such work.

Whatever the specific type of public scholarship carried out by a faculty member, we know from the experience of programs such as Arts of Citizenship that making the transition from incorporating service-learning into one's teaching into publishing forms of public scholarship can take time and requires a community of collegial support. In other words, the relationship between the two is developmentally demanding. Few faculty members, especially those outside professional schools, have had exposure to this kind of research. Many faculty members discover the scholarly/creative potential of public engagement through community-based teaching. Thus community project-based teaching can be the point of intersection between pedagogy and significant developments in the faculty member's field, an intersection that leads to productive public scholarship. But faculty members need support through programs such as Arts of Citizenship in building public scholarship projects toward the point of publication (whether the project originated in teaching or not).

- **Continue Arts of Citizenship's work to support public scholarship in the arts, humanities, and design**. The Arts of Citizenship program offers funding for faculty members to undertake research related to service and engagement, and the program also couples funding with training programs and advice about how to strengthen such work. Workshops explore how to present the work's scholarly contribution, how to integrate projects into teaching, and how to partner with people outside the University.
- **Offer training programs to faculty members in many fields who are interested in doing public scholarship**. Building on work in community-based public health, social work, and nursing, and on advances in public scholarship in other fields, training programs could be developed to strengthen faculty members' capacity in this kind of scholarship and creative work.

Faculty, students, and staff often carry out research and creative work with an engagement focus, service-learning, and service projects in places where many other faculty, students, and staff also work. They do not necessarily know about each other's work until they meet in those places or when partners suggest they contact each other. For example, many disconnected projects are ongoing in Ypsilanti, the Brightmoor section of northwest Detroit, southwest Detroit, and in Flint. An effort to identify University-community partnerships in Brightmoor found 24 separate projects from student organizations, staff-led programs, service-learning courses from five schools and colleges, and community-based participatory research projects. The community benefit of such engagement and service would be enhanced if faculty, students, and staff knew enough about each other's work to build on these efforts to advance community agendas. Strengthening the connections among University-community collaborations in the same location would greatly benefit the University community's service and engagement work. Two examples of how the University might achieve this enhancement are below.

- **Identify ways to enable partnerships to learn about others in the same places**. The systematic collection of data about projects (see above) would provide information about projects in the same places and therefore enable faculty members and students to connect with each other. The existing Community Assistance Directory offers some of that aid already. Information about other projects has led to the linking of service-learning courses in Social Work and Urban and Regional Planning, for example, and to joint research proposals involving Landscape Architecture, Public Health, and Urban and Regional Planning.
- **Communicate with other universities**. University of Michigan faculty members and students often encounter students and faculty members from other institutions as they undertake engagement and service. Better communication about each institution's efforts might enable the work to have greater community benefit. An informal association, the Southeast Michigan University-Community Collaborative, which involves the University along with Michigan State University, Wayne State University, Marygrove College, Madonna University, and several other institutions, illustrates how the work at different institutions can be more complementary.

6.5.4
Increase Institutional Support for Engagement and Service

Institutional leadership is essential in cultivating and promoting a positive environment for engagement and service. In particular central and unit leadership can play key roles in advancing this area for the University. Below are a set of recommendations for central leadership to consider.

- **Support an environment of engagement and service** that enables and encourages every unit, faculty member, and student to follow their ideas about how to engage with those outside the University, and to continue to create the thousands of projects, programs, courses, and research initiatives that no central guiding administrator or office could ever coordinate, dictate, or imagine.

- **Engage the campus in discussions of engagement and service** through forums that enable campus constituents to learn from each other within and between academic units. The unit responses to the questions on engagement (see appendix "Units on Engagement") show uneven understanding about ways to think about engagement and service. Sessions on this topic could also be integrated into the annual leadership program for associate deans and chairs.
- **Assess leadership of schools and colleges on their support for engagement and service** by including these activities in unit and leadership reviews.
- **Articulate the value of engagement in public statements**, relating public engagement to student learning and the co-creation of knowledge with communities.
- **Address bureaucratic barriers**. In an organization as large as the University of Michigan, difficulties arise in getting offices in different part of the University to help meet the needs of faculty, students, and staff in implementing engagement and service activities. For example, University Housing could facilitate the use of residence halls for efforts that bring high school students to campus.

To increase its support for service and engagement, unit leadership should also consider the actions below.
- **Communicate and reward**. Communicate the value of engagement and service to faculty and staff members and reward them for excellent research and creative work, teaching and service that involve engagement.
- **Convene college engagement councils** to address challenges, articulate goals, and find ways to advance service and engagement work in keeping with the schools' and colleges' missions. Examples of such committees already exist in the School of Public Health and the College of Engineering, which offer models for others.
- **Work with department chairs** to find ways to encourage service-learning courses, as well as faculty research development, in areas relevant to the discipline or interdisciplinary field. These efforts might include workshops with faculty members on teaching such courses, and efforts to ease logistical barriers.
- **Encourage strengthening the quality of service-learning courses** in advancing student learning and in benefiting community partners. Faculty members and graduate students teaching such courses could receive guidance about best practices in service-learning and in community engagement.
- **Integrate assessment of engaged teaching and research and creative work into tenure and promotion reviews**. Several schools and colleges already include such assessments, for example, the School of Social Work, the Taubman College of Architecture and Urban Planning, and the School of Art & Design. The Center for Research on Learning and Teaching (CRLT) offers models for how to integrate this type of assessment with respect to teaching that incorporates service.
- **Integrate engagement and service initiatives into development**. Engagement and service funding is often unstable and comes in small amounts, making it difficult for programs to achieve their goals. To address this unmet need, units could integrate attempts to raise funds for engagement and service activities more completely into their development goals. Because so many foundations and major donors seek to fund activities that contribute to solving public problems, a focus on engagement can even enhance fund-raising efforts.
- **Provide funding for engagement and service**. Although most units recognize engagement and service as important to the curriculum, they rarely allocate funds to facilitate service-learning and other forms of engagement. One challenge to integrating engagement into teaching is paying for students' transportation. Although lab fees can cover these costs in large classes, fees become too high in smaller classes to support the offering.
- **Create an online, monitored system for matching students with volunteer positions and projects in nonprofit organizations**. Such a system would enable community organizations to request help from students during designated periods of time, and it would also allow students to sign up for particular types of positions. Such a system could also link students and community partners to the forms they need to complete, including, for example, documents that address the responsibilities of each party, liability agreements, evaluations of the work, and assessments of student learning--with links tailored to each role or positions. Faculty members teaching large undergraduate courses could then more easily offer service-learning sections, with GSIs trained to guide students' reflection and with staff in place to monitor the online system and to match interested students with appropriate placements.

6.6
CONCLUSION

The University of Michigan has a long history and great strengths in engagement and service activities. Reflecting this range of activities is the compelling measure of our students' and alumni's commitment to this area of activity, with participation exceeding 80% of these cohorts. Perhaps the emphasis on engagement and service at the University is an essential part of what characterizes the Michigan Difference.

The University's decentralized structure means that the schools and colleges, departments, programs, faculty, staff, and students select or develop engagement activities that fit their interests and their goals. A large amount of activity occurs under this model, enabling anyone to pursue ideas and initiatives. Our faculty members have received national and international recognition for their work in this arena. Also, our collective commitment to service, as articulated in administrators' statements and by the number and variety of service efforts in place, has likely contributed to the University being a recipient of the President's Higher Education Community Service Honor Roll award each year this national recognition has been bestowed. The University was also recently awarded the Community Engagement Classification from the Carnegie Foundation for the Advancement of Teaching. Such recognition as a national leader in engagement and service will aid faculty, students, and staff in continuing and expanding our efforts.

The University has strong, positive relationships with its partners. These enable the faculty and staff members to continue to work together, but, in addition, they smooth the way for other faculty and staff members to establish partnerships. Good reputations facilitate others' engagement. University alumni and many donors care deeply about the University's engagement and service, as evidenced, for example, in outcomes from alumni focus groups held in fall 2008 to prepare for the 2010 reaccreditation process. The alumni network is an underutilized resource of potential partners in engagement work, and alumni and other donors are often prepared to make gifts to support such work as well.

Engagement and service contribute considerably to advancing University priorities. Our commitment to diversity leads to valuing engagement that emphasizes diverse communities and diverse forms of knowledge, intercultural and multicultural learning, and educational access. Depending on the kind of engagement, students and faculty members interact with people who often are not like themselves. They learn to address issues of privilege and cultural difference, social inequity, and racial discrimination. Engagement also advances the University's commitment to encouraging young people to consider higher education who might not have done so otherwise. Many University students and faculty members work with youth in tutoring and mentoring programs. Engagement in international settings furthers student and faculty experience of and contribution to diverse cultures. Finally, engagement advances interdisciplinarity because the nature of partners' concerns often cross disciplinary boundaries inside the University; in response, students and faculty members often recruit participants from other academic fields to help them address partners' needs and issues. Despite students' and faculty and staff members' extensive engagement and service efforts, and despite the University's many strengths in this area, we could do even more to enhance this work and address the barriers we face.

Many of the recommendations in this report involve using technology in new ways to enable people across the University to know more about what others are doing, to allow the institution to build its capacity in this area, and to enhance the environment for engagement. Because the University is large and decentralized, we need to address ways to further "scale up" these efforts. Today's technological innovations can help us reach and benefit more students, faculty, staff, and community partners in their engagement and service activities. An engagement, service, and outreach web portal that includes course offering descriptions, funding initiatives and opportunities, registration of ongoing activities, and documentation of faculty, student, and staff experiences would support our growing campus needs in this area and further emphasize the University's continuing commitment to serve the state, the nations and the world in multiple ways.

7. GLOBAL ENGAGEMENT AT THE UNIVERSITY OF MICHIGAN

7. GLOBAL ENGAGEMENT AT THE UNIVERSITY OF MICHIGAN

In chapters Two through Six, the focus has been on the Higher Learning Commission's five criteria for reaccreditation. In chapter Seven, we present the University of Michigan's Special-Emphasis Study on Internationalization. This Chapter introduces the rationale for the study, provides a range of observations on the topic, and offers sets of ideas and recommendations on how the University can further grow in this important area.

7.1
INTRODUCTION

Our students are entering a world in which international connections are the norm. Already they collect information, news, data, music, and video from the Internet without concern for national boundaries. The companies they will work for and lead, the scholarship they will pursue, the policies and positions they will vote on or enact, the associations they will form via the Internet, the cultures they will meld in their own experiences, and the voluntary work they will engage in, all have global dimensions and global drivers to a degree not true for their parents' generation. It is imperative that the University help our students, whether they are resident or non-resident, domestic, or international, to prepare for lives of significant international engagement. We must give them tools to understand, to appreciate, to critique, and to engage. To live, lead, and thrive in tomorrow's world, it is more vital than ever for our students to have ample and robust opportunities to expand their international horizons, and to experience an education commensurate with those horizons. We know that many of them are eager for such opportunities.

Today's University of Michigan students already have numerous ways to study abroad or to engage in international study on campus, as illustrated with examples below. Building on these strengths, we can do more to forge the kind of forward-looking education for our students that we envision and that they desire. This report presents an examination of the University's goal to broaden the international experiences of our students and to deepen the global engagement of the University as a whole. These internationalization goals align fully with our institutional commitment to diversity and our belief that the encounter with diverse people, experiences, and perspectives is critical to intellectual development and progress.

7.1.1
The Internationalization Self-study

What is meant by internationalizing the University? Internationalization can be defined as the process of adaptation to different cultures, regions, and languages, but the concept's meaning and interpretation varies across campus. To articulate what internationalization means at the University of Michigan, we asked campus units to respond to a set of related questions:

1. *What does the concept of internationalization mean to the programs and activities in your unit?*
2. *What are the key measures by which the University of Michigan defines itself now or could further define itself as an internationalized institution?*
3. *What are the means by which you would be likely to broaden internationalization in your unit?*

The results are collected in a supporting document (Units on Internationalization) that illustrates a deep commitment and urgency to internationalization activities, and that presents a range of unit-specific goals and plans.

The campus shares a set of common goals for internationalization efforts:

- Improve student preparedness for a global society.
- Internationalize the curricula and programs.
- Enhance the institution's international profile and reputation.
- Grow international access and partnerships in research and teaching.

This chapter builds on, but does not summarize, the range of perspectives and approaches of units, recognizing our commitment to decentralization. The delicate balance between centralized and decentralized activities, however, will feature in a number of places in this chapter.
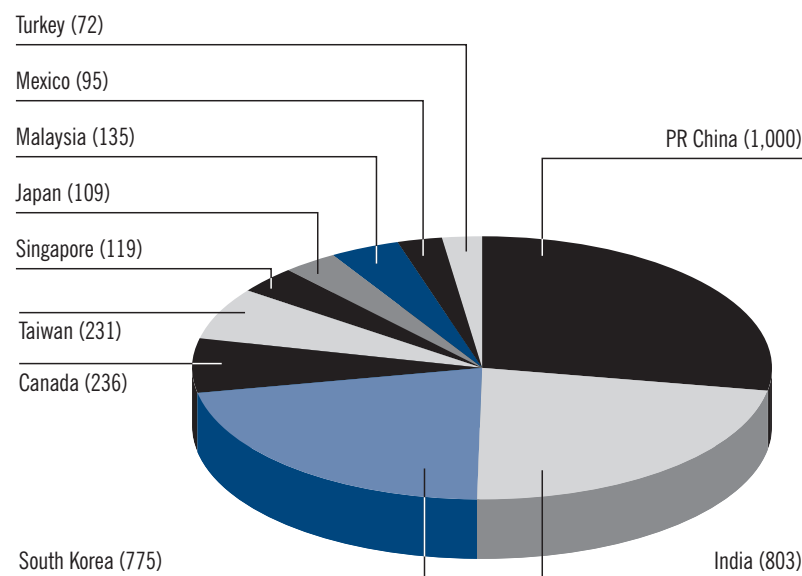
7.1.2
Approach

A campus-wide approach to understanding our internationalization goals and needs was established through the unit survey mentioned above and from the work of two accreditation working groups (AWGs) that were comprised of faculty and staff members with recognized international expertise. These AWGs formulated recommendations based on the premise that the University should be a leader in internationalization, consistent with a priority established by the president, provost, and the deans. An overarching goal identified by the AWGs is that our students should possess and be able to use knowledge of other places and cultures to articulate both comparative and critical perspectives about their own countries. Every student should have at least a minimum of internationally-focused coursework or curricular activity, on- and off-campus, and the University should aggressively seek to expand the scope, quality, and depth of the opportunities it offers to students who wish to make international issues a central part of their studies. The working groups' activities were complemented by conversations with other campus constituents, new surveys of students and alumni, and information from complementary reports with an international focus (such as the 2008 China Task Force Report, described more fully below; the International Center's Annual Statistical Report; and the Senate Assembly's 2008 Study Abroad Programs at Michigan).

Following a description of international students and alumni, international experiences, and example activities, the report offers four sets of recommendations within the following categories: *curriculum, education abroad, people and partnerships*, and *organization*. Key questions that guided the recommendations and that will also by themselves be a resource for future discussion and actions are included with each topic. Units and programs can also customize these questions for their own uses. Then, the closing sections will highlight several key recommendations that focus on centralized efforts, anchored by the creation of what we tentatively call the Center for Global Engagement. This new center would aggregate many of the recommended changes, meet the demands associated with anticipated growth in this area, host a webportal that would support campus information needs, and coordinate the University's many outreach efforts to the state, the nation and the world.

7.2
A SNAPSHOT OF INTERNATIONALIZATION

The University of Michigan admitted its first international students in 1847, one from Mexico and one from Wales. Today there are well over 4,500 students from more than 115 countries on campus (see figure below). Dozens of international student organizations have been established in recent years, most of which are engaged in social activities and, increasingly, in the organization of outreach events designed to educate the University and local communities about different cultures from around the world. This international student population is one of University's most valuable resources and ready to be engaged at all levels of our internationalization efforts.

International student enrollment in 2008 (Top Ten Countries).

Turkey (72)
Mexico (95)
Malaysia (135)
Japan (109)
Singapore (119)
Taiwan (231)
Canada (236)
South Korea (775)
PR China (1,000)
India (803)

Source: International Center's 2008 Statistical Report.

The University of Michigan is renowned for having the largest number of living alumni in the world, with over 460,000 people worldwide holding University degrees. The number of alumni living and working abroad is already large, representing 170 countries, and it will continue to grow as more international students enroll at the University and more U.S. students move abroad. The University's alumni are as geographically diverse as the student population on campus (figure below). To facilitate communication and networking with alumni abroad, the Alumni Association of the University of Michigan has created a list of international alumni contacts in about thirty countries.

Alumni and Friends of the University of Michigan around the world (winter 2009).

Canada 2,043 / 1,383
Quebec 211 / 72
Germany 524 / 175
Israel 272 / 59
China 803 / 68
South Korea 1,587 / 471
Japan 1,368 / 319
Ontario 1,330 / 898
England 687 / 262
France 372 / 63
British Columbia 291 / 59
Switzerland 210 / 96
Taiwan 1,016 / 60
Italy 132 / 65
Hong Kong 1,066 / 63
Mexico 389 / 31
Egypt 130 / 9
Thailand 630 / 29
Venezuela 194 / 18
India 1,027 / 25
Singapore 678 / 41
Saudi Arabia 133 / 6
Chile 75 / 1
Argentina 97 / 11
Brazil 342 / 52
South Africa 68 / 23
U.A.E. 81 / 6
Malaysia 383 / 6
Australia 275 / 73

Alumni / Non-Alumni as of 3/09

Source: U-M Alumni Association.

In fall 2008, more than 7,000 international students, scholars, faculty, and staff were studying or working at the University of Michigan. Based on 2007-08 data from the Institute of International Education's (IIE) Open Doors 2008 report, the University ranked sixth nationally among U.S. universities and third among public research institutions in terms of international students[5].

Significant change has already occurred over the past decade. A comparison of enrollment, demographics, and related data for 2000, 2004, and 2008 is shown in the table below. Since 2000, the international student enrollment has increased by as much as 25%, while international scholars increased by an even greater percentage. Education abroad also increased significantly, although data for 2000 may suffer from incomplete reporting. In recent years, the University's International Center has been producing a statistical report that examines trends and demographics on students, faculty, and staff, allowing better insight into the scope of our various activities. The data in the table below are mostly from the International Center and the University's submissions to IIE's Open Doors reports.

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[5] The Open Doors report includes both enrolled students and those on Optional Practical Training (one year work authorization after completion of studies). Therefore, Open Doors 2008 indicates that UM "hosted" 5,748 international students in fall Semester 2007, as opposed to 4,455 reported as enrolled by the Office of the Registrar.

	2000	2004	2008	change since 2000
INTERNATIONAL ENROLLMENT	3,426	4,343	4,574	25.1%
% international of total	9.0%	11.0%	11.2%	
male	2320	2881	2984	22.3%
female	1106	1462	1590	30.4%
undergraduate	991	1151	1300	23.8%
graduate/professional	2396	3144	3221	25.6%
BY REGION				
Asia	2,314	3,176	3,421	32.4%
Australia/Pacific	35	52	43	18.6%
Europe	384	374	308	-24.7%
Latin America	227	226	267	15.0%
Middle East/ N. Africa	218	230	244	10.7%
N. America	205	235	236	13.1%
Sub-Saharan Africa	39	50	55	29.1%
BY CITIZENSHIP (TOP TEN)				
PRC (incl. Hong Kong & Macau)	600	851	1,000	40.0%
India	430	588	803	46.5%
South Korea	472	751	775	39.1%
Canada	194	235	236	17.8%
Taiwan	230	261	231	0.4%
Malaysia	58	138	135	57.0%
Singapore	171	188	119	-43.7%
Japan	132	150	109	-21.1%
Indonesia	90	92	85	-5.9%
Turkey	92	98	72	-27.8%
EDUCATION ABROAD	1,365	1,533	3,191	57.2%
Study abroad	995	1,103	2,055	51.6%
% male		21.8%	37.8%	
% female		48.9%	59.0%	
% UM	56.8%	65.0%	78.5%	
% non-UM	43.2%	31.8%	21.5%	
% undergraduate	89.2%	86.1%	79.2%	
% graduate/professional	10.8%	13.9%	20.8%	
Co-curricular	370	430	1,136	67.4%
% undergraduate			51.1%	
% graduate/professional			48.9%	
INTERNATIONAL SCHOLARS	1301	1291	1856	29.9%
% male	71.8%	67.0%	65.6%	
% female	28.2%	33.0%	34.4%	
INTERNATIONAL EMPLOYEES	1197	1383	1512	20.8%
% male	64.3%	64.9%	64.4%	
% female	35.7%	35.0%	35.6%	

Source: International Center (Open Doors reports). Note: 2000=AY98/99, 2004=AY02/03, 2008=AY06/07; totals do not add to 100% in all categories because of "unknown".

The 2008 record of our undergraduate and graduate students' experiences abroad illustrates that study-abroad experiences reflect a mix of curricular and co-curricular activities, and a mix of credit and non-credit experiences (figure below).

Graduate and undergraduate educational experiences abroad.
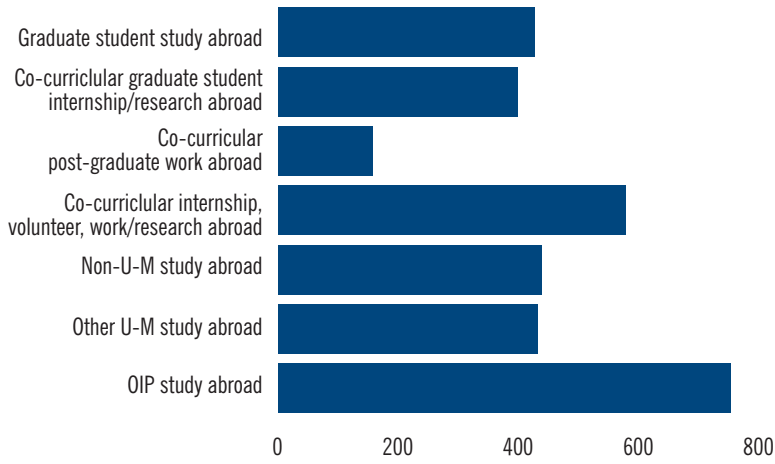
Co-curricular activities are not for academic credit. The data include 2,209 undergraduate students, 824 graduate students, 158 post-graduates; total: 3,191 students.
Source: International Center's 2008 Statistical Report.

Limiting these data to undergraduate students only, we find that study abroad experiences include a considerable component of non-University offerings (figure below), possibly reflecting the type of offerings currently available and cost issues, which we can address in our future plans.

Undergraduate educational experiences abroad.
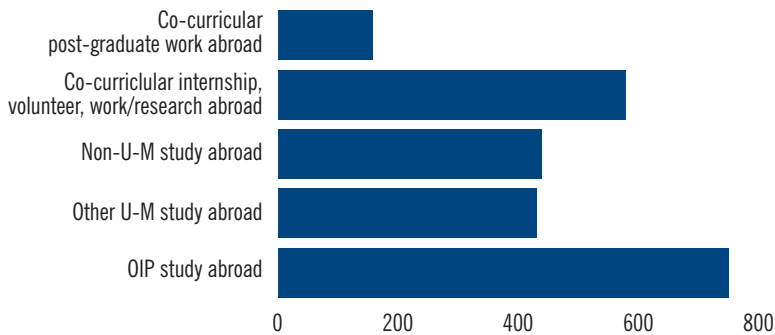
The data include 1,628 for credit, 739 co-curricular education (includes post-graduates); total: 2,367 students.
Source: International Center's 2008 Statistical Report.

Our 2008 survey of graduating seniors (described below) sheds additional light on the choices of our students by including a specific set of questions on their international experiences.

7.2.1
Experiences abroad

The 2008 survey of graduating seniors, The Michigan Experience I: Perspectives from the Class of 2008, and the 2009 survey of alumni cohorts, The Michigan Experience II: Perspectives from the Alumni, give snapshots of our students' international experiences. The survey listed a number of experiences involving internationalization and then asked survey respondents how frequently, if ever, they had sought out or encountered them.

The University's population of international students plays a significant role in bringing an international component to the undergraduate experience (figure below). Almost all respondents to the 2008 graduating senior survey (93%) reported interacting with international students in class at some point, and these students were most likely to say this happened during most terms. Nearly as high a percentage (86%) also indicated that they interacted with international students socially, and 79% said they had a friendship with one or more international students. Three-quarters of the senior respondents indicated that they had enrolled in a course with an international focus, most commonly for one or two terms. Other opportunities commonly reported by students were cultural events (82%), and extracurricular lectures and workshops with an international focus (66%). A significant fraction of the 2008 senior survey respondents re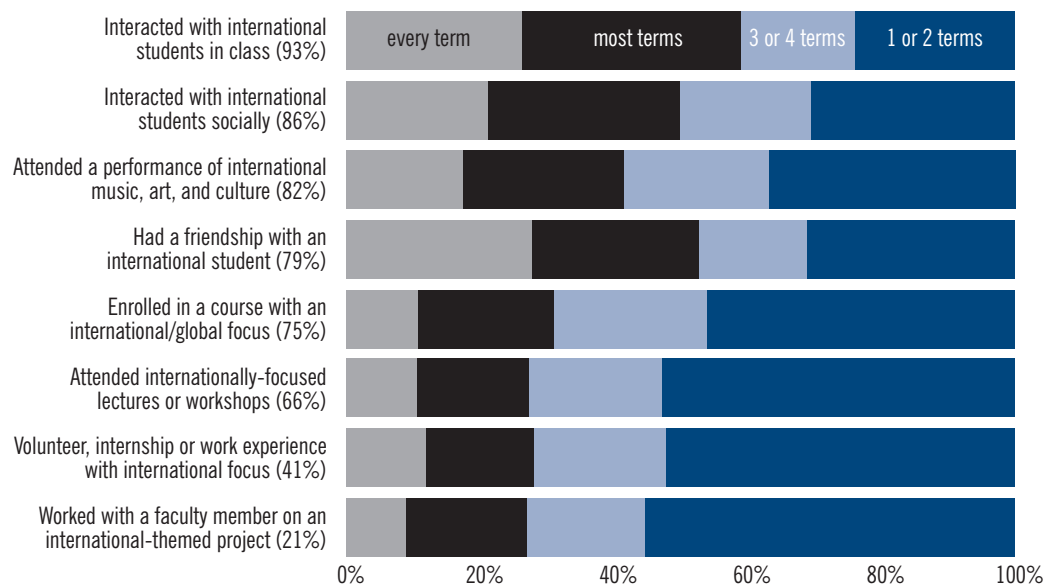ported volunteer, intern, or work experiences that were international (41%), while projects with faculty members that had an international focus were less common (21%).

How frequent were international experiences? (2008 seniors; (n=1504)

When asked the same questions, the alumni cohort respondents also valued the presence of international students on campus. Almost everyone reported interacting with international students in class at some point, typically in most of their terms on campus. Nearly as high a percentage indicated that they interacted with international students socially, and three- quarters developed a friendship with one or more international students. Over three-quarters of alumni indicated that they had enrolled in a course with an international focus, most commonly for one or two terms, and the same proportion of alumni reported attending a performance or other cultural event with a global theme. Almost a third of recent alumni respondents reported volunteer, intern, or work experiences that were international (31%), while projects with faculty members that had an international focus were less common (20%).

An important component to alumni responses is the way they differ by cohort (figure below). There is a distinct change over time, showing that recent alumni are more likely to have had international experiences than those who graduated a decade ago. Furthermore, recent alumni reported having had these experiences more often. To show these differences, the charts display alumni responses grouped by years since graduation. The results of the 2008 senior survey indicate that the University continues to make progress in this area.

Which of these activities did you participate in while at U-M?
(% alumni who participated; n=3097)

Interacted with international students in class
9–11 years out — 93%
3–5 years out — 94%

Interacted with international students in social settings
86%
89%

Attended an international cultural performance or exhibition
76%
80%

Enrolled in a course with an international/global focus
74%
82%

Had a friendship with U-M international students
74%
78%

Attended internationally-themed extracurricular lectures
59%
64%

Participated in a volunteer, internship or work experience with international focus
25%
34%

Worked with faculty on international project
12%
20%

Slightly more than half (51%) of the respondents on the 2008 graduating senior survey reported having traveled or studied abroad (defined as outside the U.S. and Canada). A fifth of the respondents stated that they participated in a study abroad experience that lasted for an academic term or more, while 9% reported study abroad that lasted for less than an academic term. Notably, volunteering or working abroad was reported by 14% of 2008 senior respondents, while 17% indicated they went abroad outside of a study abroad or work setting, but with the primary purpose of having a cross-cultural or educational experience (in contrast to travel for pure recreation). Most of the students who reported these experiences abroad had them in countries where English is not the primary language (figure below). The regions where students said they traveled to or studied were diverse. Western Europe was the most common (62% of the respondents), while Eastern Europe was visited by a much smaller number (17%). Mexico, Central America, and the Caribbean were popular (50%), whereas Asia was a destination for 20% of the seniors.

Experiences in a foreign country (2008 seniors; (n=1673)

Any experience abroad
% who participated — 51%
% in non-English speaking country — 43%

Travel abroad for recreation
40%
33%

Other travel abroad for cross-cultural experience
17%
15%

Volunteer or work experience abroad
14%
11%

Shorter-term academic experience abroad (e.g. GIEU)
9%
6%

Formal study abroad for a term or more
21%
14%
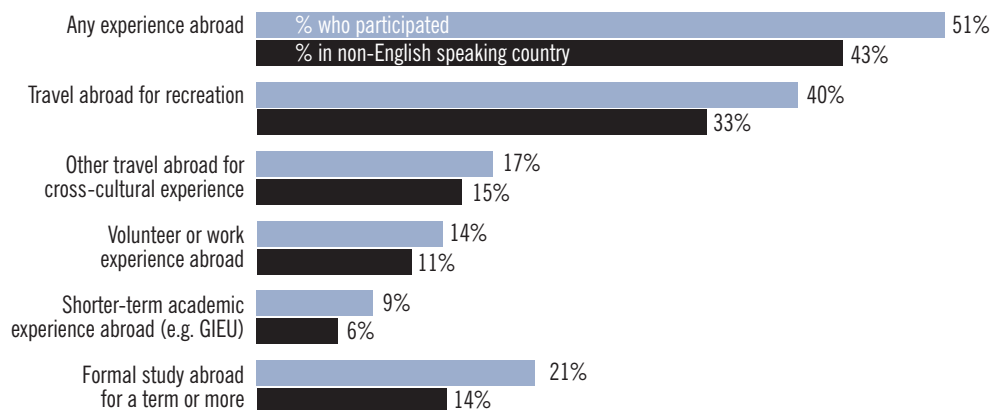
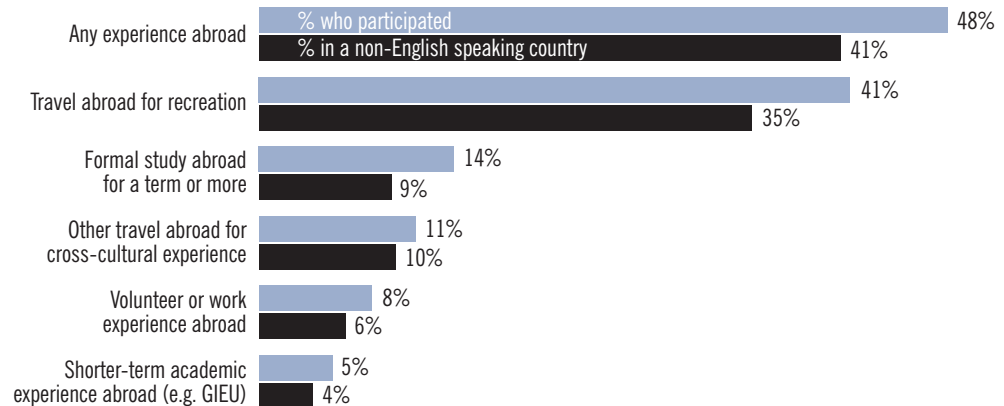Just under half of alumni from the last decade who responded to our survey reported that they had some experience traveling or studying abroad (again defined as outside the U.S. and Canada). About one alumnus out of seven participated in a study-abroad experience that lasted for an academic term or more, while 5% reported study abroad that lasted for a shorter period than an academic term. Volunteering or working abroad was reported by 8% of alumni. About one in ten indicated they went abroad outside of a study-abroad or a work setting, with the primary purpose of having a cross-cultural or educational experience (in contrast to travel for pure recreation). Alumni were asked about recreational travel abroad as well, and about 41% did this while a University of Michigan student. Most of the alumni respondents who reported time spent abroad did so in countries where English is not the primary language (figure below).

Did you have any of the following types of experiences in a foreign country while enrolled at U-M?
(alumni; n=3097)

Any experience abroad	% who participated — 48%
	% in a non-English speaking country — 41%
Travel abroad for recreation	41%
	35%
Formal study abroad for a term or more	14%
	9%
Other travel abroad for cross-cultural experience	11%
	10%
Volunteer or work experience abroad	8%
	6%
Shorter-term academic experience abroad (e.g. GIEU)	5%
	4%

Western Europe was the most common destination for our alumni survey respondents (nearly two-thirds), while Eastern Europe was visited by a much smaller number (16%). Mexico and Central America were relatively popular, with one-third of the travelers reported having visited that region. Asia was a destination for 16% of the alumni who reported travel and study abroad.

Based on the survey results, we find that international experiences between 2008 senior respondents and alumni cohort respondents are comparable in totals, but that, based on this sample, their levels of international activities appear to be on the rise. Longer academic experiences (one term or more) seem to be increasingly common, as are international volunteering activities, possibly reflecting the evolving goals of today's students and the available opportunities at the University of Michigan.

7.2.2
Example Activities

The University of Michigan has numerous strengths upon which to build its future internationalization efforts. These strengths include an already globally-engaged faculty, the ability to recruit and retain world-class scholars, professional schools with strong international components, a well-prepared and determined student body, a breadth of curricular and co-curricular programs, extensive student support services, a large international student and scholar population, the availability of many off-campus learning programs--both in the U.S. and abroad, and the commitment of the academic units and University leadership to become a premier global university. Example activities that currently promote international engagement are described below.

- Established within the College of LSA in the early 1990's, the **International Institute** (II) develops and supports international teaching, research, and public affairs programming that helps students and faculty members see the world through a global lens. The institute currently houses 18 centers and programs focused on specific world regions and global themes, which bring together faculty experts from across the University community. Each year, the institute and its centers distribute more than $3 million to University faculty members and students, which includes funds for nearly 300 grants for international study and research.

- Established in 1946, the U.S. **Fulbright Program** aims to increase mutual understanding between the peoples of the United States and other countries through the exchange of persons, knowledge, and skills. The program provides funding for one academic year of study or research abroad, to be conducted after graduation. Award recipients undertake self-designed programs in disciplines ranging from social sciences, business, communication, and performing arts to physical sciences, engineering, and education. In the past 63 years, over 100,000 students from the U.S. have benefited from this experience. In 2008 the University of Michigan received the greatest number of Fulbright awards out of all participating research institutions. The Fulbright competition is administered through the University's International Institute.

- The **Engineering Study Abroad** office is piloting software for managing information about education abroad. StudioAbroad is a web-based system that includes online student program searches, electronic applications, and tracking. The system is integrated with the University's IT environment and combines existing data from the University's information system with self-reported data that are not currently collected (e.g. health, travel, and insurance information needed for education abroad programs). The software will also be used to deliver pre-departure modules; launch program evaluations; maintain a shared electronic record for course approvals, advising correspondence, international internships, volunteer work, and research experiences; and to facilitate travel and emergency communications. Campus-wide application of this system is under review.

- Established in 2002 and recently moved into the College of LSA, the **Global Intercultural Experience for Undergraduates** (GIEU) supports global educational projects that expand learning beyond traditional classroom boundaries by creating new opportunities for short-term (three or four week) intercultural study of a global nature at field sites. These intercultural endeavors are selected from proposals submitted by faculty members to cover project costs. Grants for faculty members and students are used to promote intercultural learning across campus and to support ongoing intercultural education and intellectual development of undergraduates.

- The **Global Scholars Program** (GSP) is an academic living-learning community that provides sophomore, junior, and senior students the opportunity to engage with both U.S. and international students on campus and around the world. All GSP students, who are appointed as global scholars, are required to live together in the same residence hall, allowing them to learn from one another both academically and socially. Global scholars also have a significant role in planning and coordinating intercultural programs, with the support of their resident advisors. Required courses prepare students to address pressing global issues with diplomacy, to commit themselves to social justice, and to expand their intercultural awareness. To fulfill the academic requirement of GSP, students can choose between an Intergroup Dialogue or Global Understanding course. In addition to coursework, students attend monthly academic lectures and participate in collaborative group projects. These co-curricular program requirements allow students from a variety of majors to participate in a living-learning community that emphasizes interdisciplinarity. In 2010 GSP will move into the new North Quad Academic and Residential Complex.

- The **Program on Intergroup Relations** (IGR) is a social justice education program that offers Intergroup Dialogues courses that are structured to help students explore social group identity, conflict, community, and social justice. The intergroup dialogues involve multiple identity groups, including those defined by national origin. Trained student facilitators--one from each represented identity group--encourage dialogue rather than debate, as participants explore similarities and differences among and across groups, and strive toward building a multicultural and democratic community.

- The **International Internship and Service-Learning Program** is a program for students with internships or service-learning commitments abroad who will be returning to campus after the overseas experience. It brings together small groups of students to consider goals in going abroad, receive assistance in finding programs and funding, and to attend preparatory workshops before traveling. In addition, participating students share experiences while abroad and advise other students when they return the following year.

- The International Institute (II) offers support to faculty members and students for research and coursework abroad through the **Experiential Learning Fund and Individual Fellowships**. The II's Experiential Learning Fund supports faculty-led group travel for students that incorporate an education abroad experiential component into an ongoing course, group internship, or other academic program. Funded proposals promote student learning through participation in course-related activities outside the classroom and give students an opportunity to acquire and use insights about the society in which the program (or its overseas component) takes place. The II's Individual Fellowship program supports students, regardless of citizenship, who are enrolled in a degree program and who wish to participate in internships or conduct research abroad. Funding is available for internships in private companies, government agencies, international organizations, or non-governmental organizations. The award also provides support for preliminary visits to prospective overseas dissertation sites by graduate students who are planning doctoral research on topics in area and international studies.

- The **Multidisciplinary Action Project** (MAP) of the Ross School of Business represents an innovative approach to research and theory in real-world settings throughout the U.S. and the world. Offered in entrepreneurially focused assignments during the final seven weeks of students' first year, MAP builds on the core curriculum by enabling students to work in teams on select in-company projects where they apply theory to help companies overcome challenges and to affect meaningful change in a workplace. Each MAP assignment involves cross-functional teams that work with a cross-disciplinary team of faculty members. Teams also work closely with a consultant on team effectiveness and project management, as well as with host company executives.

- Beginning in 2010, all undergraduate students in the **School of Art & Design** will be required to complete an international experience. This change builds on an existing requirement for graduate students. Students can fulfill the requirement through credit for study abroad, research abroad, internship abroad, volunteering abroad, or through approved non-credit activity abroad. A three-week experience involving systematic reflection is the minimum requirement, and travel grants are available to all students in good academic standing. International students are exempt from the requirement.

- The **Center for Global Health** was formally established in January 2009. The center builds upon an extensive portfolio of cross-disciplinary work of University faculty members to foster innovative ideas and applications for global health. The Certificate in Global Health, which offers a formalized set of courses and also support for field experiences, is dedicated to "engaging [students] in analysis and action toward understanding and improving how globalization affects human well-being." The Program in International Health takes a complemen-

tary approach to the study of relationships between developing and industrialized countries. A capstone project includes an internship in a developing country. Established in 2005, the Global Health Research and Training Initiative offers travel fellowships for students, faculty seed grants, and public presentations on campus. The initiative engages undergraduate and graduate students in multidisciplinary global health research, encourages innovative research collaborations across the University, and supports research and training partnerships with institutions in low-and middle-income countries.

- The Center for International and Comparative Studies provides a not-for-credit seminar for master's and doctoral students intending to pursue field-based research outside the United States. The **Graduate Seminar on Global Transformations** offers students the opportunity to develop thesis projects, pre-dissertation proposals, and dissertation prospectuses with their peers in an interdisciplinary setting. The seminar increases students' capacity for understanding research designs and systems of evidence in other professions and disciplines, examines ethics and values in the development and conduct of cross-cultural and cross-national research, encourages high-level critical discussion of methodology and epistemology, and exposes students to different qualities and characteristics of data in international research.

- The College of Engineering's **International Buddy Program** acclimatizes incoming international students to their surroundings, allows them to integrate into the University environment more rapidly, and provides the opportunity to develop a more global perspective and learn about other cultures. Each international student is paired with a current University student who volunteers to act as an International Buddy.

- **Orientation programs for international students and scholars**. The International Center (IC) provides a variety of services and programs for prospective, newly admitted, and current international and domestic students, scholars, staff, and faculty. These offerings include educational and social events and workshops throughout the year on topics of interest, such as intercultural adjustment, immigration requirements, study, work, volunteering, and travel abroad. The IC also provides leadership opportunities and contact information for international student associations, and information about immigration-related topics for students and departments.

7.2.3
The China Task Force

Before moving into findings and recommendations, we highlight a recent, complementary University initiative that underscores the depth of the University's interest in and commitment to internationalization. Following her 2005 trip to China with a delegation of University leaders that included faculty members and administrators, President Mary Sue Coleman commissioned the China Task Force to examine the University's long-standing connection with China. Although this study has a distinctly regional focus, the University's many varied connections to universities, organizations, and people in China made it a broad University undertaking.

In 2008 the task force submitted its report on how to strengthen ties with Chinese institutions, according to the University's culture of mutuality and reciprocal engagement. Some of the key recommendations in the report are:
- Create an Institute for Advanced International Studies.
- Launch an initiative to develop an interdisciplinary, international curriculum.
- Enhance international visitor and scholar-in-residence programs.
- Create a University-wide facility in China as a platform for further collaborations.
The complete CTF report is available on the president's China Task Force website.

The University's current self-study on internationalization, as described in this chapter, takes a diverse and bold approach, and steers clear of any suggestion that the campus's commitment is limited to one region. Indeed, while focusing its efforts on China, the China Task Force recognized that Asia is only one of several focus areas, and in many ways the group viewed China as an example of internationalization more broadly conceived. This study echoes several important recommendations made previously in the China Task Force Report.

7.3
FINDINGS AND RECOMMENDATIONS

An increasingly interconnected world demands that our students and faculty members recognize and appreciate social and cultural diversity. Developing global awareness calls for campus discussion and, perhaps, enrichment and refinement of the teaching and research goals of the University of Michigan. Operating in today's global environment requires ever-greater attention to developing the international knowledge and skills both of faculty members and of students in our undergraduate, graduate, and professional programs.

The two accreditation working groups (AWGs) on internationalization, focusing on academic dimensions and on organizational dimensions, were appointed as part of the University of Michigan's Special-Emphasis Study on this topic. This chapter incorporates both the findings and recommendations of these two groups. The recommendations in this chapter should be viewed within the context of the goals of a campus study. As demonstrated by the information in section 7.2 of this chapter, which is only a partial list of activities, the University already offers and supports a rich array of international experiences. In the spirit of the University's commitment to improvement and to become a leader in this field, both the general points of inquiry posed by the AWGs and their recommendations contribute to a broader vision for the future.

This chapter, incorporating and expanding on the outcomes of the two internationalization AWGs, presents recommendations in four categories: curriculum, education abroad, people and partnerships, and organization. Each of these categories includes a brief overview and some context for that particular set of recommendations, a set of questions for reflection, and the recommendations, which have been further divided in some cases.

The questions for reflection arose out of the AWG discussions. They are situated before the recommendations because they provide the larger points of inquiry from which many of the recommendations emerge. In the interest of subsequent review, planning, and action steps, they will serve other individuals and groups by inviting them to consider important topics and issues through further inquiry and exploration.

Since the work of the internationalization AWGs was perceived as a visioning activity, their reports mark the first step in a strategic planning process that will lead to change. The content of this chapter represents a second step that adds conversations with various leadership groups and others inside the University. We end with a set of recommendations that focus on the opportunity and need to coordinate and strengthen centralized activities and services in support of internationalization, within the framework of a decentralized institution.

7.3.1
The Curriculum

Students graduating from the University of Michigan should be able to succeed in a global environment as leaders, as workers, and as citizens. This requires that they be able to situate, understand, and think critically about global challenges and important international problems. They should also be able to work in settings that are linguistically, culturally, economically, and politically diverse. Thus, the University should offer a curriculum that provides and expands opportunities for all students to be exposed to and engage in international experiences and learning opportunities. Our students should leave the University with a considerable level of knowledge, insight, and experience pertaining to the broader world community.

Despite the widespread and growing use of English throughout the world, the prospects for success and advancement in many professions are greatly enhanced by the knowledge of a language other than English. In addition the United States has far too few citizens capable of working in a language other than English. This reduces our country's overall effectiveness in such fields as international business and commerce, international relations and diplomacy, media relations and journalism, and many others. Knowledge of one or more foreign languages broadens a person's outlook, perspective, and horizon, enhancing his or her prospects for a successful and satisfying life in a society that is increasingly diverse and in a world that is increasingly interdependent. Indeed, more than two-thirds of the 2008 graduating seniors and the alumni who were surveyed in 2009 reported that they had studied a foreign language at the University on average just under two academic years. For all of these reasons, the University should reject the view that the widespread use of English around the world means that knowledge of a foreign language has become less important. Rather, the University should continue to encourage language learning and ensure that students have the broadest possible array of opportunities to study and achieve proficiency in one or more languages other than English, including less- and least-commonly-taught languages[6].

Another key issue that needs to be addressed for students is course and credit pre-approval for international education. The current system provides few guarantees to our students and their parents. Other universities have resolved this issue by allowing students to take academic classes abroad to "complete" college requirements, and by aligning study abroad with departmental credit. The University should develop an efficient and transparent system for pre-approval of credit, as well as comprehensive articulation tables for courses taken abroad, which would take this uncertainty and worry out of education abroad and thereby increase the rate of participation.

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[6] See Wikipedia for definition.

Questions for Reflection

- Should the University require a minimum amount of coursework with international content for graduation? What level of internationally-themed coursework should be considered the minimum necessary to prepare students for global engagement?
- How should the University implement a minimum level of international engagement for students who are not necessarily interested in international issues, and also provide a robust set of classes and co-curricular activities for students with a strong interest in international issues? Additionally, what are the best ways to increase student appreciation of the importance of learning about international challenges and about other societies and cultures?
- In what ways, and to what degree, should the University engage the local community in its internationalization efforts? For example, can initiatives on campus to enrich the curriculum provide new opportunities for collaboration with primary and secondary educational systems in order to deepen the exposure of pre-collegiate students to international perspectives and concerns?
- How ambitious should the University be in working to increase the proportion of students, particularly undergraduates, who achieve or at least approach proficiency in a language other than English? What are ambitious, yet realistic, goals and expectations in this regard?
- How can the University ensure high-quality, on-campus instruction at an acceptable cost in low-enrollment, less- and least-commonly-taught languages? In what ways, if any, are the challenges in this regard different than those associated with other specialized and advanced courses that have low enrollments, but that are essential for students in a particular field?

Recommendations

Course Offerings

- **Develop and offer a broad array of internationally-themed freshman seminars**, and encourage (or require) all incoming freshmen to take one of these courses. The purpose of these seminars is not only to impart knowledge about a particular topic or world region, but also to develop among students appreciation for international studies more broadly, including the value of education abroad. Giving students this experience early in their academic careers would encourage them to take fuller advantage of the many opportunities for international learning offered by the University.
- **Where possible, include segments on internationalization in introductory courses within specific disciplines**--considering, for example, how these disciplines do or do not differ across countries in their curricular content and associated careers for students. In addition to other initiatives, this would encourage students to consider taking more courses with an international focus. Equally important, if not more so, it would enable them to better understand the international significance of their disciplinary studies and to resist an inappropriate distinction between knowledge of other countries and regions on the one hand and disciplinary specialization on the other.
- **Require undergraduate students to take at least one course selected from a specified suite of substantive upper-division courses with an international theme**. In addition to the possibility of motivating students to take additional courses with an international focus, this would ensure that every student has at least a minimum of exposure to a topic or problem of international significance or to another country or world region.
- **Encourage the faculty to identify or develop one or more coherent sets of courses with an international focus,** which students would enroll in to fulfill the requirements of a concentration. In particular, an interdisciplinary approach to such internationally-themed, upper-level courses should be encouraged. This will not only guide students in selecting courses that, taken as a group, provide an integrated learning experience, but it would also enable them to more fully connect international learning to their disciplinary specializations.
- **Expand opportunities with other universities to share courses** with international content--particularly, but not exclusively, with other Committee on Institutional Cooperation (CIC) institutions. This would enable students both at the University of Michigan and at other participating institutions to benefit from their collective faculty resources. The University should also look for opportunities to develop and expand course sharing with partner institutions in other countries.
- **Promote and support a research agenda around international education and student learning outcomes**. The number of students going abroad for educational purposes is an important measure of campus internationalization. In addition to this "output" measure, important measures that are often not assessed are the impact of those students on the institution upon their return, and what students actually learn while abroad, both inside and outside the classroom. A commitment should be made to measuring these outcomes to place the focus of education abroad not on the numbers exclusively, but also on the learning and development of students and how the global education of students effects the entire campus.

- **Include graduate education when considering and implementing recommendations related to curriculum development**. Although many of the preceding recommendations focus on undergraduates, each department, school, and college should be encouraged to develop, implement, and adapt any of these recommendations they find relevant to their graduate programs. It is important that graduate students be knowledgeable about the ways that their fields of study are understood and practiced in other countries and about the possible ramifications of their own research and professional work for other societies.

Language Learning

- **Develop curricular and co-curricular programs that help students to appreciate the importance of learning a language other than English** and that stimulate interest in an education-abroad experience with a foreign language component. This might include short-term overseas "exposure" programs for freshmen and sophomores on the order of weeks. It might also include expanding and adding the use of foreign languages in on-campus meetings and other activities that involve international students or other native speakers of a language other than English.

- **Offer students varied and multiple opportunities to use a foreign language in their coursework and research**, including a language-across-the-curriculum (LAC) program. Elements of an LAC program might include history, social science, and professional school courses taught in a language other than English; foreign language discussion sections in some of these same courses; and team-taught courses in which one or more instructors are proficient in another language. Also of value would be a "trailer course" program, in which a language department and a non-language department jointly plan and offer a pair of courses addressing the same subject matter, encouraging students to enroll in both courses during a given semester.

- **Continue to offer on-campus instruction in a broad array of less- and least-commonly-taught languages**. Particularly important are languages that are important to the research undertaken by faculty members and students and/or that the U.S. government has identified as critical for national needs. This is important despite the low enrollments in some less-commonly-taught language courses, especially in the third- and fourth-year classes that are needed for proficiency. The potential for new collaborations and expanding existing collaborations, such as CIC's CourseShare initiative with other institutions, should be explored as cost-effective approaches.

- **Offer a selection of foreign language immersion courses in the summer** and provide increased support for students to participate in these programs for languages that are not already taught during the summer.

Infrastructure

- **Develop an efficient and transparent system for pre-approval of credit for education abroad.** The current process is a barrier to education abroad, as it is cumbersome, time consuming, and provides few guarantees to students and their parents. A system is needed that enables students, staff, and faculty to know before a student goes overseas how courses and credits taken abroad will apply toward graduation requirements. Work should also be done to develop and maintain online comprehensive articulation agreements with partner and peer institutions.

- **Assist students in organizing themselves into cohorts that share an interest in a particular international issue, country, or world region.** Toward this end, the University should provide support, structure, and resources for activities with an international focus that are planned either by the students themselves or by the University. In some cases, it may be desirable for cohorts to form living-learning communities with an international orientation, such as LSA's Global Scholars Program. By participating in the activities of these cohorts, students can work together over a sustained period to exchange ideas and perspectives and to deepen their understanding of, and their commitment to, those international issues in which they have a particular interest.

- **Increase opportunities for international visitors**--including scholars, authors, artists, and performers--to visit classes and to supplement their public lectures or performances with Q&A sessions for interested students. This would not only enrich the experience of the visiting scholars, it would also give students direct contact with individuals who may introduce them to different cultural, political, or intellectual perspectives and help them to appreciate the differences and similarities between themselves and people in other societies.

7.3.2
Education Abroad

As other nations emerge as economic powers and our society grows more international, so, too, must a student's education. There is so much to be learned from observing, from interacting, and from listening to people who live and work in different cultures than ours. Two years ago, a bipartisan congressional commission called for 1 million American students to be studying abroad by 2017. The year 2017 has special significance on our campus because it is our bicentennial, and I want the University to be a leader in reaching this study abroad goal. At least 1,800 University of Michigan students take advantage of study abroad pro-

grams annually, and I want us to double that number in the next five years. I am intentionally setting the bar high because I believe this is critical to preparing tomorrow's students for a more culturally diverse and more cooperative world. We must find ways to make the international study experience more flexible, creative, and affordable. Our future and the future of our nation depend on it.
President Mary Sue Coleman, Five Years Forward: An Address to the University of Michigan Community*; November 15, 2007.*

According to the University's 2007 First Year Student Survey, 38% of incoming freshmen indicated that they planned to study abroad at some point during their undergraduate careers. This reflects about a 20% increase in just four years, and this trend shows no sign of declining. To meet the growing demand, it is essential for the University to lower, if not remove, barriers that interfere with students achieving their goal of participating in high quality and affordable overseas learning programs.

One major barrier is lack of easy access to comprehensive information about overseas programs and related financial support. Currently, students must visit a number of offices in various locations on campus to collect information and to get answers to their questions. With today's technology, the University could eliminate this barrier quite easily by investing in software that effectively houses, organizes, and makes readily available all education abroad information in one interactive web environment. Such a resource would put students in contact electronically with education abroad advisors; enable them to apply for programs online; and provide necessary information about passports, visas, living expenses, travel arrangements, health insurance, safety issues, credit transfer procedures, and pre-departure as well as re-entry programs. Examples of such web portals elsewhere are Duke University, the University of Minnesota, and many others.

The University should increase the number of students having an education abroad experience. Toward this end, the University should develop activities that increase students' interest in having such experiences and should identify and remove any factors that discourage students from going abroad. As part of this effort, the University should also increase the range, type, and location of the education abroad opportunities it offers. These education abroad experiences are likely to be most beneficial if they have strong connections to the students' coursework and if they are available early in the student experience.

Questions for Reflection
- Should there be a campus-wide education abroad office? If so, what concerns related to education abroad should be administered centrally and assigned to this office? Alternatively, what matters related to education abroad are best dealt with at the level of the schools, colleges, and other academic units?
- What is the appropriate balance of centralization and decentralization in the development and administration of education abroad programs?

Recommendations

Offerings
- **Develop and expand short-term education abroad opportunities for first-year and second-year students** to increase their interest in including a fuller overseas experience in their programs of study at the University. This would help students to think about and plan for an education abroad experience early in their academic careers. It would also encourage them to think about international aspects of their chosen field of study and to consider taking more courses with international content.
- **Expand and diversify the range, location, and type of education abroad opportunities for students**. This includes developing more opportunities to study abroad in non-traditional settings and creating programs that appeal to students with a broad range of disciplinary, professional, and area interests. The Global Intercultural Experience for Undergraduates (GIEU) program, and the International Internships and Service Learning Programs and Experiential Learning Fund of the International Institute are examples of innovations that expand the range of education abroad opportunities.
- **Encourage undergraduate students to participate in education abroad programs that maximize their interaction with educators from other countries**, including, but not limited to, attending an overseas university and taking classes with the instructors and students of that university. Education abroad experiences that include significant and regular interaction with classmates and professors from another country would also increase the likelihood of continuing international relationships.

- **Promote undergraduate student participation in education abroad programs that involve the use of a foreign language in ways that help them to achieve foreign language proficiency**. Toward this end, the University should expand on-campus activities that motivate students to enroll in overseas programs in non-English speaking areas, and that help to prepare them. Adequate language preparation makes students' education abroad experiences more satisfying, expands and deepens their opportunities for learning while overseas, and allows them to more fully realize the benefits of an education abroad experience.
- **Encourage individual academic units to play an active role in helping to establish, administer, and sustain education abroad programs**. This would expand and diversify education abroad opportunities by encouraging programmatic innovation and the development of education abroad opportunities that meet particular and specialized needs. Equally important, it would motivate faculty members and departments to become more involved in the education abroad experiences of their students. To increase and diversify partnerships with overseas institutions could also strengthen the interest and involvement of departments in the overseas study and research of their students.
- **Create greater faculty involvement in building interest among and advising students with respect to education abroad experiences**. This should include helping students to think about the relevance of education abroad for their programs of study and advising students on matters of curriculum and research while they are abroad and after they return. Not only would this provide a more seamless transition between on-campus and overseas study, it would also help students to make decisions about the opportunities they will find overseas and about ways to incorporate what they have learned into their studies after they return to campus.
- **Offer one or more "virtual education abroad" semesters** that, in a given semester, would involve offering an integrated suite of classes with a common international thematic or regional focus, some or even all of which would include the use of a foreign language. Completion of a virtual education abroad semester might be noted on the student's transcript.

Infrastructure

- **Establish a system of pre-approval for the courses that students take as part of their education abroad programs**. Ensuring that students receive appropriate and anticipated credit upon the completion of an education abroad program, and that study abroad does not lengthen time-to-degree, would increase the number of students seeking a study abroad experience and would greatly improve students' ability to incorporate an education abroad experience into their academic plans.
- **Develop an institutional platform for international project-based learning**, in which students explore real-world, community-based problems in small collaborative groups. This would require a coordinating entity that manages partnerships, ensures continuity, evaluates success, and offers logistical and financial support.
- **Make financial support for students to participate in overseas programs one of the University's priorities**. Students consistently indicate that cost is the biggest barrier to their participation in an education abroad program. Eliminating or lowering this barrier would dramatically increase student participation in this increasingly necessary educational opportunity. To lower this barrier, the University should examine alternate tuition models, contain the cost of current programs, create new low cost programs, and raise and allocate funds to support every student who wants to participate in a University international program and who demonstrates financial need. The University should also look for ways to remove the financial disincentives for out-of-state students who are interested in study abroad to enroll in University sponsored programs, as such disincentives often lead them to enroll in programs at other universities instead.
- **Improve the preparation of students for participating in education abroad programs**, which would include standardizing pre-departure orientations and risk-management procedures. The University should ensure that students are fully and appropriately informed about all relevant concerns pertaining to their education abroad experience. Both online- and classroom-based orientation sessions should be available.

7.3.4
People and Partnerships

International students, visiting scholars and artists from other countries, and faculty members who come from other countries all contribute significantly to the international character of the University. These individuals bring information, insight, and perspective both from and about other societies and cultures. They represent a valuable, underutilized resource for the University's efforts to strengthen and expand programs and activities with an international focus. Employing graduate student instructors (GSIs) from other countries in ways that are effective and that address learners' concerns is particularly important, both to accomplish the University's instructional mission but also to foster positive student attitudes toward people from other societies and cultures.

Partnerships with overseas universities and other educational institutions deepen the international character of the University of Michigan, as well as facilitate student study and faculty research in other countries. With the production of knowledge in all fields more than ever a worldwide phenomenon, contact with faculty members and students in other countries expands learning opportunities, broadens intellectual horizons, and helps students to contextualize the information and insights to which they are exposed. The University has established study abroad agreements with many institutions around the world. More noteworthy, however, are the partnerships based on cooperation and collaboration that the University has developed with major overseas educational institutions. For example, the University has established two joint institutes in China, the University of Michigan-Peking University Joint Institute for Interdisciplinary Humanities and Social Sciences and the University of Michigan-Shanghai Jiao Tong University Joint Institute. These programs and others like them serve as international platforms for research and training that are open to undergraduate and graduate students, post-doctoral fellows, and faculty members.

All the University's interactions with internationals and with international partnerships should be guided by the principles of reciprocity and mutual value, of maintaining academic quality and scientific and ethical integrity, and of the projection and protection of the University of Michigan brand. These criteria should also govern the University's response to invitations to establish a branch campus, a degree-granting program, or project-based experiences in other countries.

Questions for Reflection

- How can the University make information about international visitors and international students more widely and readily available, so that they may be identified and invited to participate in programs and activities that increase interaction with other members of the campus community? What other uses might be made of a database constructed and maintained for this purpose?
- Does the University currently provide adequate support services for international students and visiting scholars? What would contribute to giving international students a more satisfying and productive experience at the University of Michigan?
- How should the University think about partnerships with non-peer institutions in other countries? Are there some countries or world regions in which such partnerships might undermine the University of Michigan brand?
- How should the University think about partnerships that enhance research and academic capacity at universities in countries that are important economic competitors of the United States?
- What is the role of project-based international experiences?

Recommendations

Interaction with Internationals

- **Increase and expand opportunities for international scholars and artists to visit campus**, and increase and expand opportunities for these visitors to interact with the broader campus community, especially with undergraduate students, during their time at the University. Particularly useful in this regard would be in-class presentations and/or discussions, as well as other meetings attended by students who might not otherwise have an opportunity to interact with international visitors. Students who have frequent opportunities to interact with people from other countries are likely to develop a deeper global interest and understanding, and at the same time the international visitors will have a richer experience at the University and a better sense of the importance of their visits. More generally, beyond the benefits to individual students and visitors, activities that expand opportunities for interaction with visiting scholars and artists from other countries will help create a more robust international community on campus.
- **Develop new support services and learning opportunities for international visiting scholars.** Like international students, international scholars and employees need more opportunities and planned programs to become involved and integrated into campus life. Programs such as a campus-wide research forum, a scholar-in-residence program, and specially designed faculty development programs would prove beneficial for these individuals and the campus community as a whole.
- **Encourage and support extracurricular and classroom activities that increase interaction between international students and other students**. As described with respect to international visitors, this interaction would broaden the perspective and horizons of our students from the U.S. and give international students additional opportunities to meet others and deepen their ties to the University. This would also reduce the need for international students to depend so heavily, and sometimes almost exclusively, on their own ethnic or national communities for campus involvement and life beyond the classroom. Efforts to increase interaction between international students and other students at the University should not be limited to periodic meetings

of an ad hoc nature. The University should sponsor and support groups and cohorts that bring international and other students together for sustained activity relating to problems or issues in which they share an interest. The University offers an ideal setting for such exchanges, which would expand the "bridging" social capital of all participants and increase their appreciation of other cultures.

- **Develop opportunities to benefit more fully from the knowledge and experience of the University's international faculty members,** beyond that associated with their academic specializations. International faculty members bring a valuable cross-cultural dimension to the campus, even if their academic or research interests do not focus on international issues or are associated with language departments. To explore ways to capitalize on this asset, the University might organize meetings with interested international faculty members to discuss whether and how members of the University community coming from other countries could more fully share their experiences and perspectives with others at the University and could contribute more fully to its internationalization efforts. It may be appropriate for some of these efforts to include University staff members as well.

- **Take steps to address the difficulties that are associated with the use of international Graduate Student Instructors (GSIs)**. These difficulties may result from English language limitations, differing teaching styles, or a lack of sensitivity on the part of the students being instructed. Such steps might include a more thorough orientation for international GSIs, at which topics such as undergraduate student expectations and the teaching styles familiar to them receive attention. Some of this enriched orientation might be organized centrally rather than being left to the GSIs' departments. The University should also explore ways to foster among our students greater sensitivity to the challenges faced by GSIs who are unfamiliar with American higher education, and to encourage students to reflect on the ways their own attitudes can help to make the teaching experiences of international GSIs a positive, value-added learning opportunity.

International Partnerships

- **Expand and promote diversity in international partnerships** with respect to location, type of partnering institutions, type of collaborative activities, and the innovative use of new technologies. The University should not limit its partnering activities to familiar regions and well-established institutions, but should include partnerships for mutually beneficial engagement and exchange throughout the world. In particular, the University should increase its programs and partnerships in developing countries.

- **Assess and exploit opportunities for cooperation with other U.S. universities**, including Committee on Institutional Cooperation (CIC) universities, in the development and administration of international partnerships. Such cooperation would increase the range of possible international partnerships, permitting activities and exchanges beyond the capacity of a single U.S. university.

- **Make greater use of information technology and communications innovations in the University's international partnerships** to deepen and sustain interaction with faculty members and students at overseas partner institutions. Among other things, new technologies expand the possibilities for curriculum enrichment through course sharing, distance-learning, and international team-taught instruction.

- **Take fuller advantage of the University's international partnerships to organize major and well-publicized on-campus scholarly conferences and public affairs programs**. This would increase the national and international visibility of the University and at the same time enable the University community and the constituencies it serves to benefit more fully from connections with scholars and institutions in other countries.

- **Provide seed money for research or pilot projects involving collaboration with overseas partner institutions**. In allocating such funds, beyond scholarly merit the University should consider the potential for subsequent external funding and for additional collaborative opportunities with the partner universities.

- **Create a database of the University's currently active (and perhaps inactive) international partnerships** and develop criteria for assessing the benefits and costs of these associations. Understanding the scope and value of existing partnerships would better position the University to make long-term, strategic plans in this area and help to ensure that the University's international partnerships are of the highest quality.

- **Coordinate centrally the University's processes for reviewing, approving, and managing international agreements**. Information and procedures related to all international agreements, such as Memoranda of Understanding, should be available in one place to guide academic units in creating them, and to provide all entities on campus with information about the number and scope of all active agreements at the University. This would also enable the University to be strategic in forming international agreements and ensuring that international agreements are mutually beneficial.

7.3.5
The Organization

As noted in many places in this report, the University of Michigan has a strong and successful tradition of decentralization. This practice has been important in fostering effective program development and administration, and has provided the latitude needed for innovation. It is important to recognize and continue to capitalize on this tradition. However, it is essential that a university as large and complex as the University of Michigan, and one with as many international programs, has well-functioning mechanisms in place to broadly communicate and share information about its internationally-themed activities. It is also important to have administrative arrangements that coordinate activities, thereby minimizing undesirable duplication; that provide access to common policies; and that facilitate collaborations to expand or enrich international activities and programs.

A new University-wide operation charged and supported to enable and enhance international engagement, located in a prominent facility that houses units dedicated to international experiences and collaborations, would provide heightened visibility, both on campus and beyond, for the University's commitment to the global dimension of its teaching, research, and service missions. Such an operation would better serve students with international interests, and would significantly increase opportunities for interaction among faculty members, students, and visitors involved in international activities and programs. A central facility could also provide space for international visitors, who are currently scattered in offices across campus with minimal interaction, as well as host cultural experiences through the offering of gatherings and performances. Additionally, the cultural dimensions of an international center would present a novel opportunity for outreach to the citizens of the state of Michigan, offering education about and exposure to international societies and cultures. The top ten institutions ranked by the Institute of International Education, which includes the University of Michigan, typically have a coordinating international office headed by a dean, vice-chancellor or vice-provost who oversees international activities. In a growing number of cases, this central office is housed in a dedicated facility to reflect the commitment to international experiences, such as UNC/Chapel Hill's FedEx Global Education Center and Michigan State University's International Center (complemented by campus-wide webportals). Many other schools are in the process of reorganizing their international structures. A new center at the University of Michigan (possibly called the **Center for Global Engagement**) would demonstrate a commitment to our students, faculty, and staff, and would provide a path to nationally and internationally recognized leadership in internationalization.

Increased support for activities and programs that strengthen the University's international character should be among the top priorities of the University's development efforts. Our alumni and friends from and/or living in other countries are an important source of support for the University and the many constituents it serves. Their involvement could be significantly enhanced.

Questions for Reflection
- Would the creation of a central facility dedicated to international experiences be consistent with the decentralization that characterizes the University? Is there any danger that this would reduce the interest or involvement of schools and colleges in international studies and programs?
- Which units with an international focus should be brought together in a single physical space? Should a central facility dedicated to international engagement be the home of both academic and administrative units? Would the creation of a central facility dedicated to international experiences isolate the units it houses? Would it become an unused "second home" for University faculty members and graduate students with international interests?
- What are the roles of the International Institute and the International Center, as well as unit-based programs (such as LSA's Office of International Programs[7] or the International Programs in Engineering)?
- How can we best develop a virtual environment (web portal) on internationalization that supports our students, faculty, and staff? Where will this web portal be housed? Who should administer and maintain it?
- Should there be any change in the responsibilities, staff, and resources of the vice provost for international affairs?
- The University's schools, colleges, and departments have widely differing priorities and needs for development, and also differing kinds of alumni and friends in other countries. Given these circumstances, how can we cooperate more fully yet avoid competition in the area of development? Will increased attention to development efforts that strengthen the international character of the University--both in general and when working with alumni and friends in other countries--require any changes in the ways that the University currently organizes development and alumni relations?

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[7] In fall 2009, LSA's OIP merged with the GIEU program into the Center for Global and Intercultural Study (CGIS).

Recommendations

Click and Mortar

- **Establish a well-located facility that houses units and programs with an international focus**. Such a facility would showcase and give prominence to the importance the University attaches to its international activities and the pride it takes in the high quality and extensive character of these activities. Moreover, a dedicated space centered on international programs would permit deeper and more regular interaction among faculty members and students with international interests, as well as with and among visiting international scholars and artists. Such interaction would not only enrich the international dimension of campus life, but would also encourage and facilitate conversations that can lead to programmatic innovations and to collaborations that transcend disciplinary boundaries and regional specializations. A campus facility would foster communication and collaboration among the schools and colleges, limit duplication of effort, create organizational efficiencies, and better utilize resources.

- **Offer internationally-themed outreach and public affairs programs that are dedicated to international experiences**. These would serve and deepen engagement with campus communities but also with other constituents of the state and nation. Such activities would broaden the role and value of a centralized international facility.

- **Continue to develop living-learning spaces and integrate international themes into existing ones, where applicable**. While living-learning spaces with an international component exist on campus today, the University should do more to engage students in this type of environment with internationally-focused themes and topics. Today's rapidly evolving communication and technology environments, including social networking, allows further expansion of these efforts through the creation of Internet-based international spaces.

- **Create a campus-wide interactive web environment related to global engagement**. The University needs a campus-wide international web portal, Michigan International, to (1) illustrate and promote the broad array of educational programs, activities, and events that define and support the University's global community; (2) to inform students of all education abroad opportunities that the University offers (e.g., study, research, internships, and service-learning), as well as funding options; and (3) to provide unified information and publicity regarding the value and importance of international education at the University and the extent of its global engagement and initiatives. We envision that school, college, and central administrative international offices would be linked to this web portal, including campus-wide software for education abroad. Examples of successful web portals elsewhere include Stanford's Global Gateway and the University of Illinois at Urbana-Champaign's Illinois International.

Support

- **Centrally coordinate procedures for safety, security, and emergencies, as well as shared databases of contact information for all students and all education abroad programs**. Ensuring the safety and wellbeing of students, faculty, and staff while abroad on University-related programs and activities is of the highest importance. Therefore, University-wide policies and procedures related to health, safety, and security must be designed, implemented, and enforced for the benefit of those involved in overseas activities, and for the institution as a whole. In the event of a crisis abroad, an emergency team and well-defined procedures must be in place in order for us to act quickly on the best information available, and to monitor the situation as it unfolds.

- **Create standard processes, procedures, policies, and support services for education abroad (study, research, internships, and service learning)**. It would be beneficial to students and to staff and faculty members if certain operational functions that cut across the University were handled centrally. This would provide a great service to students by simplifying their search for the right overseas program, and to faculty members, academic units, and college/school international education offices by enabling them to focus more on academic matters and less on logistical/administrative matters. For example, the University's international web portal, travel policies, emergency procedures, pre-departure and re-entry programs, student peer advising, data collection, and assessment of student learning would benefit from central coordination.

Alumni and Friends

- **Mobilize alumni and friends in other countries** for purposes of development, not only for fund-raising but also to increase international awareness of and appreciation for the University of Michigan. In many parts of the world, the University is not as well known and respected as it could be, or as it is, by comparison, in the U.S. Continued engagement beyond academics enables overseas alumni and friends to remain connected to the University and to assist in building its international visibility and reputation. It also opens or expands channels of communication that allow the University to stay more fully informed about regional and global trends and opportunities, including new international partnerships and fundraising. The University has made significant progress in undertaking these efforts with respect to alumni and friends in China, and to a lesser extent in

some other countries in East Asia. It lags with respect to other world regions, however, and needs to engage more fully with alumni and friends in these areas as well.

- **Leverage the knowledge and contacts of international alumni and friends**. In establishing and maintaining ties to alumni and friends in other countries, and also in defining objectives and identifying opportunities for development and other programs in certain countries, the University should take advantage of the deep knowledge and broad contacts of the University's international faculty and its area studies centers. The University faculty members who are affiliated with these centers represent most or all the University faculty members who have teaching or research interests in the relevant country or world region. In the International Institute's Center for Chinese Studies, personnel in development and alumni relations are already working productively in this capacity, and their work could be used as a model for other area centers. Such increased efforts could require additional dedicated staff in alumni relations, development, and/or the area studies centers.
- **Work with overseas alumni and friends beyond country-specific projects**. Many of the University's friends in other countries have an interest in global themes and international problems of more general relevance, such as international human rights, economic development, environmental change, democratic governance, poverty reduction, and health care delivery. The University needs to give such themes a prominent place in conversations with, and programs organized for, alumni and friends in other countries. It also needs to find ways to foster and coordinate conversations among groups of alumni and friends who share an interest in a particular global theme or issue to which the University also wishes to devote greater attention—despite the fact that they live in various countries. Centers and institutes with an international thematic focus, such as the area centers that are housed in the International Institute, could assist in identifying and shaping such thematic international development efforts.

7.4
KEY CHALLENGES AND OPPORTUNITIES

7.4.1
Centralized Support to Benefit a Decentralized Community

Perhaps the biggest barrier to implementing many recommendations in this chapter and advancing the University's vision for the future is also our greatest strength: decentralization. In the University's campus culture, decentralization promotes academic excellence and innovation. As a result, academic aspects of international education will and should continue to originate in the schools and colleges. However, it also appears that an openness exists among many campus groups for a greater degree of central infrastructure that will foster communication and collaboration among our programs, that eliminates redundancies and inconsistencies, that conserves increasingly stressed resources, that enhances the quality of student services and programs, and enables the schools and colleges to focus their energies on academic issues. A more central approach to internationalization would ultimately support the diversity of offerings and activities that are the hallmark of an otherwise decentralized institution.

Many of the recommendations in this report focus on units and disciplinary activities. Our organizational culture has time and again demonstrated that our decentralized structure is optimally suited for a diverse approach to change. However, today's lack of coordination and cooperation limits the impact and efficiency of the University's enhanced vision for internationalization, as envisioned in this study. Below is a list of key recommendations that, if implemented, would significantly help to address the disadvantages of our decentralized environment, but in ways that respect and do not dampen in any way its benefits.

The main recommendations for centralized action are:
1. **Create a Center for Global Engagement** with a team of professionals to coordinate support systems and processes for education abroad, as well as to build, promote, and institutionalize campus-wide international programs and activities. The center would be headed by the vice provost for international affairs (expanded from today's role), supported by a global engagement council made up of faculty and staff members.
2. **Create a centrally-supported international web portal** that would include interactive software that provides comprehensive and up-to-date information for students interested in education abroad, as well as a web magazine format for publicizing individual experiences and highlights, documenting international research activities and listing relevant campus events. In addition to information sharing for campus constituents, this web portal would make our commitment to internationalization to the outside world more visible.

3. **Remove cost barriers to education abroad** for both in-state and out-of-state students in a variety of ways (e.g., through alternate tuition models, grants, scholarships, and fellowships) , and increase the number of short- and long-term international offerings through new University partnerships, both educationally- and project-based.
4. **Leverage our international cohorts**. Capitalize on the presence of international students and faculty members on campus and the commitment of our international alumni, and attract more international visitors to campus through University fellowships and hosting activities. Adding an international "backflow" to campus would complement our efforts toward our students' off-campus experiences.

7.4.2
Measurement, Tracking, and Accountability

The findings and recommendations in this chapter form an enhanced vision for the University's commitment to internationalization. As we look ahead to the process of reviewing, planning for, and implementing these recommendations, it is important to reflect on the ways in which the University will measure not only its progress in this regard, but also to consider the ways in which we will measure the degree to which we are achieving our goals.

Measuring the success of internationalization efforts and drawing comparisons with other institutions is a complicated but critical matter. One ready measure, which the U.S. News & World Report has used in its rankings, is the number and proportion of students and faculty members at the University whose citizenship is outside the U.S. While highly ranked overall with respect to international activities, the University of Michigan scores in the lower range for this particular measure, showing that considerable progress can be made here (see 2008 World's Best Colleges and Universities). Increasing the number of international citizens in the University community would improve our international reputation and expand our growing international alumni network.

However, assessment of success should have a much broader base than the national origin of students and faculty members, and a first attempt at measures of internationalization is offered below. Ultimately the range and nature of our offerings, the make-up of the University, and our international reputation are measures that will assess the impact of our activities.

Earlier in the report, we described a set of questions that we asked each of the schools and colleges to respond to about their internationalization activities (see Units on Internationalization report). One of the questions was, "What are the measures by which the University of Michigan defines itself now or could further define itself as an internationalized institution?" Drawing directly from these responses, a summary set of measures was created for students, for faculty members and for the University. In each of these main categories, measures were sorted by type. Below is the overall structure for this summary, along with one or two sample measures within each type, representing a widely varied set of both quantitative and qualitative measures. As the University takes the next steps toward the recommendations in our self-study, this list of measures will be a useful tool to assess the progress toward meeting our goals.

Students
Incoming Students
- International students who enroll.
- Students who test out of school/college language requirements (e.g., in LSA).

University Programs and Practices to Support International Students and Internationalization
- Funds for international student travel (e.g., to attend an international conference, participate in or undertake international research, or participate in an international service activity).
- Survey results about students' international interests, values, and concerns (e.g., students' ability to participate in international programs).

Student Accomplishments and Outcomes
- Alumni who obtain positions in international settings or with international organizations.
- Ph.D. students who write their dissertations or produce creative work on international topics.

Faculty
Composition of Faculty and Scholars
- Non-U.S. born faculty members on campus.
- Faculty members who do international research.
- Visiting scholars at the University (either international scholars or scholars with an international focus).

Faculty Activities, Accomplishments, and Honors
- Faculty members who apply for external funding to do international research.
- Faculty presentations for an international audience (e.g., at international conferences, universities, institutes, government entities, or businesses).

Support for Faculty Involvement in International Research or Creative Work, Teaching, and Service
- University funds that support faculty members in their international endeavors, for example to travel internationally, to do research, or to develop and teach courses.
- Efforts to help faculty members identify, articulate, and use competencies for internationalizing the curriculum.

University

History and Mission
- Articulation of critical areas of focus by central administration, and by schools and colleges.

Institutional Rankings and Prominence
- Placement in international rankings of universities (e.g., rankings by institutes).
- Description of key accomplishments in areas of international research, teaching, and outreach/engagement.

Structure & Organization
- International development initiatives.
- Interdisciplinary activities that support or contribute to international scholarship.

Curriculum
- Undergraduate concentrations or minors/specializations with an international focus.
- Foreign language requirements (by school/college or program).

Research and Creative Work
- Research initiatives and creative activities with an international focus (e.g., international populations or international matters).
- Visiting scholar programs open to international scholars.

Academic Resources
- Foreign language collections held in the libraries.
- Information technology resources that enable international communication and collaboration (e.g., classrooms with the necessary technology to enable international communication and collaboration among students and faculty members)

International Partnerships and Agreements
- Formal collaborative programs and partnerships developed with other international institutions.

Other Outreach Activities
- International conferences on international topics or issues, hosted by the University (e.g. to further international collaboration).

Funds for International Initiatives and Activities
- Amount of Title VI and Fulbright-Hayes funds (Federal Department of Postsecondary Education—International Education Programs Service) received by the schools and colleges or academic programs.
- Amount of competitively awarded funds for international activities.

7.5
CONCLUSION

The University of Michigan is already a premier global university. However, we must continue to commit our energy and resources to advance the internationalization of the curriculum, our research, and the campus. The University must continue to build on its ability to compete for the best and brightest students and faculty members from around the country and the world. Through a new commitment to global engagement, the University will provide its students with a wide range of international educational opportunities to prepare them to be global citizens. Our students represent the next generation of leaders, inventors, problem solvers and teachers, and for them to be successful it is essential to understand the interconnectedness of our world. By enabling students, staff, and faculty to work collaboratively with partners across the globe, more informed, creative and incisive contributions will be made to the campus and the world. Therefore, the University must bring the same level of excellence to global engagement as it does to other University-wide initiatives, such as diversity and interdisciplinarity.

Centralized campus strategies are organized under (1) *click-and-mortar* and (2) *people.* Click represents the electronic world, and particularly an interactive database and information portal for international experiences. Mortar represents the campus footprint of internationalization, advancing the creation of an academic, service, and cultural center with recognizable international focus. It also focuses on the opportunities and removal of cost barriers for international experiences, both short and long; on growing the stream of international students, researcher, and visitors to campus; and on leveraging the extensive international character of our alumni.

Embedded within our evolving conversations, as expressed in this report, is a belief that every student who completes a University degree should have at least a minimum of exposure to the international dimensions of his or her field of study, that the University should encourage students to seek more than a minimum level of exposure, and that the University should increase the scope, quality and depth of the opportunities available to students and faculty members seeking to engage more fully with international themes and issues.

Our focus on internationalization should start with our applications process and emphasize "when" rather than "if" our students have international experiences. Early exposure to international people, issues, and cultures, both on and off campus, are key toward a more international University of Michigan. Throughout the curriculum we should emphasize the international dimensions of our education. We are already uniquely positioned to leverage our international students and faculty members, as well as our international alumni and friends, for this purpose.

Some of the observations and perspectives in this report are by necessity general and sometimes bold. Additional work will be needed to determine whether and how each one of the recommendations might best be implemented. Some of this future work can be undertaken by a presidential or provost-appointed task force on internationalization, comparable to the presidential task force on multidisciplinary learning and team teaching that was established to address issues of implementation associated with interdisciplinarity--the focus of the University's special emphasis study for reaccreditation review in 2000. A campus-wide effort as part of a presidential internationalization initiative that includes educational, research, and engagement elements has great potential to quickly elevate the University of Michigan among the leaders in this important area.

MUNIVERSITY OF MICHIGAN

ACCREDITATION 2010

APPENDICES

APPENDICES

Federal Compliance Program

This section of the report addresses the requirements of the Higher Learning Commission (HLC) with regard to the ways the University must comply with federal requirements in eight areas. For the convenience of the review process, a description of each item, as provided by the HLC, has been included. For each item, the University's response has been placed beneath the title and the HLC description.

1. Credits, Program Length, and Tuition
The institution has documented that it has credit hour assignments and degree program lengths within the range of good practice in higher education and that tuition is consistent across degree programs (or that there is a rational basis for any program-specific tuition).

Credits, program length, and tuition
The University of Michigan operates on trimesters, one of the three standard academic calendars. A semester extends over approximately four months, including examinations. The University's year-round calendar, by months, is approximately as follows:
Term - Months
Fall - September, October, November, December
Winter - January, February, March, April
Spring/summer - May, June, July, August
The spring-Summer term may also be scheduled as two half terms.

Bachelor, master's, and doctoral degree requirements vary widely across schools and colleges. The minimum number of credit hours varies from 120-128 for a four-year bachelor degree program. A two-year master's degree program requires a minimum of 30-60 credit hours. Doctoral degree requirements vary widely across schools and colleges. First professional degrees are offered in the School of Dentistry, Law School, Medical School, and the College of Pharmacy. Detailed information on specific program requirements is available through the website of each school and college.

More than 18,000 courses are available. Most undergraduate students take four classes per term for a total of 14 to 16 credit hours. Classes range in size from about 15 students to large lectures for 200 to 500 students. The large lecture courses also include small discussion groups to discuss the course material. Most students schedule a balance among large, small and medium-sized classes.

The University of Michigan has a highly differentiated tuition fee structure based on student level, program, and residency. The University makes these tuition and fees public in a wide variety of formats including websites, bulletins, time schedules, and admissions materials. The University's current tuition and fee schedule is available online by school and college and also by level.

2. Student Complaints
The institution has documented a process in place for addressing student complaints and appears to be systematically processing such complaints as evidenced by the data on student complaints for the three years prior to the visit.

Students can report complaints to a wide variety of people and units across campus, including a few designated offices (described below) as well as offices all across campus that provide services and support to students—both at the unit level (e.g., to student services staff in academic units) and centrally (e.g., to the provost's office). Based on information from the three designated offices below and the provost's office, a total of roughly 950 student came forward with complaints during the three previous academic years, the bulk of which were handled by the Office of the Student Ombuds. Each of the key offices described below offers both informal and formal procedures and processes for trying to help resolve complaints.

Three central conflict resolution offices are noteworthy with respect to their role in responding to student concerns: the Office of the Student Ombuds, the Office of Student Conflict Resolution, and the Rackham Graduate School's Office of Graduate Student Affairs. In addition, the Office of the Provost also receives and responds to student concerns.

The ombuds office in the Division of Student Affairs is a place where students at all levels can discuss questions, complaints, and concerns about the functioning of the University confidentially and in a safe environment. The office offers informal dispute resolution services, provides resources and referrals, and helps students explore options. The office, which has no formal authority, operates independently as a supplement to existing administrative and formal dispute resolution processes. The student ombuds is not an advocate for either side in a dispute but rather an impartial advocate for fair and consistent treatment.

The Office of Student Conflict Resolution (OSCR), which is also part of the Division of Student Affairs, facilitates conflict resolution for the University community by administering the *Statement of Student Rights and Responsibilities*, implementing related University policies, and providing alternative dispute resolution. OSCR's annual reports are available online.

The Rackham Graduate School's Office of Graduate Student Affairs (GSA) provides support and consultation to graduate students. The office offers formal and informal dispute resolution services, provides resources and referrals, and can offer alternative resolutions in consultation with other offices as appropriate. Students can expect confidentiality in a safe environment. The designated grievance/resolution officer provides advice and informal mediation for any student presently or previously registered in the graduate school who wishes to file a complaint or a grievance related to academic matters.

Each of these offices tracks written complaints from students who come directly to their offices or who are referred to them by other offices or individuals in the University. Information included in these tracking systems typically includes when the complaint was received, the nature of the complaint, and how the complaint was handled.

3. Transfer Policies
The institution has demonstrated that it is appropriately disclosing its transfer policies to students and to the public. Policies contain information about the criteria the institution uses to make transfer decisions.

The Office of Undergraduate Admissions provides information for transfer students on a dedicated section of its website. More than 1,200 transfer students are selected to enter the University of Michigan each year from over 3,000 transfer applications. Transfer admission policies, including requirements and deadlines, are specific to each of the eleven undergraduate schools or colleges. Transfer credit guidelines, some of which are school- or college-specific, are also available online.

4. Verification of Student Identity
The institution has demonstrated that it verifies the identity of students who participate in courses or programs provided to the student through distance or correspondence education.

The University of Michigan does not provide any academic programs that are offered entirely online or through web-based learning. There are, however, a small number of programs that include web-based courses or web-based learning. These include courses offered by the School of Nursing toward their master's degrees, distance learning courses offered through the Executive Master's of Business Administration (MBA) program in the Ross School of Business, and coursework in the School of Public Health's On Job/On Campus program (OJ/OC). In all of these cases, the academic unit verifies students' identities through each student's use of a University of Michigan uniqname and password.

5. Title IV Program and Related Responsibilities
The institution has presented evidence on the required components of the Title IV Program. The Team has reviewed these materials and has found no cause for concern regarding the institution's administration or oversight of its Title IV responsibilities.

General Program Requirements. *The institution has provided the Commission with information about the fulfillment of its Title IV program responsibilities, particularly any findings from any review activities by the Department of Education. It has, as necessary, addressed any issues the Department raised regarding the institution's fulfillment of its responsibilities in this area.*

Financial Responsibility Requirements. *The institution has provided the Commission with information about the Department's review of composite ratios and financial audits. It has, as necessary, addressed any issues the Department raised regarding the institution's fulfillment of its responsibilities in this area.*

With respect to both the general program and financial responsibility requirements described above, for the year that ended June 30, 2008, the University of Michigan's independent auditors, PricewaterhouseCoopers, conducted their audit in compliance with several auditing standards. These included standards generally accepted in the U.S; government auditing standards issued by the Comptroller General of the United States; and standards included in OMB Circular A-133 *Audits of States, Local Governments and Non-Profit Organizations.* These standards and OMB Circular A-133 require that PricewaterhouseCoopers plan and perform the audit to obtain reasonable assurance about whether any non-compliance has occurred that could have a direct and material effect on a major federal program. As stated in their report for the year ended June 30, 2008, it is PricewaterhouseCoopers' opinion that the University has complied, in all material respects, with the requirements applicable to each of its major federal programs. OMB A-133 reports for the University for the past four years are available online.

Default Rates, Campus Crime Information and Related Disclosure of Information, Satisfactory Academic Progress and Attendance Policies. *The institution has demonstrated, and the team has reviewed, the institution's policies and practices for ensuring compliance with these regulations.*

Default Rates. The cohort default rate at the University of Michigan (Ann Arbor campus) in the Federal Direct Ford/Stafford Loan Program is very low compared to the national average for public research institutions. According to a report released in August 2009, the University of Michigan cohort default rate for 2007 was 1.2% as compared with the national average for four-year public research institutions of 4.8%. The University's cohort default rate for the Perkins Loan Program as of FY2007 was 2.0%, also well below the national average of 7.81% for the program. Though our default rates are well below the thresholds where default management plans are required, nonetheless we provide borrowers with many opportunities for loan counseling and debt management advising.

Campus Crime Information. As part of the Campus Crime Awareness and Campus Security Act of 1990, the University of Michigan is required to publish and distribute an annual report on campus crime statistics. These statistics are compiled by the University of Michigan Department Of Public Safety (DPS) and published in the *Campus Safety Handbook* (see section 2. Crime Statistics). The handbook is distributed widely across campus to faculty, staff, and students and is also available online. Each year DPS publishes an updated version of the Handbook by October 1. DPS also provides three years of crime statistics on its website, and a daily incident log of on-campus crimes reported in the previous 24 hours.

DPS sends copies of the handbook to officials in the Michigan Department of Management and Budget as part of the University's state reporting requirements. In addition to crime statistics, the *Campus Safety Handbook* also contains comprehensive information for students, faculty, and staff on available campus safety services (such as after-dark escort services, emergency phones, etc.) and procedures for reporting crimes and assaults.

DPS also issues crime alerts when a crime is reported to law enforcement either on or near campus that, in the judgment of the DPS commanders, constitutes an ongoing or continuing threat to the University community. DPS distributes crime alerts via email to all Ann Arbor students, staff, and faculty, and to non-campus subscribers; posts fliers around campus; and posts the alerts on the DPS website.

Contractual Relationships.
The institution has presented evidence of its contracts with non-accredited third party providers of 25-50% of any degree or certificate programs.

The University of Michigan does not have any contracts in place with non-accredited third party providers.

6. Institutional Disclosures and Advertising and Recruitment Materials
The institution has documented that it provides accurate, timely, and appropriately detailed information to current and prospective students and the public about its accreditation status with the Commission and other agencies as well as about its programs, locations, and policies.
The accreditation status of the University of Michigan is included in the various bulletins and many other documents used for advertising and recruitment. The accreditation statement currently reads:

The University of Michigan is accredited by the North Central Association of Colleges and Schools, Commission on Institutions of Higher Education, 30 N. LaSalle Street, Suite 2400, Chicago, IL 60602-2504. Phone: (800) 621-7440; (312) 263-0456; Fax: (312) 263-7462

7. Relationship with Other Accrediting Agencies and with State Regulatory Boards
The institution has documented that it discloses its relationship with any other specialized, professional or institutional accreditor and with all governing or coordinating bodies in states in which the institution may have a presence.

As indicated in Chapter 3, section 3.4.1 *Planning and Assessment*, eleven of the nineteen schools and colleges (see below) are accredited by their professional organizations and undergo a formal review periodically for reaccreditation. In addition, some divisions and programs within the schools and colleges are similarly accredited. These schools, colleges, divisions, and departments disclose their relationship with the relevant accrediting bodies and describe their accreditation status in online and paper publications.

8. Public Notification of an Evaluation Visit and Third Party Comment
The institution has made an appropriate and timely effort to solicit third party comments. The team has evaluated any comments received and completed any necessary follow-up on issues raised in these comments.

In the fall of 2009 the University of Michigan published an invitation for third-party comments in three key publications: the Michigan Daily, the Michigan Alumnus, and AnnArbor.com (in both its twice-weekly printed newspaper and its daily online newsletter). This announcement provided information about the review team visit and invited all interested parties to submit comments about the University of Michigan to the Higher Learning Commission.

Request for Continued Accreditation
The University of Michigan-Ann Arbor formally requests continued accreditation from the Higher Learning Commission of the North Central Association of Colleges and Schools.

The self-study process, including the Special-Emphasis Study and the development of the evidence of meeting the core criteria, has given University of Michigan leaders, faculty, and staff a better understanding of the strengths of the institution and opportunities for improvement. This self-study report provides selected examples of evidence that the University meets or exceeds the expectations of the criteria for accreditation and other requirements for accreditation.

Institutional Snapshot
As stated by the Higher Learning Commission, the purpose of the Institutional Snapshot portion of the self-study report is to provide a basic impression of the organization's scope and operations. In the tables and information in this section, the University has provided the data within the time frames required by the HLC and, in several cases, additional information from an earlier time frame for additional comparison. The data and information provided are drawn from 2007, 2008, and 2009 (selected data).

Financial Statements
The University of Michigan's financial statements contain detailed information about the budget for the University of Michigan – Ann Arbor campus. Statements have been provided for FY2008 and FY2009 (website).

Organizational Charts
The University of Michigan's Standard Practice Guide provides organizational charts for each executive area, for all the schools and colleges, for several research institutes, and for numerous other offices and units on campus. To provide the members of the Higher Learning Commission review team with a broad overview of how the University is structured, we include a few select organizational charts (website).

www.accreditation.umich.edu

Non-Discrimination Policy

The University of Michigan, as an equal opportunity/affirmative action employer, complies with all applicable federal and state laws regarding nondiscrimination and affirmative action. The University of Michigan is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, national origin, age, marital status, sex, sexual orientation, gender identity, gender expression, disability, religion, height, weight, or veteran status in employment, educational programs and activities, and admissions. Inquiries or complaints may be addressed to the Senior Director for Institutional Equity, and Title IX/Section 504/ADA Coordinator, Office of Institutional Equity, 2072 Administrative Services Building, Ann Arbor, Michigan 48109-1432, 734-763-0235, TTY 734-647-1388. For other University of Michigan information call 734-764-1817.

The University of Michigan is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools, 30 North LaSalle Street, Suite 2400, Chicago, Illinois 60602-2504. Phone: (800) 621-7440; (312) 263-0456.

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