

MONTANA UNIVERSITY SYSTEM

Mission Review
of
Montana State University



MONTANA
STATE UNIVERSITY

Mountains & Minds

September 2009

Memorandum of Understanding

This document serves as a Memorandum of Understanding between the Montana Board of Regents, the Montana University System Office, and Montana State University as a depiction of institutional role, characteristics, and system and statewide contributions. This agreement helps guide the system and the institution in developing strategic directions that build on distinctive strengths and the leadership role that Montana State University contributes to its affiliated campuses and the University System.

Stephen Barrett, Chair
Montana Board of Regents

Sheila M. Stearns, Commissioner
Montana University System

Geoffrey Gamble, President
Montana State University

MISSION STATEMENT

Mission Statement

- To provide a challenging and richly diverse learning environment in which the entire university community is fully engaged in supporting student success.
- To provide an environment that promotes the exploration, discovery, and dissemination of new knowledge.
- To provide a collegial environment for faculty and students in which discovery and learning are closely integrated and highly valued.
- To serve the people and communities of Montana by sharing our expertise and collaborating with others to improve the lives and prosperity of Montanans.

In accomplishing our mission, we remain committed to the wise stewardship of resources through meaningful assessment and public accountability.

MSU's most recent five-year vision statement is attached, and each year's five-year vision and progress report is available at www.montana.edu/vision.

1.0 INSTITUTIONAL CHARACTERISTICS

1.1 Profile

Montana State University in Bozeman attracts high quality students, faculty and staff who are drawn to an institution with a reputation for excellence in a spectacular Rocky Mountain setting. Students at MSU are at the intersection of learning and the discovery of new knowledge. Through a research and inquiry-based curriculum the institution inspires exploration and creativity. MSU is a flagship campus of the Montana University System (MUS) and is ranked by the Carnegie Foundation for the Advancement of Teaching as one of the top 96 research universities in the nation.

Montana State University is also the state's land-grant institution and houses the agencies of Extension, Montana Agricultural Experiment Station and Fire Services Training School. MSU serves as the outreach arm that transfers knowledge to the citizens of the state, including all 56 counties and seven tribal colleges. To ensure access to education and knowledge, MSU has developed a number of distance learning and online solutions to better serve the state.

1.2 Role

Montana State University is a state leader in delivering high quality undergraduate and graduate programs. At the most fundamental level, MSU contributes to ensuring a high quality of life in Montana through our eight academic colleges and programs:

- Agriculture graduates are prepared to provide and manage a food supply through crops and livestock management.
- Arts and Architecture graduates add culture to communities and create sustainable living and working spaces.
- Business graduates are prepared with accounting, marketing, management and entrepreneurship skills to start, grow and expand businesses.

- Education, Health and Human Development graduates promote wellbeing, healthy relationships, and an informed population.
- Engineering graduates are trained to apply scientific and technical knowledge to create solutions to challenges from health related issues to energy production.
- Letters and Science graduates are prepared to respond to complex issues through problem-solving, critical thinking and a broad understanding of cultures and disciplines.
- Nursing graduates improve health in communities around the state.
- University College supports student success by enabling them to explore their options and select the right program that suits their strengths.
- WWAMI (a pre-medical program) and pre-veterinary and biotechnology programs prepare students for further study in medical disciplines.

MSU is located in Bozeman, one of Montana's most densely populated and fastest growing areas. MSU offers professional programs and workforce development courses to serve the surrounding communities and ensure economic vitality in the region. Montana's relatively rural population has defined many of MSU's programs and areas of expertise. MSU has developed particular expertise to serve the needs of the state in the following areas:

- **Agriculture:** from vaccines to new crop varieties to sustainable practices, technologies discovered at MSU are being implemented across the state and around the world.
- **Rural Transportation:** researchers in the engineering college are working to keep rural roads safe and reduce the number of vehicle, wildlife collisions
- **Rural Healthcare:** from nutrition to managing chronic diseases to providing community-based healthcare
- **Native American and Rural Education:** MSU is helping to improve education on reservations and in rural areas by recruiting, educating, certifying and placing educators into administrative positions
- **Remote Communication:** engineers are developing communication devices capable of transmitting information at high speeds over long distances

MSU contributes significantly to the economic health of the state through training a qualified, specialized workforce and conducting research that results in new technologies which can be commercialized. MSU is the largest research and development entity in the state. To promote the success of business throughout the state, several economic development outreach arms are housed on the MSU campus and provide critical support to business growth and development by supporting companies throughout the state: Tech Link, TechRanch, Montana Manufacturing Extension Center (MMEC), and the Center for Entrepreneurship for the New West.

1.3 Distinct Characteristics & Strengths

MSU is committed to the integration of learning and the discovery of knowledge as demonstrated by the undergraduate general education curriculum, Core 2.0, which ensures that every student participates in a research or creative experience. The Carnegie Foundation for the Advancement of Teaching classifies MSU as one of 96 research universities with "very high research activity." This top tier classification—out of 4,400 institutions—recognizes the significant opportunities for research, scholarship and creative work at MSU. MSU is the only top tier research institution in the five-state region of Montana, Wyoming, Idaho and North and South Dakota.

External research funding expended by MSU is typically between \$96 million and \$103 million, which greatly enhances the education of students. Undergraduate and graduate students benefit from state of the art laboratories, studios, and field stations, and numerous opportunities to conduct research and engage in creative activity in our natural environment. According to the Chronicle of Higher Education, MSU was sixth in the nation for growth in federal funds for academic research and development between 2000 and 2007, with a 148 percent increase based on the NSF Science and Engineering survey.

What distinguishes us from other MUS institutions?

Our unique geographic location and a collaborative culture on campus have provided the foundation for many of MSU's significant contributions:

- **Energy:** Ongoing exploration in four key areas including fuel cells, wind, carbon sequestration and biofuels show promise for tomorrow's energy needs. (Energy Research Institute)
- **Biomedical:** Advances in the medical arena directly improve lives from healing chronic wounds to efficiently delivering medical treatments. (Center for Biofilm Engineering and Center for Bio-Inspired Nanomaterials)
- **Laser Optics:** Integration of physics, chemistry, mathematics and engineering to develop technologies like radar and lidar, and finding new applications for computational, communication, sensor, or measurement that exceed state-of-the-art capabilities. (Optical Technology Center)
- **Native American Health Initiatives:** The NIH-funded Center for Native Health Partnerships reduces disparities of Native Americans in Montana through community-based health projects that are conducted in partnership between community members and health researchers. (Health and Human Development Department and Division of Health Sciences)
- **Thermophiles (Yellowstone Microorganisms):** Scientists explore life in the extreme environments of the Yellowstone ecosystem to develop improvements in medicine, energy production and environmental concerns. (Thermal Biology Institute and Center for Astrobiology Biogeocatalysis)
- **Infectious disease:** researchers strive to increase understanding and develop vaccines for threatening diseases like brucellosis. (Department of Veterinary Molecular Biology)
- **Paleontology:** Montana's unique landscape has revealed many dinosaur bones. (Museum of the Rockies)
- **Snow Science:** Research in MSU's state-of-the-art laboratory enhances understanding of extreme weather conditions, improving safety. (Subzero Laboratory)
- **Science and Natural History Filmmaking:** the Rocky Mountains setting in the Greater Yellowstone ecosystem affords many opportunities to combine scientific knowledge and filmmaking skills. (School of Film and Photography)

In addition, MSU is Montana's health professions university:

- The Division of Health Sciences coordinates and enhances the related educational, research and service programs of Montana State University and provides outreach to the entire community.
- WWAMI educates twenty Montana residents with the first-year medical curriculum at MSU, emphasizing primary care in the state and region.
- The College of Nursing, with coursework and practical experience in several cities across the state, serves students and communities throughout Montana and maintains impressive pass rates on national licensure exams.
- Cutting-edge, interdisciplinary programs in Biotechnology, Genomics, Neurobiology, and other health-related fields prepare students for the health professions of tomorrow.

- Montana Area Health Education Center , the Office of Rural Health, and the Center for Native Health Partnerships promote health education, research, participation in health professions in communities across Montana.
- MSU's post-baccalaureate medical certificate program prepares students from diverse academic backgrounds for medical school.
- MSU students consistently achieve outstanding medical, dental, pharmacy, optometry, and physician assistant program placements at rates double the national average.

Finally, MSU is highly successful in combining the positive attributes of an intensive research institution with a parallel emphasis on personal, student-focused experiences for undergraduates. MSU's award-winning CORE 2.0 general education curriculum, Freshman Convocation, and the First Year Initiative are examples of MSU's focus on undergraduates. MSU is indeed one of the top 96 research institutions in the nation, but – even more impressive – MSU is one of only two universities to achieve that designation while maintaining a very high undergraduate focus.

1.4 Peer Institutions

Within system: University of Montana

Outside the System:

For most comparisons, we use public institutions in our Carnegie Class – Very High Research Institutions.

For facilities (parking, police, etc) and other business process-oriented comparisons, we use the flagship public institutions in the contiguous states, which are roughly similar in size and location.

For non-resident tuition analyses, we use MSU's main competitors for non-resident applicants, derived from the National Student Clearinghouse.

For other comparisons, we use the peer set developed for the Board by NCHEMS (Dennis Jones).

2.0 STUDENT PROFILE & ENROLLMENT TRENDS

2.1 Student Characteristics

Fall 2008 Headcount Enrollment

	Undergrad	Graduate	Total	%
Total	10519	1850	12369	
Male	5708	882	6590	53%
Female	4811	968	5779	47%
African American	51	3	54	<1%
Asian American	137	19	156	1%
Hispanic American	152	13	165	2%
Native American	282	80	362	3%
White	9283	1171	10454	85%
Other	27	10	37	1%
Unknown	313	421	734	6%
International	274	133	407	3%
Average Age	22	33	23.63	

Resident	7757	1197	8954	72%
WUE	327	0	327	3%
Nonresident	2435	653	3088	25%
Full Time	8996	494	9490	77%
Part Time	1523	1356	2879	23%

2.2 Academic Preparedness

Fall 2008 Incoming Freshmen Test Scores

ACT	<18	18-20	21-24	25-29	>30
Number	107	235	499	474	142
Percent	7%	16%	34%	33%	10%
SAT					
Number	47	74	241	352	170
Percent	5%	8%	27%	40%	19%

Fall 2008 Incoming Freshmen Requiring Remediation

	English	Math	Both
Number	195	464	69
Percent of incoming class	8.35%	19.87%	2.96%

2.3 Enrollment Trends

A decline in resident undergraduate students has been partially offset by an increase in resident graduate students. All resident figures are up significantly in the Fall 2009 semester. We have experienced strong growth in nonresident undergraduate students.

Student FTE by Residency & Level

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Resident Total	8,001	8,089	7,944	7,851	7,777
Undergraduates	7,367	7,456	7,315	7,166	7,072
Graduates	634	633	629	685	705
Non-resident Total	2,527	2,554	2,611	2,616	2,732
Undergraduates	1,876	1,869	2,000	2,086	2,170
WUE	394	421	361	299	321
Graduates	257	263	251	230	240
Total FTE	10,528	10,642	10,555	10,467	10,509

New student numbers look very strong for Fall 2009. After two smaller than usual incoming freshmen classes, it appears that the Fall 2009 class will be a new record number. The steady decline in numbers of new transfer students seems to have stopped and this year's transfer class will be 80 to 100 students larger than last year. In addition, there are approximately 140 FTE Bozeman students in Great Falls College of Technology courses on the Bozeman campus. Before FY05, MSU would have counted that FTE in its own enrollment. The number of new graduate students might exceed last year's record figure.

Student Headcount by New Student Status

	Fall 2004	Fall 2005	Fall 2006	Fall 2007	Fall 2008
First-time Freshmen	2,174	2,237	2,203	2,088	2,054
New Transfer Students	729	758	684	569	578
First-time Graduate Student	276	314	278	303	387
First-time Non-degree	175	188	179	185	211
Total New Students	3,354	3,497	3,344	3,145	3,230

2.4 Enrollment Projections & Challenges

Our enrollment projection model is driven by the numbers of Montana high school graduates and historic figures for nonresident students, transfer students, and continuing/returning students. The model has trouble reacting to conditions that change rapidly (like the economy over the last year). The declining number of high school graduates in Montana will continue to present an enrollment challenge.

3.0 STUDENT SUCCESS

3.1 Degree Production

Degrees Award by Type

	2003-04	2004-05	2005-06	2006-07	2007-08
Associate Degrees	--	--	--	--	--
Bachelor's Degrees	1821	1805	1821	1837	1809
Master's Degrees	440	442	440	466	434
Specialist's Degrees	0	1	0	1	1
Doctoral Degrees	42	40	40	56	52
First Professional Degrees	--	--	--	--	--

3.2 Retention & Graduation Rates

MSU's Five Year Vision document sets a fall-to-fall retention rate goal of 75%. In spite of significant effort on campus (see below) progress on this metric has been sporadic. We remain committed to improving this figure as that will drive up graduation rates (4 to 6 years later).

Retention & Graduation Rate of First-time, Full-time Freshmen

	2003-04	2004-05	2005-06	2006-07	2007-08
Fall to Fall Retention Rate	71.6	70.5	70.6	71.4	71.6
Six Year Graduation Rate	46.6	46.9	49.6	47.7	47.9

Source: CSRDE

3.3 Retention Efforts

What is the institution doing to increase retention?

The following is a sampling of recent MSU retention efforts:

Early Intervention Strategies – In the first week of the semester, students are welcomed to campus with Move-In Day, Catapalooza, and Convocation to immediately develop ties to MSU.

Supplemental Instruction – Supplemental instruction was initially funded by a grant in the College of Engineering. Peer Assisted Study Sessions (PASS) started with two PASS leaders in October 2007 and expanded for the 2008-09 year to include six leaders. PASS courses include Math, Chemistry, Computer Science, and Physics.

Student Centered Instruction – MSU students are taking developmental coursework from MSU-Great Falls on the Bozeman campus in an effort to improve the success rate in lower level math courses among conditionally admitted students.

Educate and motivate faculty (Faculty/Advisor Toolkit) – All advisors need access to vital information to aid students with academic course selection and extra-academic issues. A clear, concise, and comprehensive set of resources was developed to help answer questions and refer students. <http://www.montana.edu/wwwgs/Advisortoolkit.html>

Reduced the size of WRIT 101 – We have added sections in order to reduce class sizes from 33 to 25, which is the national average.

New degree programs such as Liberal Studies and American Studies have allowed students in a variety of academic situations to stay and finish a degree.

First Year Initiative Program (FYI): The FYI program continues to assess all incoming students for college readiness prior to matriculation. The goal of the program is to have each student connect with a trained staff member during his/her first three to six weeks on campus. Students identified as “at-risk” for transition and retention difficulties are contacted immediately and engaged in a program of intervention to mitigate attrition risk factors.

The MSU Academic Advising Council has been meeting monthly to assess and improve advising. Research shows that good advising is a major factor in retention.

“Students-in-Transition Advisor” works specifically with those students who are unclear of their future academic pathways.

NSSE (National Survey of Student Engagement) – MSU participated in NSSE in 2007 and 2008, with plans to re-survey students every three years. Baseline findings have been reported to department heads, advisors, and others, highlighting areas of concern and success. Freshman Convocation was one of the NSSE recommendations, which we started in Fall 2007 with Greg Mortenson, Stephen Covey in 2008, and Steve Lopez in 2009.

What can be done at the system-level and/or through Board policy?

Continued support of retention initiatives will foster student success.

3.4 Student Satisfaction

National Survey of Student Engagement results from Spring 2008:

- 82% of seniors would attend this institution if they started over again

- 82% of seniors rated their entire educational experience as good or excellent
- 79% of seniors reported that other students were friendly or supportive

3.5 Outcomes Assessment

Describe your campus' outcomes assessment process, highlight accomplishments in measuring learning outcomes, both at the program and general education level

MSU's learning outcomes assessment process places the primary responsibility on departments to clearly articulate learning goals for their majors and to plan, implement, and report an appropriate process for measuring how these goals are being met. Departments must update plans at least every two years and must report annually on how plans were implemented and how, if appropriate, the department will respond to any shortcomings identified through the process.

MSU also administers a senior exit survey, which is delivered electronically to all graduating seniors. The survey addresses general issues of student satisfaction, but also asks many specific questions about learning experiences and general education goals. Additionally, many departments use the survey to ask questions of their own majors as part of their comprehensive assessment strategy.

A number of programs at MSU (e.g., Engineering and Accounting) use subject-specific examinations as part of their overall assessment programs and to meet requirements for licensure. Overall scores and pass rates often place MSU graduates among the best in the country. For example, Engineering students at MSU (where all students are required to take the exam) have averaged an 88.5% pass rate compared to the national average of 78.2%. And MSU Business majors, who are required to take the Major Field Test in Business, consistently score in 90-95th percentile nationally.

4.0 ACADEMIC PROFILE

4.1 Academic Programs (program mix)

Description of program array at undergraduate and graduate levels

At the undergraduate level, MSU offers an array of programs that not only continue the academic traditions of the past 100+ years, but also responds to evolving student interest and student demand. Our reputation as a “Top 10” film school attests to the latter. We continue to explore exciting new avenues of interdisciplinarity as we link student learning with the discovery of knowledge, and realize that emerging fields often originate at the intersections of traditional academic disciplines.

MSU offers graduate degree programs at the master and doctoral levels in 50 distinct disciplines. The graduate degree programs are administered by 33 academic departments across seven colleges and the Divisions of Health Sciences and Graduate Education. Specific master's degrees include masters of arts, sciences, architecture, fine arts, education, professional accountancy, public administration, and science education. At the doctoral level degrees include the doctor of philosophy (Ph.D.) and doctor of education (Ed.D.). MSU also offers the Education Specialist degree as well as six graduate certificate programs. Approximately, 80% of MSU's graduate degree programs are in engineering and science with the balance focused on professional degrees (e.g., education, architecture, business, and public administration), the arts and the humanities.

General education program

Distinctive characteristics (relative to other MUS campuses)

Core 2.0 at MSU holds the distinction of placing MSU on the leading edge of undergraduate research among public institutions. When started in 2004, MSU was the first public university in the nation to require an undergraduate research/creative experience in its general education component. As a complement to this requirement are four inquiry courses, in the Arts, Humanities, Natural and Social Sciences.

Characteristics in common with other MUS campuses

Like other MUS campuses, the general education program covers the bases in terms of subject areas and learning outcomes, so its courses can be fairly easily transferred from one institution to another.

Class size analysis, Student/faculty ratios

Student/Faculty Ratios

Fall 2004	Fall 2005	Fall 2006	Fall 2007	Fall 2008
17:1	16:1	17:1	16:1	16:1

Source: CDS

Undergraduate Section Size, Fall 2008

Section Size	Number of Sections	Percent of Sections
2 to 9	262	16%
10 to 19	486	30%
20 to 29	320	20%
30 to 39	239	15%
40 to 49	119	7%
50 to 99	101	6%
100+	72	5%
Total sections offered	1599	100%

Source: CDS

Undergraduate Degree Recipients by College, 2008-09

College/Department	#	%
College of Agriculture	120	6%
College of Arts & Architecture	231	12%
College of Business	213	11%
College of Education/HHD	226	12%
College of Engineering	323	17%
College of Letters & Science	541	29%
College of Nursing	179	9%
University College	56	3%
Total Undergraduate Degrees	1889	100%

Graduate Degree Recipients by College, 2008-09

College/Department	#	%
College of Agriculture	45	5%
College of Arts & Architecture	498*	54%
College of Business	43	5%
College of Education/HHD	118	13%
College of Engineering	57	6%
College of Letters & Science	102	11%
College of Nursing	13	1%
Division of Graduate Education	38	4%
Total Graduate Degrees	914	100%

*In AY 2009, MSU awarded 429 retroactive masters degrees in Architecture.

4.2 Academic Plans

Information from Academic Master Plan

At the undergraduate level we continue to explore exciting new avenues of interdisciplinarity as we link student learning with the discovery of knowledge, and realize that emerging fields often originate at the intersections of traditional academic disciplines.

The development of new or expanded graduate degree programs are directed at meeting the advanced professional and technical workforce needs of Montana for the 21st Century. Areas of development cross traditional disciplinary boundaries and include the biological, energy, and engineering sciences (e.g., bioengineering, biotechnology); business planning, entrepreneurship and science/engineering management; and health sciences research and policy with a focus on rural Montana. Specific professional degree programs are also under consideration and development including doctoral programs in nursing practice, public humanities, and industrial engineering. Similarly, proposed masters programs with a professional emphasis under development are medical laboratory sciences, landscape architecture, information technology, public health sciences, ranch management, and optical sciences. In addition, many of our current professional degree programs will be offered in a distance education format to meet the growing needs of working professionals who need advanced training and education but are place and time bound due to careers, family, and financial constraints.

4.3 Faculty Characteristics

Faculty Characteristics

Faculty Type	Headcount	% Full Time	FTE	% Women
Professor	188	93%	181.75	14%
Associate	140	98%	139.22	42%
Assistant	141	100%	141.00	43%
Adjunct	345	29%	211.78	57%
Research	46	59%	36.15	30%
Ag Exp. Station	15	100%	15.00	13%
Extension	116	90%	110.68	49%
Total	991	71%	835.58	42%

Faculty Productivity

Productivity Measure	Average Departmental Percent of Research Institution Peers
Student Credit Hours Taught per Faculty FTE	125%
Organized Course Sections Taught per Faculty FTE	136%
Research Expenditures per Tenure-Track Faculty FTE	210%
Service Expenditures per Tenure-Track Faculty FTE	343%

Source: Delaware Study of Instructional Costs and Productivity

5.0 PUBLIC OUTREACH, RESEARCH, & TECHNOLOGY TRANSFER

5.1 Outreach programs

To carry out its land grant mission, MSU has an abundance of outreach programs designed to disseminate knowledge and education throughout the state and beyond.

Statewide Service

- Extension offers practical resources on topics ranging from financial management and healthy choices to weed control and optimizing crops. It coordinates the statewide 4-H program and programs such as the Montana Weatherization Training Center. Extension offices serve all 56 counties and 7 tribal colleges in the state.
- The Montana Agricultural Experiment Station (MAES) has eight locations around the state which conduct scientific investigations and experiments relating to agriculture, natural resources and rural life.
- The Montana Manufacturing Extension Center is a statewide manufacturing outreach and assistance center that provides technical assistance to businesses in a variety of industries. MMEC has a proven record of positive impact for client firms and the economy.

Statewide Programs and Resources

- Extended University promotes lifelong learning to help students of all ages take advantage of the learning opportunities that excellent instruction and emerging technologies make possible.
- Montana Shakespeare in the Parks brings professional productions, at no cost to the public, to communities throughout Montana, northern Wyoming, eastern Idaho and western North Dakota.

K-12 Education

- Extended University coordinates a number of events and activities for K-12 students including: Science Saturdays for youth age 10 to 15, the Peaks and Potentials Youth Camp for high ability students in grades 5 through 7, and the Expanding Your Horizons science and math program for middle school age girls.
- The Montana Apprenticeship Program (MAP) works to increase the number of Native American and disadvantaged high school students who want to pursue careers in science, technology, engineering, and math career fields. The main component of MAP is a structured, six-week, hands on summer research experience for both students and teachers under the direction of active science research mentors at Montana State University.

Campus-based Outreach

- The Museum of the Rockies, a Smithsonian Institution affiliate and a federal repository for fossils, showcases the rich natural and cultural history of America's Northern Rocky Mountains. The Museum reaches diverse communities with engaging exhibits, educational programs, and original research that advance public understanding of the collections.
- KUSM, Montana Public Television, serves more than 150 communities around the state. MontanaPBS can be viewed over the air and on cable, satellite and dish networks and works through media to enrich the lives of Montanans.
- The Montana Early Childhood Project is dedicated to improving the quality of programs and services for Montana's young children and their families. The ECP is housed in Montana State University's Department of Health and Human Development.
- The Montana Watercourse provides public information, education, and support to educators, communities, local organizations and individuals so they can understand and use water resources wisely throughout the state. The Watercourse is the only state-wide water resources program that serves all water users.

Public Lectures and Forums

- The David B. Orser Executive Speakers Forum is a lecture series of the MSU College of Business that brings successful business executives to the campus to provide students the opportunity to hear directly from leaders in their field.
- The Burton K. Wheeler Center for Public Policy promotes the discussion, analysis and eventual resolution of critical issues facing Montana and the region. The Center holds two conferences annually, sponsors research and lectures, and publishes conference reports.
- The Big Sky Institute hosts scientists and naturalists for lectures and outings about the science and nature of Big Sky and the Greater Yellowstone Ecosystem. Topics range from historical geography to bird watching to hot spots of Yellowstone.

5.2 Funded research program profile

Montana State University Research and Other Sponsored Programs, Fiscal Year 2009 Expenditures by Colleges and Departments

Montana State University Research Expenditures by Sponsor - FY2006 through FY2009

Agency	FY06 Exp.	FY06 % of Total	FY07 Exp.	FY07 % of Total	FY08 Exp.	FY08 % of Total	FY09 Exp.	FY09 % of Total
Department of Defense (DOD)	\$11,078,898	10.8%	\$10,511,174	10.3%	\$10,113,956	10.5%	\$2,033,697	2.1%
Department of Interior (DOI)	\$5,508,042	5.3%	\$5,424,557	5.3%	\$3,919,736	4.1%	\$2,859,245	2.9%
Health & Human Services (HHS)	\$24,917,428	24.2%	\$24,988,634	24.5%	\$22,579,559	23.5%	\$23,707,511	24.1%
Homeland Security (HOMLAN01)	\$103,963	0.1%	\$222,363	0.2%	\$232,230	0.2%		0.0%
National Aeronautics & Space Administration (NASA)	\$8,046,602	7.8%	\$6,928,262	6.8%	\$6,701,179	7.0%	\$5,781,387	5.9%
National Foundation for Arts and Humanities (NFAH)	\$58,568	0.1%	\$50,566	0.0%	\$137,014	0.2%		0.0%
National Science Foundation (NSF)	\$13,116,628	12.7%	\$11,887,238	11.6%	\$12,328,532	12.8%	\$14,292,504	14.5%
U.S. Agency for International Development (USAID)	\$746,903	0.7%	\$604,245	0.6%	\$325,598	0.3%	\$204,519	0.2%
U.S. Department of Agriculture (USDA)	\$9,559,361	9.3%	\$9,098,645	8.9%	\$7,069,990	7.3%	\$7,759,199	7.9%
U.S. Department of Commerce (USDOC)	\$839,738	0.8%	\$1,077,946	1.1%	\$607,582	0.6%	\$751,538	0.8%
U.S. Department of Energy (USDOE)	\$5,475,490	5.3%	\$7,916,273	7.8%	\$8,829,920	9.2%	\$8,648,589	8.8%
U.S. Department of Education (USDOED)	\$2,858,092	2.8%	\$2,254,409	2.2%	\$1,803,768	1.9%	\$1,998,550	2.0%
U.S. Department of Transportation (USDOT)	\$3,694,444	3.6%	\$4,201,807	4.1%	\$4,248,245	4.4%	\$5,776,202	5.9%
U.S. Environmental Protection Agency (USEPA)	\$1,682,235	1.6%	\$1,389,898	1.4%	\$740,065	0.8%	\$988,219	1.0%
Other Federal	\$2,202,644	2.1%	\$2,345,612	2.3%	\$2,289,927	2.4%	\$9,431,340	9.6%
Federal Agencies Total	\$89,889,036	87.2%	\$88,901,629	86.3%	\$81,927,301	79.5%	\$84,232,500	81.7%
Private Total	\$8,104,014	7.9%	\$8,700,233	8.5%	\$9,877,263	10.3%	\$10,520,053	10.7%
State Agencies Total	\$5,055,815	4.9%	\$4,514,455	4.4%	\$4,345,989	4.5%	\$3,679,138	3.7%
Total	\$103,048,865	100.0%	\$102,116,317	100.0%	\$96,150,553	100.0%	\$98,431,691	100.0%

5.3 Inventions, patents, and spin-off companies

Technology Transfer Measures	FY 2006	FY 2007	FY 2008	FY 2009
R&D Expenditures	\$103,048,865	\$102,116,323	\$96,150,553	\$98,431,691
Number of new invention disclosures filed	32	30	22	25
Number of new start-up companies which have licensed or commercialized university-developed intellectual property	5	1	2	3
Number of new intellectual property licenses issued	29	35	43	48
Total intellectual property licenses in effect at the close of the fiscal year	109	130	152	182
Total gross revenues from intellectual property licenses	\$219,931	\$257,621	\$664,244	\$557,832
Patents Issued	2	7	8	18
Trademarks Issued			3	1
Total Active Licenses	109	130	152	184
Total Active Licenses with MT Companies	68	81	89	105
License/Patent Revenues	\$49,949	\$69,165	\$221,614	\$290,690
Reimbursed Patent Costs from Licenses	\$169,982	\$138,562	\$442,630	\$267,142

5.4 Community engagement

Some recent community engagement activities include:

- Extension Service – providing research-based knowledge to strengthen the social, economic and environmental well-being of families, communities and agricultural enterprises
- Centers that work directly with Montana Companies
 - Center for Biofilm Engineering
 - Thermal Biology Institute – “Hot Science” – classroom activities K-12
 - Optical Technology Center
 - Spectrum Lab
 - Center for Entrepreneurship of the New West, more than 250 projects
 - Image and Chemical Analysis Laboratory
- Outreach to high school students through EPSCoR K-12 Science Technology Engineering Math Program
- Outreach to tribal colleges through EPSCoR
- Montana Manufacturing Extension Center – served 595 Montana companies through 1259 projects in 48 counties
- MSU TechLink – assisted more than 140 Montana companies
- MilTech – assisted more than 22 Montana companies
- MSU has more than 400 Partnerships with Montana high-tech companies
- TechRanch business incubator
- Office of Community Involvement – thousands of student hours assisting not-for-profits, schools and government organizations
- Big Sky Institute – sponsors NSF K-12 research and education program, grad students matched with elementary schools
- Science Olympiad – hosting middle and high school students in science competitions

- Western Transportation Institute
 - bridges and dams outreach
 - demonstrating engineering principles to elementary school students
 - summer transportation institute for high school students
- Peaks and Potential – summer program for middle school students
- Big Sky Carbon Sequestration Partnership, K-12 education
- Center for Bio-Inspired Nanomaterials (CBIN) – connecting with over 400 school children
 - nanoscience education (middle and elementary),
 - first national Nanodays demonstrations
- Science Saturdays – Extended University and CBIN – middle and high school students
- Expanding Your Horizons – middle and high school girls in math and science
- National Teachers Enhancement Network (NTEN) – Extended University – graduate level on-line courses for science teachers
- Montana Space Grant Consortium – presentations about NASA missions for K-12
- MT Watercourse – water education program, stewardship, water resource decisions, K-12
- College of Engineering
 - Engineerathon – middle school students taught engineering concepts
 - Women in Engineering Dinner for high school and college students
 - Shadow Engineer Day for high school students
- Academics, Life Skills, and Leadership Challenge in Athletics (ALL) –student athletes perform several thousand hours of outreach
- Leadership Institute – student outreach and leadership development
- Engineers without Borders – student-led group providing clean water supply to villages in Kenya
- Caring for Our Own Program and Designing our Community – mentoring programs for Native Americans in Nursing and Engineering
- Museum of Rockies programs for preschool and K-12

5.5 Special recognition

- Tier One Carnegie Institution, one of top 96 research active institutions of 4,400 nationally
- Native American Studies received accreditation from World Indigenous Nations Higher Education Consortium, first mainstream, non-indigenous institution in the world to receive this designation
- 16 NSF Career Awards since 1995
- Four student Emmys from the Science and Natural History Film-making program
- 88.5% cumulative pass rate for Engineering Field Exam since 2000 (78% national average)
- 11th nationally in Goldwater Scholars
- 18 MSU students received Fulbright grants from 1997-2008
- College of Nursing student pass rate for national licensing exam has exceeded 90% for the last 10 years, and graduate level certification first-time pass rate has been 100% since program's inception in 1957

- College of Business seniors consistently score in the 90th percentile on the Major Field Test-Business, a standard exam administered to business seniors across the country in more than 500 institutions, spring 2009 cohort (141 students) scored in the 96th percentile overall.
- 70% medical school acceptance (44.4% nationally)
- National award from the Association of Collegiate Schools of Architecture
- Jeffrey Sharkey, a 2008 graduate from MSU's computer science master's program, won \$275,000 in a software design competition sponsored by Google.
- Technology Transfer Office was recognized as one of ten small offices nationwide for licensing and spinning out companies.
- MSU's Office of Disability, Re-Entry, and Veteran Services was recognized by GI Jobs in the top 15% of military friendly schools in the nation.
- The College of Nursing installed a cutting-edge simulation laboratory, completed in fall 2008, to allow student to experience emergency and critical patient simulations before caring for patients in hospitals.
- Three groups of MSU researchers sent experiments on the Space Shuttle Endeavour
- MSU was selected as the sixth university-based Wind Application Center by the U.S. Department of Energy's National Renewable Energy Lab program.
- One of 14 schools in the nation to receive funding to support a Beckman Scholars Program, which provides scholarships to advance the education, research, training and personal development of undergraduates majoring in chemistry, biochemistry, and the biological and medical sciences.
- One of the top universities in the country graduating engineers of Native American background

5.6 Peer comparisons

- MSU is classified as a Research University - Very High Research Activity by the Carnegie Foundation for the Advancement of Teaching. Only 96 institutions (of 4,400) share that designation. Further, MSU is one of only two top research institutions that also maintain a Very High Undergraduate profile.
- MSU ranks in the top 100 research institutions nationally for research expenditures.
- MSU was recognized as the 6th “Biggest Gainer” in federal funds for research, 2000-2007.
- According to the Delaware Study of Instructional Costs and Productivity, MSU's research expenditures per faculty member double other participating research institutions, with the average department at MSU expending 210% of peers.
- Service expenditures per faculty member reported in the Delaware Study are more than three times (343%) that of peer institutions.
- College of Business once again earned accreditation by the Association to Advance Collegiate Schools of Business (AACSB) – the most rigorous and difficult accreditation to earn and retain, less than 15 percent of business schools worldwide attained AACSB accreditation.
- In 2007 47% of the Montana University System Honors Scholars attended MSU, 14% more than any other in-state institution.

6.0 SYSTEM COLLABORATION

6.1 Collaborations with K-12

MSU faculty work with teachers and administrators at the local and statewide level (including many tribal communities) to address issues specific to the needs of K-12 teachers and students. This includes undergraduate and graduate teacher training (including on-line masters programs), in-service teacher education, summer programs for students (including fully-funded research opportunities), outreach programs to schools, summer research experiences for teachers (often funded through NSF's Research Experience for Teachers program) and a number of federally supported programs to enhance teacher effectiveness in specific disciplines. A recent highlight is the I LEAD (Indian Leadership Education and Development) program, for which Montana State University has been awarded two grants totaling \$2.5 million from the US Department of Education to recruit, prepare, and train Native American teachers to become school principals and superintendents.

6.2 Program Partnerships

Academic programs of other institutions offered on your campus

Academic programs of your institution extended to other sites

Jointly offered academic programs

Non-academic program partnerships

MSU has a number of established academic partnerships at the graduate level. Joint degrees with the University of Montana – Missoula include doctoral programs in Fish & Wildlife Biology and Neuroscience. A new doctoral program in American Studies has just been implemented in partnership with the Universities of Utrecht and Amsterdam. MSU also jointly awards the Master of Public Administration with MSU-Billings. Additional partnerships that include graduate course offerings are as follows:

- Inland Northwest Research Alliance (INRA) – Eight universities in the Northwest are working together in research and graduate education in the subsurface, hydrological, and energy sciences and engineering.
- Great Plains IDEA Network (GP IDEA) – An alliance of eleven universities offering online graduate degrees, certificates, and courses in the human and agricultural sciences.
- Center for Teaching and Learning in the West (CTLW) – A consortium of five universities collaborating with tribal colleges and public school systems in Montana, Colorado, and Oregon to advance student learning in science and mathematics from middle school through college. The center supports interdisciplinary research, doctoral related coursework, and professional development for teachers.
- Big Sky Science Partnership (BSSP) – A partnership between Salish Kootenai College, the University of Montana, and Montana State University in collaboration with K-8 schools and Tribal Communities in Montana focused on strengthening elementary science education. BSSP is working with MSU's Masters of Science in Science Education program to provide a graduate program in science education for elementary teachers in Montana.
- MSU-Great Falls College of Technology – The College of Technology in Great Falls offers developmental courses for conditionally admitted students on the MSU-Bozeman campus, short-term training through a downtown Bozeman center and certificate and Associates degree programs both on-campus and at facilities elsewhere in the community. Over a one to three

year horizon, authority will be sought to have these programs transitioned as part of a two-year effort within MSU-Bozeman.

6.3 Participation in System Initiatives

Consistent with MSU's student-centered approach, common course numbering has been fully implemented to ease the transfer of credits between institutions throughout the state. The leadership and faculty at MSU engaged early on in the initiative to apply common course numbering and maintained a high level of involvement through the faculty learning outcome committees to assist in making the transition. MSU also developed an awareness campaign including a website and printed materials to promote the change.

MSU was the lead in developing the MUS Green University web site. MSU collaborated with OCHE to develop an online resource that serves as a clearing house for green learning opportunities such as online and place-based courses and programs, energy research and careers. The site also outlines statewide sustainability initiatives.

To promote the American Indian Tuition Waiver, MSU consulted with OCHE and developed messaging and graphically designed a printed piece to support tuition waivers for Indian students across all campuses.

6.4 Support for Campuses Affiliated with the University

Financial

- Since FY02, through various General Fund reallocation practices implemented by the Board of Regents, Bozeman has provided its smaller MSU campuses with nearly **\$16 Million** of additional General Fund support.

Figure 1. Reallocation of State Funds				
	Bozeman	Billings	Northern	Great Falls
FY02 Differential Tuition Adjs	(407,012)	16,986	217,159	174,540
FY02 General Fund Adjustment	(126,482)	86,735	37,530	28,568
FY03 Differential Tuition Adjs	(543,712)	27,020	267,072	236,426
FY03 General Fund Adjustment	(252,964)	173,470	75,060	57,136
FY04 Differential Tuition Adjs	(543,712)	27,020	267,072	236,426
FY04 General Fund Adjustment	(252,964)	173,470	75,060	57,136
FY05 Differential Tuition Adjs	(543,712)	27,020	267,072	236,426
FY05 General Fund Adjustment	(252,964)	173,470	75,060	57,136
FY06 Differential Tuition Adjs	(543,712)	27,020	267,072	236,426
FY06 General Fund Adjustment	(252,964)	173,470	75,060	57,136
FY06 Reallocation to Campuses	(1,020,780)	175,000	744,780	101,000
FY07 Differential Tuition Adjs	(543,712)	27,020	267,072	236,426
FY07 General Fund Adjustment	(252,964)	173,470	75,060	57,136
FY07 Reallocation to Campuses	(1,020,780)	-	738,966	281,814
FY08 Differential Tuition Adjs	(543,712)	27,020	267,072	236,426
FY08 General Fund Adjustment	(252,964)	173,470	75,060	57,136
FY08 Reallocation to Campuses	(1,020,780)	-	738,966	281,814
FY09 Differential Tuition Adjs	(543,712)	27,020	267,072	236,426
FY09 General Fund Adjustment	(252,964)	173,470	75,060	57,136
FY09 Reallocation to Campuses	(1,020,780)	-	738,966	281,814
COE Differential Tuition Adjs	(543,712)	27,020	267,072	236,426
COE General Fund Adjustment	(252,964)	173,470	75,060	57,136
Reallocation to Campuses	(1,020,780)	-	738,966	281,814
FY10 General Fund Adjustment	(604,231)	440,148	163,961	122
Stimulus Reduction	(291,487)	11,594	(26,633)	306,526
COE Differential Tuition Adjs	(543,712)	27,020	267,072	236,426
COE General Fund Adjustment	(252,964)	173,470	75,060	57,136
Reallocation to Campuses	(1,020,780)	-	738,966	281,814
FY11 General Fund Adjustment	(818,847)	572,294	196,732	49,820
Stimulus Reduction	(291,487)	11,594	(26,633)	306,526
GRAND TOTAL	(15,834,310)	3,118,761	8,080,915	5,018,230

Centralized Operational Support from Bozeman is significant, including the following.

Centralized Budget Office Support/Services

- Test upgrades and troubleshoot encumbrance, budget adjustment and fiscal year-end processes for all campuses/agencies
- Validate and load new year budgets via Spreadsheet Budgeting for all campuses/agencies
- Develop standard biennial budget templates and merge data into one MSU system document prior to submittal to OCHE; make subsequent updates to maintain one system document

- Coordinate and merge other MSU system documents, as needed

Centralized Financial Reporting Support/Services:

- Prepare consolidated financial statements, including consolidating all foundations, reviewing balances, writing the MD&A, preparing pie charts, preparing and reviewing statement templates, and maintaining the Banner financial statement application, etc.
- Prepare annual transfers report and submit to OCHE
- Conduct accounting research and stay abreast of changes to accounting standards, tax laws, reporting requirements, etc.
- Prepare all required documentation for the bond indenture (Moody's and S&P questionnaires, Official Statements, etc.) including audited consolidated bond financial statements (provide templates for individual campus reports)
- Reconcile MSU-wide financial figures to the State's SABHRS figures for the State of MT financial statement
- Issue 1099s and 1098-Ts to all vendors/students

Centralized Business Office Inter-Campus Communication Services:

- Conduct weekly University Finance Officer meetings to ensure a regular forum for updates and concerns
- Conduct weekly controllers' calls to discuss upcoming changes in regulations, state-mandated chart of accounts issues, operations issues, Banner changes, upcoming deadlines, etc.

Centralized Financial Systems Technical Support/Services:

- Provide Banner report web reporting system and report-writing expertise
- Provide production control from ancillary modules into Banner, to ensure that all transactions are fed properly (student accounts subsidiary, fixed asset detail, payroll system, accounts payable data)
- Monitor and feed all campuses' transactions to SABHRS, including accounts payable disbursement files
- Investigate and implement new Banner functionality (parent PLUS loans, multi-invoice per check, ACH, etc)

Centralized Accounting Operations Support/Services:

- Monitor chart of account changes to data warehouse and liaise with OCHE and UM as needed
- Contract for, implement, and monitor the environment for new functionality such as student account web payment, departmental web payment, direct deposit for vendor payments (including travel)
- Issue RFP and contract for collection agency services for accounts receivable and student loans receivable
- Provide purchasing services above the campuses' delegated authority (or as otherwise requested by the campuses)

Centralized Banner Enterprise Information System Support/Services:

- Business process alignment, policy, module configuration, patch management, upgrade coordination with ITC ASG and users
- Lead investigating, testing and implementing new Banner Human Resources and Finance module functionality
- Technical project management to implement business efficiencies
- Provide leadership to maintain Banner module effectiveness in the 4-campus environment
- Provide direction, support and training on HR and finance modules
- Provide production control from ancillary modules into Banner, to ensure that all transactions are fed properly (student accounts subsidiary, fixed asset detail, payroll system, accounts payable data)
- Provides functional expertise for the Human Resources and Finance module.
- Provide outreach with customers and coordination with stakeholders to create, modify and troubleshoot HR, Finance and payroll-related reports
- Provide specific data analysis with stakeholders to facilitate improved data integrity, user training & functional processes
- Assists with 4-campus functionality (with ITC ASG) on things such as direct deposit, Choices on-line benefit enrollment, Salary Planner, end of year roll, web payment and e-billing
- Create, test, and maintain reports and data feeds to HR vendors (PERS, etc.) and to OCHE
- Provide system configuration/support and create reports for Choices Re-enrollment and Salary Planner
- Respond to requests for data by outside sources such as Commissioner's Office and Legislators
- Preparation and submission of Annual Reports for OCHE, Board of Regents and Governor's Office
- Serve as 4-campus liaison with Sungard for resolution of technical system issues
- Serve as the lead in developing and testing for 4 campus HR functions.

Centralized Human Resources Support/Services:

- Provide guidance on Payroll and Taxation compliance
- Provide guidance on international students and employee compliance
- Preparation and initial distribution of W2 for all 4 campuses and agencies
- Legislation and Policy interpretation
- Conduct weekly HR conference calls for regular updates and discussion of issues
- Classification and Compensation consultations to ensure consistency with MUS pay and classification plans
- Oversight of Choices Re-enrollment and Salary Planner
- Development and oversight of EPAF and web time entry rollouts

Centralized Administrative Support/Services:

- Coordination of preparation and submission of Board of Regents agenda items (6 times/year)
- Coordination of preparation and submission of staff items, Fall rosters, letters of appointment, extra comp & flex pay annual reports to OCHE
- Solicitation and preparation of miscellaneous budget and operational information for things such as presentations to BOR, OCHE, Legislative, etc. (i.e.; Operating Budget Presentations)

Centralized Facilities Support/Services:

- Assist with and/or provide Utility and new O&M projections for our affiliated campuses during the biennial budget process.
- Financial assistance for Facilities Services salaries at MSU Northern
- Inspect facilities and review proposed building requests – for 8 stations and 3 other campuses around the state.
- Assistance with compilation of Long Range Building Program by attending planning/building committee sessions during their project design processes and working with A&E Division to manage the bookkeeping relative to all the appropriation.
- Occasionally attend a design team interview/selection at one the campuses and for all the Montana Agricultural Experiment Station projects.
- Provide the expertise for all our campuses relative to the natural gas purchasing process.
- Operations and maintenance support in the form of an occasional surplus vehicle (<\$2K), a plan review and advice/encouragement from time to time.
- Conduct the Facilities Condition Inventory at all our associated campuses.
- Provide fire/life safety inspections, training and consulting for Billings campus several times per year and will consult with Havre in the upcoming year.
- Provide occupational health review of occupational and research protocols at Great Falls as per a cooperative research agreement between MSU and McLaughlin.
- Consult to provide hazardous waste and/or chemical management advice to any of the other units upon request or conducted on a special project basis.
- Law enforcement training (active shooter and bike patrol) is conducted 2-3 times per year and includes the Billings Campus.

6.5 Support/Collaboration with other campuses (CC's, Tribal Colleges, other)

MSU and UM have two joint graduate programs: Fish & Wildlife Biology and Neuroscience.

MSU faculty have traditionally been active in attracting federal funding to support work that either directly or indirectly supports Montana's Tribal Colleges and their students. This includes programs such as The Center for Native Health Partnerships and Montana INBRE (IDeA Network of Biomedical Research Excellence), which is itself a collaborative project in which MSU is the lead institution.

MSU has a 10+ year history of partnering with MSU-GF to offer developmental and workforce training on the Bozeman campus. The Bozeman extension is now referred to as the COT in Bozeman, which includes a very robust set of highly integrated pre-college level courses and a growing array of workforce programs.

7.0 OPERATING BUDGET

Campus	REPORTING METRIC EXPENDITURES PER STUDENT						Growth Rate
	FY 05 <u>Actual</u>	FY 06 <u>Actual</u>	FY 07 <u>Actual</u>	FY 08 <u>Actual</u>	FY 09 <u>Budgeted</u>		
University of Montana							
UM - Missoula	\$ 8,904	\$ 9,369	\$ 9,799	\$ 10,354	\$ 10,851	5.1%	
UM - MT Tech	9,341	10,192	10,443	10,903	11,198	4.6%	
UM - Western	8,302	8,561	9,298	9,794	10,412	5.8%	
UM - Helena COT	6,177	6,815	6,793	7,671	7,677	5.6%	
Montana State University							
MSU - Bozeman	9,692	10,370	11,242	12,090	12,429	6.4%	
MSU - Billings	7,568	7,897	8,375	8,786	9,133	4.8%	
MSU - Northern	9,143	9,839	10,498	11,826	12,521	8.2%	
MSU - Great Falls COT	6,504	6,734	7,071	7,656	7,772	4.6%	
Community Colleges*							
Dawson	6,423	6,881	8,319	8,939	9,316	9.7%	
Flathead Valley	6,267	7,027	7,820	8,328	8,208	7.0%	
Miles	7,095	8,412	9,265	10,698	11,229	12.2%	

Source: Individual campus reporting metric worksheets for "Expenditures per Student FTE"

*FY 08 was the first year this information was reported for Community Colleges.

By all nationally recognized measures, Montana State University is an exceptionally low cost, efficient Research University.

As shown in Figure 2, MSU's Total Net Expenditures per FTE in FY07 were only 68.49% of the Peer Average for Research Universities.

Figure 2. Net Expenditures Per Student - Compared to Peer Average

Campus	FY06 Actual	FY07 Actual	FY08 Actual	FY09 Actual	FY10 Budgeted	Growth Rate
Montana State University						
MSU-Great Falls COT	\$6,551	\$6,892	\$7,503	\$7,356	\$7,746	4.3%
MSU-Northern	\$8,939	\$9,533	\$10,781	\$11,373	\$11,471	6.4%
MSU-Billings	\$7,475	\$7,849	\$8,337	\$8,851	\$8,927	4.5%
MSU-Bozeman	\$9,630	\$10,338	\$11,098	\$11,470	\$11,607	4.8%
Research University Peer Average	\$15,094		68.49%	MSU Bozeman % of Peers		
University of Montana						
UM-Missoula	\$8,639	\$9,008	\$9,533	\$9,769	\$10,265	4.4%
UM-MT Tech	\$9,460	\$9,676	\$10,409	\$10,950	\$10,825	3.4%
UM-Western	\$8,025	\$8,696	\$9,151	\$9,749	\$9,683	4.8%
UM-Helena COT	\$6,700	\$6,938	\$7,512	\$7,170	\$7,510	2.9%

Another important consideration is that the University budget is driven by numerous expense components that are subject to significant inflation in recent years: salaries, medical benefits, energy commodities, and academic journals. Despite these factors, the multi-year growth rate of the budget has been a relatively controllable 4.8%.

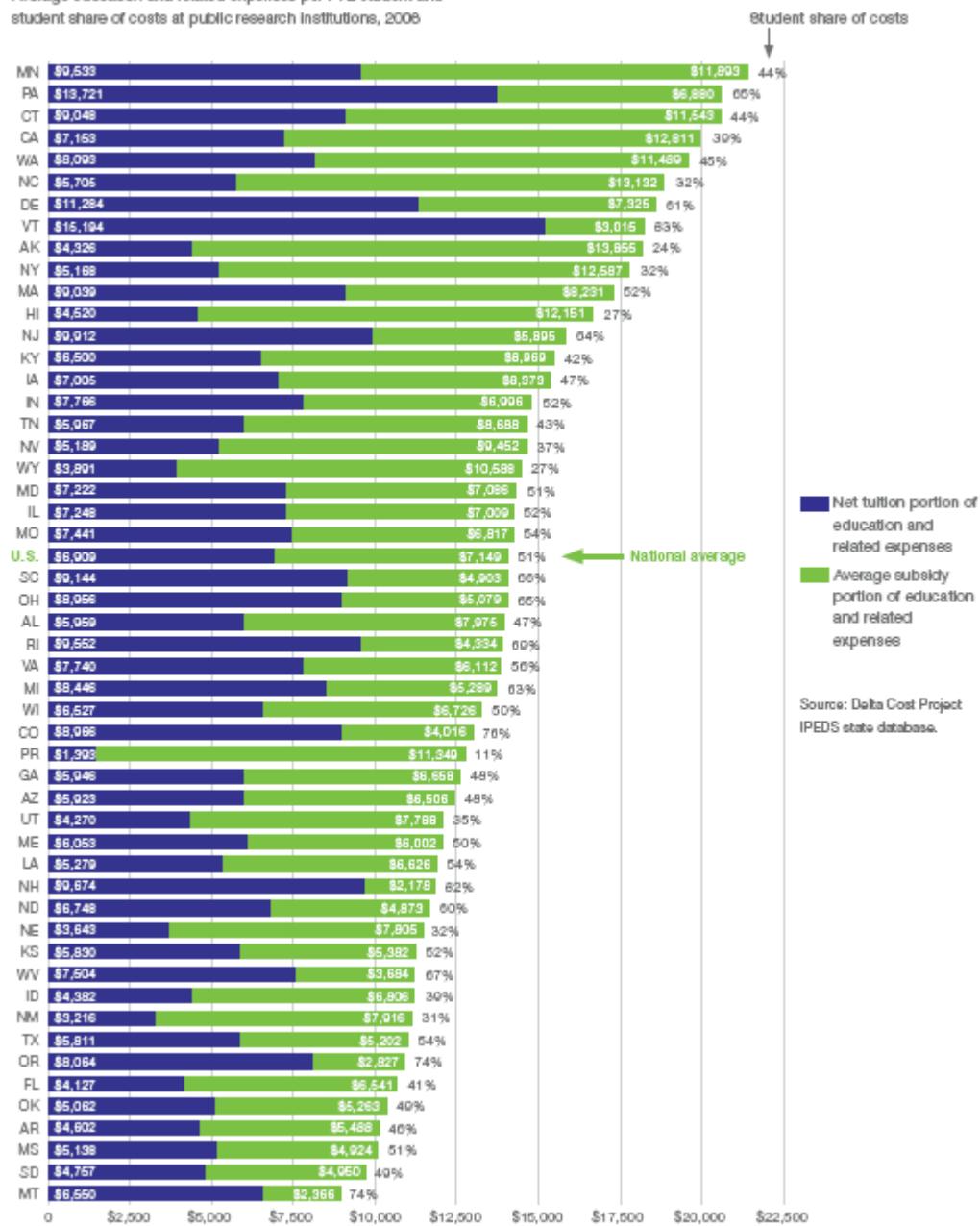
Another measure of institutional efficiency is shown in Figure 3. When just the Education and Related expenditures of universities' total net budgets are compared, MSU's level of expenditures is only 63.42% of the average for its peers.

Figure 3: Delta Cost Project, "Trends in College Spending," Figure 11, 2009

A snapshot of state subsidy patterns for education and related expenses

Average education and related expenses per FTE student and

student share of costs at public research institutions, 2008



Source: Delta Cost Project
IPEDS state database.