Federal Priorities FOR 2016

UNIVERSITY OF WISCONSIN SYSTEM

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Dear Education Partner,

We are pleased to submit to you the University of Wisconsin System’s Federal Priorities for 2016. We especially want to thank Wisconsin’s congressional delegation for its work on our behalf. We are pleased the FY2016 federal budget invests in student aid and research, continues the Federal Perkins Loan program for almost 16,000 students in the UW System, and enables students to use prior-prior year tax data to speed up the financial aid application and notification process.

The UW System's federal priorities for 2016, which were approved and adopted by the UW Board of Regents, fall into three major categories:

- **Ensuring Access through Federal Aid to Students**: Federal financial aid programs remain critical to UW students, especially those students from low-income families who rely on need-based aid. There is no question that the investment the federal government makes through student financial aid increases access to and persistence in higher education.

- **Maximizing Federal Research**: With federal research funding, faculty and students are conducting research in critical areas such as water, public health, and energy. Science, Technology, Engineering and Mathematics (STEM) programs account for almost 23 percent of all degrees conferred in the UW System, and all of our institutions offer undergraduate research opportunities to students. Thanks to federal funding, academic research is providing impactful experiences for students, fueling innovation, and driving job growth across Wisconsin.

- **Meeting National Public Policy Priorities**: When the Higher Education Act is reauthorized, we expect several issues to be of particular focus. Key issues include: ensuring access and affordability for students, making modifications to statute for competency-based learning, reaffirming historical support for international exchange opportunities, and addressing regulatory relief, campus safety and the challenges faced by our teacher preparation programs. Other legislative and regulatory priorities include addressing changes to regulations governing exemptions to the Fair Labor Standards Act (FLSA), supporting bipartisan recommendations to reform the immigration system, and encouraging efforts to further improve educational opportunities for veterans and service members.

This document, supplemented by narratives for each UW System institution, is available online at: [www.wisconsin.edu/government-relations/federal-priorities/](http://www.wisconsin.edu/government-relations/federal-priorities/). For questions or assistance, please contact Kris Andrews, Associate Vice President for Federal and Corporate Relations, by phone at 608-263-3362 or by email at kandrews@uwSa.edu.

Sincerely,

Raymond W. Cross

President
The University of Wisconsin System is made up of two doctoral universities (UW-Milwaukee and flagship UW-Madison), 11 comprehensive four-year universities, 13 UW Colleges liberal arts transfer campuses, and statewide UW-Extension. The UW System is one of the largest systems of public higher education in the country, serving approximately 180,000 students each year and employing more than 40,000 faculty and staff statewide.

ENROLLMENT
Over 180,000 students enrolled in the fall 2014 semester.
15% of UW System undergraduate students were non-traditional aged in fall 2014.

ACCESS
32% of students graduating from high school in Wisconsin in 2014 enrolled at a UW System campus for fall 2014.
In 2014–15, UW System institutions offered 6,420 distance education courses.

DEGREE TRENDS
In 2014–15, the UW System conferred 36,560 associates, bachelor’s, master’s, doctoral, and professional degrees.
Women earned 54.8% of degrees in 2014–15.
66.2% of fall 2008 full-time new freshmen graduated in six years or less.

FINANCIAL AID
A total of 123,103 students received some form of financial aid in 2014-15. This is 68% of all students enrolled in the UW System.
Federal sources provided 73% of financial aid to UW System students in 2014-15.
The Pell Grant program provided $152 million to almost 40,000 Wisconsin resident undergraduates in 2014-15.
Pell Grants were awarded to 32% of resident undergraduates in 2014-15. The average grant was $3,786.
The average loan debt for a Wisconsin resident who had loan debt at graduation and received a bachelor’s degree in 2014–15 was $30,650.
The three-year student loan default rate for the UW System was 4.6% for students graduating in fiscal year 2012, well below the national average of 11.8%.

FEDERAL FUNDS
Federal support touches each and every institution and program in the UW System. It helps all our campuses attract and keep promising students and helps those students realize their potential in contributing to Wisconsin’s economy. The federal funds that support research on our campuses drive innovation and growth in Wisconsin businesses and help yield well-paying jobs in our state.
Federal Awards: $878,139,980

Federal Awards (without UW-Madison): $258,656,350

Total Revenues: $5,252,567,058
Federal Sources: $932,786,924

Total Revenues (without UW-Madison): $2,516,028,089
Federal Sources: $308,380,358

All UW Institutions Fiscal Year 2014–15

FY 2014–15

DOE: 8%

DOD: 3%

DHHS: 6%

DED: 24%

NIH: 35%

COMM: 2%

AGRIC: 4%

OTHER: 5%

SBA: 1%

NSF: 13%

Transactions: 1%

Federal: 12%

Auxiliaries: 19%

Student Fees: 36%

Gifts and Nonfederal Grants & Contracts: 12%

General GPR: 15%

Specific Purpose GPR: 6%

Other: 6%

Federal: 12%

Auxiliaries: 19%

Student Fees: 36%

Gifts and Nonfederal Grants & Contracts: 12%

General GPR: 15%

Specific Purpose GPR: 6%

Other: 6%

All UW Institutions Fiscal Year 2014–15

FY 2014–15
FISCAL YEAR 2017 BUDGET PRIORITIES

AGRICULTURE
- Maintain strong funding for activities of the U.S. Department of Agriculture.
- Support the National Institute of Food and Agriculture (NIFA) Aquaculture Research Program.
- Invest in Non-Land Grant Colleges of Agriculture and Natural Resources (NLGCA) programs at the U.S. Department of Agriculture.

ENERGY
- Maintain strong funding for research activities of the U.S. Department of Energy, Office of Science.
- Provide research funding to the U.S. Department of Energy to support energy-water research.

LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION
- Support continued increases to the maximum Federal Pell Grant Award and maintain the Pell Grant surplus for students in the future.
- Consider restoration of graduate student eligibility for the Federal Perkins Loan Program.
- Provide robust funding for TRIO and GEAR UP programs, and oppose any proposal to scale back or eliminate any significant component of these programs.

COMMERCE
- Maintain strong funding for activities of the National Science Foundation.
- Support undergraduate research programs that provide undergraduate students with research opportunities.
- Maintain funding for successful international and foreign language education programs.
- Oppose funding for the portion referred to as the “Great Teaching and Leading for Great Schools Act” in Title II of the Every Student Succeeds Act.
- Maintain strong funding for the National Institutes of Health.

OTHER
- Continue to provide administrative allowances for campuses to write and submit grants. Many grant programs have eliminated the administrative cost allowance, discouraging institutions from fully participating in seeking federal grants.
LEGISLATIVE AND REGULATORY PRIORITIES

HIGHER EDUCATION ACT REAUTHORIZATION

ACCESS
- Support continued increases to the Federal Pell Grant maximum award and maintain the Pell Grant surplus for students in the future.
- Support the overarching theme of simplification found in the Financial Aid Simplification and Transparency Act (FAST).
- Oppose two-question FAFSA applications.
- Support implementation of the change to utilizing “Prior-Prior Year (PPY)” data.
- Support and expand funding for campus-based aid programs, which include the Supplemental Education Opportunity Grant (SEOG), Federal Work-Study (FWS) and Federal Perkins Loan Program and consider restoration of Perkins eligibility for graduate students.
- Support continuation beyond 2017 of the American Opportunity Tax Credit for qualified educational expenses.
- Increase support for TRIO and GEAR UP.
- Support undergraduate research experiences, which promote retention and graduation rates, for all students.

AFFORDABILITY
- Oppose elimination of subsidized loan programs if Congress moves to consolidate grant and loan programs.
- Support programs that allow student loan borrowers to refinance at more favorable interest rates.
- If consolidation of student repayment programs occurs, continue to support the Pay As You Earn and Revised Pay As You Earn programs, along with the standard 10-year federal loan plan.
- Support a move to income-based repayment as the default option.

CAMPUS SAFETY
- A complainant seeking to file a complaint with the Office for Civil Rights (OCR) should be required to demonstrate an affiliation with the institution of higher education and demonstrate personal impact.
- An OCR investigation should be conducted in a cooperative manner, allowing OCR to share more information about the nature and particulars of the complaint and to continue to share information with the institution throughout the process.
- It should be clarified that sub-regulatory guidance is recommended, but voluntary; future such efforts should go through the notice and comment rule-making process, with appropriate input from institutions of higher education.
- The proposed Campus Safety and Accountability (CASA) Act has advanced the concept that institutions should have Memorandums of Understanding with local law enforcement concerning investigation, information-sharing, and other areas related to Title IX. While this is a worthy objective, the language is problematic as drafted.
- Limited resources should not be diverted into the creation of reports because there is little evidence that these reports achieve their desired results.
- Higher education, schools, community organizations, faith organizations and others should be encouraged to work together to address this broad societal problem.

INNOVATION
- Modify HEA Section 103: Distance Education to provide a modern definition of distance education.
- Update and clarify the current definition of “regular and substantive” (SAP, R2T4, etc.).
- Amend Title IV requirements to enable students to engage in various academic modalities simultaneously.
Amend Title IV requirements so that (especially adult) students can access the entire spectrum of federal student aid funds.

INTERNATIONAL
- Reaffirm support for international and foreign language education in the United States.
- Amend Title VI to specifically enable two-year colleges to plan, develop, and carry out programs to improve undergraduate instruction in international studies and foreign languages.
- Authorize and fund a program to encourage international teacher exchanges.

REGULATION
- The federal government should rely on the expertise of the Department of Justice (DOJ) in creating the standard definitions for crimes, and the Clery Act should require reporting on crimes as they are defined in the Uniform Crime Reporting or National Incident-Based Reporting System, and if Congress believes campuses should report on other "crimes" that are not currently a part of the UCR or NIBRS, it should instruct DOJ to modify the UCR/NIBRS to include these definitions.
- Campus law enforcement should have clear authority to use its own expert judgment to determine when a serious or continuing threat exists and when they have the appropriate information to issue a timely warning.
- The definition of “noncampus property” should be clarified and narrowed to focus more directly on property that is a core part of a college or university.
- Congress and the Department of Education should make sure that information and data being collected from institutions and provided to consumers will actually be useful before imposing additional information and data requirements.
- Institutions should not be subject to new information collection requirements from Congress or the Department of Education when the same or substantially similar information is already in the possession of other federal agencies, but should work with those agencies to obtain the necessary information.
- Congress should use the HEA reauthorization to review all of its provisions and strike requirements that are not clearly related to the core mission and responsibilities of higher education.
- Regulations or policies regarding the conduct of research should be examined to determine those that could be eliminated, streamlined, or harmonized across agencies, especially in the areas of effort reporting, monitoring subcontracting, human subject research, and research using animals.
Congress should clarify that federal requirements to meet state authorization requirements apply only to the state in which an institution is physically located.

TEACHER PREPARATION

Through the FY2017 appropriations process, oppose funding for the portion of the law referred to as the “Great Teaching and Leading for Great Schools Act,” in Title II of the Every Student Succeeds Act.

The UW System strongly supports adoption of The Educator Preparation Reform Act (S. 1062/H.R. 2172), introduced by Senator Jack Reed and Representative Mike Honda. This legislation is supported by a wide array of P-12 and higher education organizations that includes advocates and practitioners.
LEGISLATIVE AND REGULATORY PRIORITIES (CONTINUED)

OTHER LEGISLATIVE PRIORITIES

FAIR LABOR STANDARDS ACT
- The U.S. Department of Labor should consider lowering the proposed salary threshold for all employers.
- Alternatively, the Department of Labor should provide lower thresholds for nonprofit and public employers and/or consider expanding the exemption for teachers from the minimum salary level to others integral to the education process.
- The Department of Labor should phase in the new salary level over time.
- The Department of Labor should not automatically update the salary levels; instead, the Department should proceed through the standard formal notice and comment process when making adjustments to the threshold levels.

IMMIGRATION
- Create Standard Occupational Classification (SOC) Codes specific to post-doctoral researchers.
- Simplify the green card self-petition process for U.S.-educated graduates.
- Eliminate artificial per-country caps for employment-based immigrant visas.
- Make F visas “dual intent.”
- Expand temporary visas for U.S.-educated graduates, particularly F-1 OPT and H-1B.
- Give all H-4 dependents work authorization, not just those with an approved I-140.
- Allow non H-1B dependent employers to use their own actual wage data for prevailing wages.

VETERANS
- Support continued dialogue with U.S. Department of Veterans Affairs (VA) around the innovations proposed in the Veteran and Service Member Education Benefit Data Flow Re-Engineering Project developed by the National Student Clearing House (NSC) in partnership with institutions of higher education, Student Veterans of America (SVA), and the National Association of Veterans Programs Administrators (NAVPA).
- Support innovative competency-based and alternative degree programs that attract student veterans.
- Restore payments made by the VA to institutions to support the cost of administering benefit programs and attending VA-sponsored training conferences.
- Support the VA classification of hybrid or blended classes as “in residence” rather than “distance learning.”
- Support the use of VA benefits for developmental courses that are delivered online. The VA currently prevents the use of benefits to support enrollment in these courses.
- Request that the VA join the Department of Education and consistently recognize an institution’s published academic calendar as the basis for establishing the first date of an academic term.
FINANCIAL AID IN THE UW SYSTEM

University of Wisconsin System undergraduate and graduate students received $1.4 billion in financial aid in 2014-15 (the most recent year for which data are available). Of this total, they received $470.7 million in grant funding, borrowed $868.2 million in student loans, and received $12.0 million in work study funding.

While this financial aid funding provides critical support in reducing the price for UW System students and increasing affordability, there is still tremendous unmet financial need. UW System institutions are seeing greater numbers of students with higher levels of need due to declines in student incomes and assets, which are the primary determinants of financial need and aid eligibility.

In 2014-15, over two-thirds (71%) of UW System undergraduates, or 111,627 students, received some form of financial aid. The federal Pell Grant program is the single largest grant program available to UW System undergraduates. The number of Pell awards to UW System resident undergraduates declined slightly in 2014-15 with 40,125 recipients. The average Pell award for these recipients was $3,786, a small increase.

Loan aid comprises the largest component of financial aid to UW students. In 2014-15, the federal government provided 87 percent of loans to undergraduates, with 56 percent of federal loans to this group being non-need-based. Seventy-four percent of resident undergraduates had loan debt at graduation. The average loan debt of these borrowers was $30,650, an increase from 2013-14 when average loan debt was $30,452.

The traditional audience for higher education in the United States is shifting. Our students are increasingly first generation college-goers of color, are older, and are from disadvantaged and underserved backgrounds. A larger group of racially and ethnically diverse military veterans is arriving at our campuses with the new GI Bill in hand.

UW System enrollments remain at high levels with a preliminary headcount of 178,405 students in the fall of 2015. The UW System plans to increase the number of degrees granted and, especially, seeks to increase representation by students of color and lower-income students – the fastest growing segment of college-age students.

In addition, the UW System provided access for 32,647 adult, non-traditional students in the fall of 2014. Wisconsin residents made up 79 percent of undergraduate enrollment in fall 2014, and approximately 80% of Wisconsin residents who earn a bachelor's degree from the UW System remain in the state after graduation. At the University of Wisconsin System, we are working to double the amount of private, need-based financial aid.
In the past 30 years, the loan debt that graduates have at the time they graduate has changed from being mostly subsidized loans that fall within the federal definition of "need-based" debt to being nearly evenly split between need-based and non-need-based debt. There are several reasons for this, including inadequacies in the federal formula to determine need and growing economic hardship for parents and student.

For those students who had need based on the federal formula that determines need, the current unmet need after federal, state, and institutional grants have been awarded is currently $9,992 per student, after decreasing for two straight years. From 1981 through 1992, the unmet need remaining after grants were awarded closely followed the Consumer Price Index, indicating that the burden to students remained unchanged relative to their purchasing power. However, from 2002 until 2012-13 the unmet need after grant aid has increased much faster than the rate of inflation, leading to increased debt.


The financial aid that Wisconsin resident undergraduates receive is primarily in the form of loans, more than half of which are unsubsidized. Aid that does not have to be paid back (grants and work study) accounts for 40 percent of all aid dollars distributed to Wisconsin resident undergraduates.

FIGURE 2: Unmet Need without Loans. For those students who had need based on the federal formula that determines need, the current unmet need after federal, state, and institutional grants have been awarded is currently $9,992 per student, after decreasing for two straight years. From 1981 through 1992, the unmet need remaining after grants were awarded closely followed the Consumer Price Index, indicating that the burden to students remained unchanged relative to their purchasing power. However, from 2002 until 2012-13 the unmet need after grant aid has increased much faster than the rate of inflation, leading to increased debt.

FIGURE 3. Loan Debt at Graduation for Wisconsin Undergraduates.

In the past 30 years, the loan debt that graduates have at the time they graduate has changed from being mostly subsidized loans that fall within the federal definition of “need-based” debt to being nearly evenly split between need-based and non-need-based debt. There are several reasons for this, including inadequacies in the federal formula to determine need and growing economic hardship for parents and student.
INTRODUCTION

Research, which contributes to knowledge and improves the learning experiences of students, is an important mission of the University of Wisconsin System. Each UW campus is involved in undergraduate research, recognized as one of the most powerful learning strategies for students. Undergraduate research is also a significant contributor to the development of new technologies, companies, and industries that enhance the state’s economy. Research, funded by federal and private sources, provides these benefits and also creates well-paying jobs in Wisconsin.

Federal and privately funded research expenditures increased from $789 million in Fiscal Year (FY) 2013 to $797 million in FY 2014. In fall 2014, more than 5,300 full-time equivalent research staff, including more than 1,400 graduate assistants, were funded through federal and private dollars. From FY 2005 to FY 2014, federal and privately funded research increased by 26 percent from $631 million to $797 million. During this period a total of approximately $7 billion was generated from external sources supporting research throughout the UW System.

Further, many research discoveries have potential commercial applications. Universities facilitate technology transfer by encouraging the disclosure of inventions or other intellectual property, and then licensing and/or patenting promising inventions. In FY 2014, UW System institutions generated 457 disclosures to the Wisconsin Alumni Research Foundation, the WiSys Technology Foundation, and the UW-Milwaukee Research Foundation. In the same year, 76 new licenses for technologies were executed and 167 U.S. patents were issued. In FY 2014, technology foundations affiliated with the UW System facilitated the creation of 12 spin-off companies based on licensed technologies from discoveries at UW institutions.

In 2013, UW-Extension launched the Center for Technology Commercialization (CTC) in partnership with the Wisconsin Economic Development Corporation (WEDC). The CTC provides hands-on business and commercialization planning for early stage technology-based firms, including feasibility analysis using Lean Startup methods. A key service is helping clients gain access to federal and other funding. During 2013, CTC clients were awarded $6 million in federal Small Business Innovation Research/Small Business Technology Transfer funds. In addition, CTC clients acquired over $5.5 million in additional capital. During 2013, CTC’s staff assisted 211 clients, resulting in the launch of three new businesses, the creation of 16 new jobs, and retention of 14 high-paying jobs.

The following is a snapshot of key University of Wisconsin System federal research in areas of state and national significance in the important areas of water, energy, public health, STEM education and undergraduate research.

For more details about federally funded initiatives at each University of Wisconsin institution, visit: www.wisconsin.edu/government-relations/federal-priorities/.
WATER

Wisconsin is quickly becoming an international hub for water technology development, resource management best practices, and economic growth. Wisconsin borders two of the Great Lakes and the Mississippi River, and has thousands of inland lakes and waterways – all essential resources for drinking water, industry, agriculture, and recreation.

Here is a sampling of the active research programs on water issues being conducted by many UW institutions.

**UW-Milwaukee** (UWM) is the only higher education institution in the country with a School of Freshwater Sciences. It is the first graduate school in the nation dedicated solely to the study of freshwater and one of three such schools in the world.

The school is building on more than 40 years of research excellence at UWM to promote the worldwide health and sustainability of freshwater systems through:

- Advancing strategic science
- Creating innovative technologies
- Developing nascent industries
- Informing policy, and
- Preparing the next generation of freshwater leadership through its graduate program.

UWM’s water research is organized around multidisciplinary themes: freshwater ecosystem dynamics; human and ecosystem health; freshwater technology; and freshwater policy, economics, and management. One-hundred-fifty local water technology companies are providing research collaborations with funding support from industry, government, and non-profit sectors.

For more information, visit: [uwm.edu/freshwater](http://uwm.edu/freshwater)

**UW-Eau Claire’s** Watershed Institute for Collaborative Environmental Studies (WICES) works collaboratively to build healthy, just, and sustainable human and ecological communities. Faculty representing widely ranging disciplines support an accredited major in Environmental Public Health and two interdisciplinary minor programs. WICES maintains partnerships with a wide range of local and statewide community organizations and agencies, as well as student internships with the Centers for Disease Control and Prevention and the U.S. Public Health Service. Active research projects include a collaboration with the University of Iowa for sample collection and community education related to sand mining.

For more information, visit: [www.uwec.edu/Watershed/](http://www.uwec.edu/Watershed/)

**UW-Green Bay** is fully engaged in the improvement and protection of the bay of Green Bay and its supporting watersheds, including issues related to floral and faunal populations, agricultural nutrient and sediment loss, excessive algal blooms, and hypoxia (reduced oxygen). The university is also engaged in issues related to regional groundwater resources and contamination. These activities and others are funded by collaborating agencies such as the Wisconsin Department of Natural Resources, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. National Oceanic and Atmospheric Association, National Parks Service, U.S. Department of Commerce, U.S. Department of the Interior, Nature Conservancy, Smithsonian Institution, and National Science Foundation.

For more information, visit: [www.uwgb.edu/biodiversity/](http://www.uwgb.edu/biodiversity/) and [www.uwgb.edu/nas/](http://www.uwgb.edu/nas/)
UW-La Crosse’s River Studies Center focuses on research and informational programs pertinent to the aquatic resources of the Upper Midwest. The center has extensive interdisciplinary partnerships with state and federal agencies and other universities, including the U.S. Geological Survey, U.S. Fish and Wildlife Service, Wisconsin Department of Natural Resources, Minnesota Pollution Control Agency, National Park Services, UW System, University of Minnesota System, and U.S Environmental Protection Agency. Center research addresses resource issues and environmental problems of pressing regional and national concern, such as environmental pollutants and invasive species that have caused widespread degradation of aquatic resources.

For more information, visit: www.uwlax.edu/biology/rivercntr/

The UW-Manitowoc Lakeshore Water Institute is a collaboration between the two-year campus and the Lakeshore Natural Resource Partnership. The Institute serves the lakeshore region as a tool for engaging and educating undergraduate students and for developing science-based decisions and leaders at the local government level. UW-Manitowoc students and research interns collect data on six creeks in the region which all flow into Lake Michigan. The data are shared and used by community leaders.

UW-Oshkosh’s Environmental Research and Innovation Center (ERIC) operates water-testing laboratories in five distinct regions of Wisconsin: Bayfield, Eagle River, Sturgeon Bay, Manitowoc, and Oshkosh. These facilities have partnered with communities in all Great Lake-bordering counties and over a dozen inland counties to address a number of water-related issues. These efforts have led to over $8 million in research funding for water research over the past several years. These funds have been reinvested in the local communities via the reengineering of recreational water infrastructure at usually no cost to the community. Additionally, these activities have resulted in numerous scientific advances, increased water quality along the Great Lakes, increased public usage of the lakeshore, increased economic benefit to the communities hosting these resources, and a protection of public health. The projects have supported over 300 paid student internships and have helped build capacity by partnering with municipal and business clients to meet needs that had been previously unmet.

For more information, visit: www.uwosh.edu/eric/

The UW-Parkside Small Business Development Center provides eligible high-growth small businesses with training, technical assistance, and opportunities to connect to the water cluster in Milwaukee through a jobs accelerator grant made possible by Section 7(j) of the Small Business Act. The grant is sponsored by the United States Economic Development Administration, Small Business Administration, and Employment and Training Administration.

UW-Parkside and UW-Oshkosh faculty have been monitoring surface water quality at over 130 beaches in 15 Wisconsin counties on the Great Lakes since 2005. Working with about $2.75 million in federal Great Lakes Restoration Initiative (GLRI) grants, a team is investigating impaired and unmonitored beaches in Wisconsin. The research is being conducted in collaboration with the Bay Lake Regional Planning Commission, UW-Milwaukee, and the Racine Health Department Laboratory. In addition to monitoring beaches to identify contaminants, the current GLRI grants support development of beach design plans for 20 Great Lakes and inland beaches and restoration plan implementation at eight.
The UW-Platteville Pioneer Farm is a 400-acre site dedicated to research that demonstrates and evaluates management practices and technologies designed to help farmers operate profitably while protecting and enhancing natural resources. Research projects address environmental, economic, and social issues identified by farmers and interest groups through a voluntary collaboration among producers, regulatory agencies, science and education institutions, and non-governmental organizations. For example, the edge of field water monitoring system intercepts water flow, determines the flow volume, and automatically collects a small sample of the water that will be sent to a laboratory for analysis. Water analyses help farmers determine the amount of nutrients and soil lost from their farm during runoff events. The Pioneer Farm has had a runoff monitoring system in place since 2001.

Water research at UW-River Falls is a natural gateway that draws students into an exploration of the natural and built world. UW-River Falls uses local and regional water bodies as laboratories for student learning and research. Student and faculty researchers in the KinniConsortium examine water quality and transport of nutrients and sediments in the Kinnickinnic River and its tributaries. Biology students, with faculty mentors, conduct research projects on the ecology of freshwater organisms from the Kinnickinnic and other local water bodies. In addition, faculty are involved in coastal wetland monitoring on the Canadian shores of Lakes Huron and Erie and the U.S. shore of Lake Erie through funding by the Environmental Protection Agency. UW-River Falls aims to deliver timely information to watershed resource managers, decision makers, and residents as they negotiate complex water resource management decisions.

Great Lakes Career Ready Internship Program

UW-Stevens Point received a grant of $381,225 from the 2015 Great Lakes Career Ready Internship Program competition. The purpose of the program is to support paid internship opportunities for approximately 240 students (80 per year for three years). Specifically, the grant will create, streamline, and sustain a centralized process for administering student internships across the entire UW-Stevens Point campus.

The Center for Watershed Science and Education is an education, research, and outreach partnership between the UW-Stevens Point College of Natural Resources and UW-Extension. The center supports watershed stewardship; assists citizens with lake, river and drinking water quality problems; promotes management strategies for water resource protection; provides water quality assessment and support; and prepares students for careers as water resource professionals. The center’s Water and Environmental Analysis Laboratory has conducted drinking water safety tests of more than 2,800 households in Wisconsin. Recent research areas include well water quality, invasive lake algae, high-capacity well usage, and storm-water management.

For more information, visit: www.uwsp.edu/cnr-ap/watershed
UW-Superior is home to two institutes heavily involved in water research, as well as other water-related projects:

- The Lake Superior Research Institute, created in 1967, conducts environmental research, increases environmental awareness, and disseminates information about the Great Lakes. Its specializations include biological monitoring of aquatic communities and wetland vegetation, ballast water treatment research, invasive species monitoring, toxicity testing, and evaluation of fish contaminants. Current projects include research to evaluate ballast water treatment technologies that can minimize the potential introduction of exotic species such as zebra mussels, ruffe, and goby by commercial ships. The project will pave the way for effective and defensible aquatic invasive species prevention policies for the Great Lakes by producing robust, practicable methods, and first results on the risk/release relationship for worst-case Great Lakes aquatic invaders. Funds were awarded to the Institute by the U.S. Maritime Administration and the Great Lakes Restoration Initiative through the Northeast-Midwest Institute. Other sponsors include the Great Lakes Protection Fund, the U.S. Environmental Protection Agency, the Wisconsin Department of Natural Resources, Douglas County, private foundations, and tribal entities.

- The Lake Superior National Estuarine Research Reserve was established in 2010 as a partnership between the National Oceanic and Atmospheric Administration (NOAA) and the state of Wisconsin through UW-Extension and UW-Superior. The Reserve seeks to improve the understanding of Lake Superior estuaries and coastal resources and to address the issues affecting them through an integrated program of research, education, outreach and stewardship. The Reserve’s education and outreach programs target pre-K learners to elders, modeling unique K-12 programming in local school districts and offering community decision-maker training on such topics as green infrastructure and resiliency planning. The Reserve’s research focuses on freshwater resources and the uniqueness of the Lake Superior ecosystem. Research priorities include long-term water quality monitoring, impacts of climate change, invasive species, and restoration, as well as human and community dimensions within the St. Louis River watershed. A sentinel site research module has been constructed to study how ecosystems are responding to climate change. The Reserve’s research, education, outreach and stewardship programs are conducted in active collaboration with a wide range of public and private entities including the Wisconsin Department of Natural Resources, Douglas County, the City of Superior, Wisconsin Sea Grant, Wisconsin Coastal Resource Management, and the Fond du Lac Band of the Lake Superior Chippewa.

- The Transportation and Logistics Research Center established in 1999 has long been engaged in research related to water quality including topics such as dredging impacts, port development and transportation impact on water quality. Faculty serve on the Environmental Protection Agency’s Great Lakes Restoration Fund Advisory Board and the Green Marine Advisory Board. Sponsors include the Wisconsin Department of Transportation, U.S. Environmental Protection Agency EPA, and industry.

- UW-Superior is also involved with a national wetland monitoring project funded by the U.S. Environmental Protection Agency’s Great Lakes Restoration Initiative. UW-Superior’s plant scientist is a longstanding investigator with the Great Lakes Indicator Consortium-Coastal Wetlands (GLIC-CW), the largest and most comprehensive coastal wetland monitoring project undertaken in the Great Lakes region. This 10-year project is assessing the biological condition of all wetland complexes across
the entire Great Lakes coastline based on survey data from birds, frogs, fish, aquatic invertebrates, and aquatic plants. Results of the $10-million study will inform decision makers on coastal wetland conservation and restoration priorities throughout the Great Lakes region and will extended through 2020.

UW-Whitewater is actively involved in helping to make southeast Wisconsin the freshwater capital of the world. New academic programs and coveted internships are producing water-literate graduates who understand both the science and business of this critical natural resource. UW-Whitewater’s Institute for Water Business, the first of its kind in the United States, assists students and organizations in developing water business acumen and capacity. Through education, research, and multi-stakeholder collaboration, participants learn to successfully respond to water business issues, challenges, and opportunities. With funding from the UW System Incentive Grant program, UW-Whitewater is working in partnership with UW-Milwaukee and UW-Parkside on $5.4 million in water-related economic development initiatives. These include a research and training center for the commercialization of aquaculture and aquaponics, and the creation of a water technology accelerator. UW-Whitewater is also partnering with major corporations to offer students invaluable study abroad and travel experiences to explore critical water-related issues, including product distribution, wastewater, ballast water, and environmental, economic and political impacts of dams.

For more information, visit: www.uww.edu/cobe/water

ENERGY

Energy is obviously important to the global economy, and energy independence is a national and state priority. The following are examples of UW initiatives related to energy.

UW-Milwaukee (UWM) is conducting research in fundamental materials and in broader systems and controls. In the area of fundamental materials, looking at nanomaterials – including novel materials for battery anodes, cathodes and other components – can improve the storage capacity of the next generation of lithium-ion batteries, making them practical for new types of devices. Johnson Controls Inc. (JCI) has partnered with UWM in this research, investing millions in facilities that UWM and JCI scientists can use to explore these technologies. This same strength in fundamental materials can also lead the way for new sensors and devices for water and biomedical applications.

UWM also is conducting research at a higher, systems level. The infrastructure that supports the way we access electricity is on the brink of revolutionary change equivalent to the leap from landline to cell phones in the telecommunications industry. Recent advances are making energy sources like natural gas, solar cells and even wind turbines more cost-efficient. The remaining hurdle is making these sources that generate and distribute energy in different ways compatible with the nation’s electrical grid. UWM faculty are developing a microgrid testbed – the most complex in the state — that will demonstrate this research on new energy control and storage methods. UWM also is home to the Center for Sustainable Electrical Energy Systems aiming to make electric power systems greener, more cost effective and secure.

For more information, visit: uwm.edu/engineering
At UW-Eau Claire, the Materials Science Center faculty hosts a large grant from the Department of Energy to support research in the area of high temperature superconductors. Also, through outreach, education and internships, UW-Eau Claire’s Responsible Mining Initiative, situated in the Geology department, will provide a comprehensive educational program in economic mineral resources, responsible mining practices, and environmental protection. Metallic and non-metallic resources are the foundation of a strong economy, and environmentally safe, responsible resource recovery is vital. The program will increase STEM participation and contribute to developing an educated and skilled workforce in Wisconsin.

For more information, visit: www.uwec.edu/Matsci and www.uwec.edu/Geology

UW-Fox Valley student-led projects using Wisconsin Space Grant Consortium-funded internships will be researching the emissions of pollutants from landfill sites in summer 2016. Tethered balloons will be equipped with ground-monitoring equipment such as spectrometers and infra-red sensors.

UW-Green Bay has several continuing projects focused on agricultural energy production. Specifically, the University has an ongoing project with the Oneida Nation Tribe of Indians evaluating the production potential, product end uses, economic viability, and local environmental benefits of grass-based biofuels on marginal lands in northeast Wisconsin. Several recent projects have also focused on biogas generation through on-site anaerobic digestion at regional dairies. This work has been supported through a combination of grants from the Department of Energy, the U.S. Environmental Protection Agency, and local businesses and consortia.

To train students in areas of national need, the UW-La Crosse nuclear group utilizes a local laboratory and an extensive collaborative network with universities and national laboratories. A National Science Foundation grant funds work in nuclear energy to promote a diverse workforce and fundamental research in nuclear structure. Additionally, in the area of solar energy, Dr. Seth King’s research group focuses on developing and characterizing new oxide materials which may be utilized in photovoltaic, photocatalytic, and optoelectronic devices. Utilizing zinc oxide-based materials and alloys, Dr. King is working to further a family of photoactive oxides which are inexpensive, non-toxic, and sustainable based on U.S.-sourced raw materials.

UW-Oshkosh (UWO) is the preeminent operator and research group in Wisconsin for anaerobic digestion technology. UWO owns and operates three industrial-scale biodigester facilities as well as a state-of-the-art biogas research laboratory with capabilities found nowhere else in the Americas. The UWO 370 kWh Dry Anaerobic Digester was the first renewable energy facility in the nation to process dry feedstock into biogas, heat, and a digestate solid end-product. This facility processes organic wastes that would otherwise be disposed of in a landfill and produces energy from them. The output of the system generates electricity that is sold to the grid, provides heat for a campus building, and produces a high-quality biosolid end-product. The small farm 64kw digester (Titan 55) in Allenville, Wis., is the first small farm biodigester designed for family farms in the United States with 100 to 200 head of cattle. This system is designed to operate using farm byproducts and bedding residue while providing revenue from electrical sales and at the same time providing heat to the farm house and barns. The end-product of these systems is stable in terms of nutrient movement and allows farmers to manage nutrients on their farm in a more responsible and predictable manner.
while protecting natural resources. The Rosendale 1.4 MW system is a traditional, continually mixed wet digester that provides electrical generation capacity and solid byproduct sale as a value-added product. These installations serve as industrial-scale laboratory facilities for students that serve to both train a workforce and refine technology for transfer to other applications. To complement these operations, the Environmental Research and Innovation Center (ERIC) Laboratory was developed as a state-of-the-art biogas testing laboratory that performs a unique mission that is not suited for academic labs or other simple private testing labs. The ERIC Lab supports biodigester operations around the country and provides consulting and tech transfer services. Additionally, the facility conducts original research and contract testing for clients. The ERIC laboratory has taken on an academic mission as the home of the Viessmann Chair of Sustainable Technology and the Environmental Engineering Technology major laboratory facilities. The combination of renewable energy and ERIC facilities and infrastructure present a unique opportunity for students to learn and train in a manner that is unavailable at any other academic institution in the United States.

For more information, visit: www.uwosh.edu/eric/ and www.uwosh.edu/biodigester

The **UW-Platteville** Sustainable and Renewable Energy Systems (SRES) program is a university-wide interdisciplinary program designed to enhance the knowledge of students with regard to sustainable and renewable as well as traditional energy sources and their impacts on the environment and society. For example, SRES and the Office of Sustainability grew and made food-grade sunflower oil last year and are doing it again this year. To date, about 40 students are engaged in the project through classroom experience, with 17 students in oil production and three in project management. UW-Platteville worked with 11 local businesses partners. Today, the oil is sold in six area grocery stores, at the Platteville Farmers Market during the summer and is used by two businesses to make secondary products.

At **UW-Stevens Point**, the Wisconsin Institute for Sustainable Technology (WIST) develops innovative technologies and processes to promote economic growth through sustainable use of natural resources. WIST energy research includes development of a Cellulose Pilot and Processing Laboratory (CPPL) in collaboration with industry partner American Science and Technology. The CPPL, scheduled to be fully operational by mid-2015, will feature a pilot-scale biorefinery capable of processing up to two tons of biomass per day, as well as a fermentation laboratory and related facilities.

For more information, visit: www.uwsp.edu/wist/
The **UW-Stout** Profitable Sustainability Initiative (PSI) model has proven to be highly efficient and effective in producing both short-term and long-term profitable sustainability benefits for Wisconsin’s companies. PSI’s customized model drives direct assistance to produce the highest impact and is designed specifically for companies’ operational realities and challenges, including improved energy management; improved recycling and beneficial reuse of waste stream outputs; and reduced fossil fuel consumption.

For more information, visit: [www.uwstout.edu/moc/PSI.cfm](http://www.uwstout.edu/moc/PSI.cfm)

**UW-Superior’s** Great Lakes Maritime Research Institute is making a key contribution to helping Great Lakes vessels and other modes of transportation convert to using less costly, more environmentally friendly, North American natural gas as their primary fuel. This project is funded by the U.S. Maritime Administration (MARAD) through a five-year cooperative agreement and is completed in coordination with industry and international partners.

UW-Superior chemists are exploring native plant compounds for antiviral products and biodiesel feedstocks. The project gives undergraduate students the opportunity to work on pressing issues of the using newly identified technologies for plant oil extraction and catalyst processing. This research is done in collaboration with **UW-La Crosse** with support from the UW System and WiSys Technology Foundation.

**PUBLIC HEALTH**

The UW System is providing leadership that will protect and improve the health of Wisconsin citizens through innovative research and through the education and training of health professionals, who are prepared to meet the health needs of Wisconsin in the 21st century.

UW degrees in health areas were 3,067 in the 2013-14 academic year and 3,139 in 2014-15 – representing 8.6 percent (nearly one in 10) of all degrees conferred.

**UW-Milwaukee** (UWM) is home to Wisconsin’s first public health school. UWM School of Public Health’s mission is to conduct rigorous public health research and scholarship; educate the current and future public health workforce; and influence the development of strategies and policies that promote health among diverse populations.

Research at the Zilber School of Public Health reaches across disciplines and around the world to address current and emerging threats to human health, including obesity and food security, alcohol and tobacco-related diseases, infant mortality and prematurity, and cancer and other chronic diseases. Scientists and faculty work together to better understand and address persistent health disparities and complex public health challenges in urban communities such as Milwaukee.

For more information, visit: [uwm.edu/publichealth](http://uwm.edu/publichealth)

Located on the **UW-Eau Claire** campus, the Center for Health Administration and Aging Services Excellence (CHAASE) is a bridge between academia and practitioners in the senior care continuum. The healthcare administration program is one of only seven NAB-accredited programs in the country. Partnerships exist with 72 practicum sites in six states in the region. Graduates are eligible to sit for the Nursing Home Administrators licensure examination in Wisconsin and 15 other states. The Institute for Health Sciences is a unique consortium that brings together professional health science students and pre-professional students across four colleges. The Human Development Center and the Center for Communication Disorders provide clinical services, including behavioral and speech/language,
to children and families in the Eau Claire area. Both centers are staffed by university faculty who mentor undergraduate and graduate students as they gain clinical training.

For more information, visit: www.uwec.edu/cob/chaase/ and www.uwec.edu/nursesforwisconsin/

Offered through a collaboration among UW-Eau Claire, UW-Green Bay, UW-Madison, UW-Milwaukee, and UW-Oshkosh, the Nursing B.S.—BSN@Home collaborative degree is an opportunity for practicing nurses with an associate degree or diplomas in nursing to earn a Bachelor of Science Degree in Nursing without disrupting their work or family life. Nursing courses in the shared curriculum are offered by all five institutions, with sufficient frequency to promote program completion. A majority of coursework is done online, but some of the participating institutions do require at least one class to be taken on campus. Upon completion of the program, students receive a four-year degree in nursing from their home institution. The resulting degree is fully accredited and approved by the Wisconsin State Board of Nursing and the Commission on Collegiate Nursing Education. This program is for Wisconsin residents only.

For more information, visit: www.bsnathome.com/

**UW-Green Bay** nursing researchers are engaged in the development of an electronic clinical support tool using a nursing diagnosis taxonomy. The gold standard for nursing diagnosis terminology is the NANDA International, Inc. (NANDA-I) taxonomy, which is over 500 pages in textbook form. UW-Green Bay is developing a clinical support tool (CST) using nursing diagnosis for use by nurses on computers, tablets, and smart phones. Clinical applications using these types of technology are needed in healthcare settings to practice more efficiently, quickly, and accurately. The CST will transform the use of the nursing taxonomy by allowing easy and efficient access to nursing diagnosis and criteria relevant to verify nursing diagnoses through text-based search functions, clinical reasoning guides for improved diagnostic accuracy, and rules for differential diagnosis. Similar to the NANDA-I textbook translated in 16 languages, the CST will be translated and distributed for use internationally.

**UW-La Crosse** offers a Master in Public Health degree, along with degrees in physician assistant studies, radiation therapy, nuclear medicine technology, physical therapy, and occupational therapy. The La Crosse Institute for Movement Sciences is a partnership between UW-La Crosse, Western Technical College, Viterbo University, Mayo Clinic Health System, and...
and Gundersen Health System. This brings together faculty and clinicians with expertise in movement associated disciplines. It increases collaboration within the campus and strengthens partnerships with healthcare, government, and other academic institutions regionally and nationally.

**UW-Parkside** has a long history of intensive advising for students in pre-med. Over the past three years, more than 15 UW-Parkside pre-med students have been selected to participate in Rural and Urban Scholars in Community Health, or RUSCH, an initiative from the UW School of Medicine and Public Health that encourages interested students from diverse backgrounds to pursue medicine in rural and urban underserved areas of the state. Close to 90 percent of UW-Parkside pre-med students who apply to medical school are accepted – the national average is just under 40 percent.

The **UW-Platteville** Biology Department offers 12 emphasis programs that strengthen public health, with areas such as pre-dentistry, pre-nursing, pre-physical therapy that offer students the opportunity to gain high impact practices. The Biology Department is also highly involved in the Rural and Urban Scholars in Community Health (RUSCH) program with UW-Madison’s School of Medicine and Public Health and the Wisconsin Area Health Education Center (AHEC). The Office of Continuing Education earned a service contract of $790,000 to provide access to credit-based instruction for child care providers across the state of Wisconsin. The service contract is funded through the Federal Department of Education’s “Race to the Top” initiative.

The **UW-River Falls** Biology Department has more than 400 graduates, most of whom are pursuing careers in public health. The Biology Department won the 2014 Regents Teaching Excellence Award, due in part to a strong emphasis on undergraduate research beginning the first semester of freshman year. Students are also heavily involved with faculty research projects focused on public health, including heart disease and cancer. The department has articulation agreements with respected public health institutions such as LECOM, the University of Minnesota, and Mayo Clinic. In addition, the UW-River Falls Tissue and Cellular Innovation Center (TCIC) continues to expand and enhance an already robust, active and successful research program focused on development and application of 3D artificial tissues grown in vitro. Of particular significance this year, the TCIC has continued and expanded major collaborations with regional industrial partners. TCIC Director Dr. Timothy Lyden has received funding to expand the development of a
new miniature bioreactor system for 3D artificial tissue modeling and testing. This work currently focuses on breast cancers, but will be expanded to other tumors in the near future. Other projects being pursued in the TCIC involve growing and testing artificial melanoma tissues, artificial colon cancer tissues and modeling the metastatic process in breast cancer as it relates to adipose, and other targeted artificial tissues.

**UW-Stevens Point** students and staff in the College of Professional Studies are collaborating with the Farmshed community kitchen to preserve unsold locally grown produce to reduce food waste, support the local economy, and increase accessibility of healthful foods in the community.

The **UW-Stout** Vocational Rehabilitation Institute (SVRI) provides solutions to positively impact the future of persons with disabilities and others in the community through services, training, and research. Service areas consist of Assistive Technology, Benefits Analysis, Employment Services, and Evaluation Services. SVRI serves as a leader to advance innovative programs and practice in disability and employment through partnerships in research, training, education, and services. SVRI is a premier resource for state-of-the-art knowledge, innovation, and services to positively impact people’s health, employment, and economic stability.

For more information, visit: [www.uwstout.edu/svri/](http://www.uwstout.edu/svri/)

**UW-Whitewater** offers a wide array of health-related programs and courses across all four colleges, and nearly 1,000 students are enrolled in health-related programs (an increase of 30% over the past three years). With grant funding from the UW-Whitewater Strategic Initiatives program, several faculty members from the four colleges are working collaboratively to build institutional capacity for an integrated set of interdisciplinary public health programs. This work will benefit Southeastern Wisconsin health-field employers by producing a pool of well-prepared college graduates, interns, undergraduate researchers, and service-learning volunteers, and will help to meet the rapidly growing demand for graduates in health-related fields. UW-Whitewater faculty and staff entrepreneurs participate in the campus’s business incubation program (the iHub) to develop innovative entrepreneurship.

**Entrepreneurship**

UW-Milwaukee (UWM) is developing broad-based programming to engage the university and broader community in entrepreneurship and education in ways that will enhance student success and the region’s prosperity. Through the Lubar Center for Entrepreneurship, UWM will engage the entire campus community to strengthen and expand entrepreneurship programs building on strong curriculum in the Sheldon B. Lubar School of Business.

The Lubar Center for Entrepreneurship will be anchored by Ideas Challenge programming that supports education and entrepreneurship. Ideas Challenge offerings engage undergraduate students, graduate students, faculty and staff across all disciplines. This programming builds on the long standing strength of the Lubar School as well as new innovative programs that are helping transform the UWM entrepreneurial experience, including the Student Startup Challenge – where student entrepreneurs sponsor student teams to help build prototypes, explore markets, create business plans and launch ventures; Ideas Challenge Courses – a network of experiential classes linked together to utilize emerging educational modes; and Fresh Ideas – a program for freshmen to engage with ideas and coordinated events.

The Lubar Center for Entrepreneurship and Welcome Center will be housed in a new 28,000 sq. ft. facility at the northwest corner of E. Kenwood Blvd and N. Maryland Avenue. This prominent location and the co-location of the Welcome Center with the Lubar Center for Entrepreneurship will send a powerful message about the importance of entrepreneurship to UWM. The new facility will provide space for the following:

Co-Working and Collaboration – allowing students, business leaders and entrepreneurs to meet informally to share ideas;

Flexible Instruction – providing a home for “Ideas Challenge Courses” that accommodate experiential learning;

Innovation Labs and “Maker” Spaces – providing resources for students to prototype products and software; and

Touchdown and Launch Space – providing a home for student entrepreneurs, faculty, community business partners and others to work on building new enterprises.
technology-based solutions for public health. These opportunities support the launch of new businesses, job creation, new experiential learning for students, and enhanced community wellness. The Fiscal and Economic Research Center (FERC) conducts research into the efficiency of the nation’s hospital systems, focused on quality of output and associated cost. In addition to local impact, this work has potential to improve the quality of public health while holding constant or reducing the cost of health care.

For more information, visit [www.uww.edu/ferc](http://www.uww.edu/ferc)

**STEM EDUCATION**

Across the UW System, education in the STEM fields – science, technology, engineering, and mathematics – is a high priority. It is also important to note that the number of UW degrees in the STEM fields increased from 7,767 in the 2013-14 academic year to 8,246 in 2014-15 – representing 22.6 percent (or just over one in five) of all degrees conferred. Here is a sampling of the innovative programs in place at many UW campuses.

**UW-Milwaukee** (UWM) is building a K-20 STEM pipeline that prepares students for the 21st-century workforce and to enhance society. The goal is to improve and promote excellence in undergraduate and graduate STEM education and K-12 teacher education, to conduct and implement education research, and to collaborate with K-12 schools, other system campuses, and business.

UWM is actively engaged in research on student learning and in the design, development, and widespread implementation of effective STEM learning and teaching knowledge and practice. UWM continues to seek funding through National Science Foundation science education programs and private foundations to further develop these areas.

**UW Colleges Online** is developing a Pre-Professional Health Pathway, an initiative designed to serve UW Colleges Online students, especially those who are place bound, who wish to pursue careers in Medicine, Pharmacy, Veterinary Science, Dentistry, Optometry, or other professional health and STEM careers. A new hybrid science curriculum is being established by UW Colleges Online so that students are able to take the necessary traditional science prerequisites with an added on-campus laboratory component – a feature that is demanded by the professional schools students will be applying to. These dedicated laboratory experiences will be concentrated into a short multiday experience.

**UW-Eau Claire** has received several Wisconsin Alliance for Minority Participation (WiscAMP) grants to increase the number of baccalaureate degrees awarded to underrepresented minorities in STEM fields. Underrepresented students have a faculty- mentored research experience in the summer following their freshman year, helping retain them in a STEM major to graduation. Tayo Sanders II, a WiscAMP participant, was among 32 Americans named as 2015 Rhodes Scholars. UW-Eau Claire is a National Science Foundation Research Experiences for Undergraduates (REU) site, also targeting underrepresented STEM students. Support from UW System and WiSys Technology Foundation has furthered economic development–related research in materials science and chemistry, and supported workforce development through undergraduate research experiences.

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Jointly run by UW-Extension’s Continuing Education, Outreach and E-Learning (CEOEL) and UW Colleges, STEM College Immersion Week puts youth on the path to college. Since 2012, UW-Richland, UW-Waukesha, and UW-Extension/Milwaukee County have partnered to provide a week of college experience and STEM activities to more than 90 students at the UW-Richland campus.
UW-Extension’s Division of Cooperative Extension in Milwaukee County created a number of STEM pipeline programs through 4-H. Their 4-H sySTEMatics program partners with UW-Waukesha Continuing Education to provide 7th and 8th graders at least eight STEM and three pre-college lessons. The goal is to establish a strong academic STEM foundation while creating a connection to higher education through hands-on activities at UW-Waukesha. Milwaukee County also participates in the 4-H Tech Wizards program, where youth build STEM skills with the help of mentors. Through their tutelage, youth develop confidence and life skills necessary to help them lead successful lives.

The UW-Fox Valley Device Design and Development Center (3DC) provides complete inventor and entrepreneur support to individuals and businesses in the Fox Cities who are looking to prototype, build or research a potentially patentable idea. Projects with area businesses are in various stages of development.

At UW-Green Bay, STEM becomes “STEMM” to include medicine and nursing. We have long offered strong programs at both the graduate and undergraduate level in traditional STEMM fields, with particular focus on environmental science, human biology, and health science. Recent additions to our offerings include programs in data science (MS), electrical engineering technology (BS), environmental engineering technology (BS), mechanical engineering technology (BS), nursing (MS), health information management and technology (BS), and sustainable management (MS). These programs are offered through a variety of face-to-face and online deliveries, and many include strong partnerships with regional technical and community colleges, businesses, and independent partners. STEMM education at UW-Green Bay is focused on building the engaging natural environment, healthy population, and strong economy needed for a prosperous tomorrow.

UW-La Crosse faculty have recently led two mathematics and science partnerships on campus—one in physics and one in mathematics, both funded by the U.S. Department of Education through the Wisconsin Department of Public Instruction. The programs built partnerships between UW-La Crosse STEM faculty and high-need school districts to provide classroom teachers with professional development in content knowledge and teaching skills, thereby increasing the academic achievement of students in mathematics and science. The First Year Research Exposure (FYRE) program is an academic diversity initiative of the College of Science and Health (SAH) and the McNair Scholars program at UW-La Crosse. Participation in the program is free to students and is supported by the college. The FYRE program accepts first-year underrepresented students of color. The goal of the program is to improve achievement and retention of first-year underrepresented students at UW-La Crosse in the Science, Technology, Engineering or Mathematics (STEM) fields. The FYRE program creates fun and educational activities that expose the students to a variety of career paths and introduce them to graduate schools. The program also creates a learning community by enrolling them in STEM classes together and providing free tutoring for success in those courses.

UW-Oshkosh received funding through the National Science Foundation Robert Noyce Teacher Scholarship Program to support students interested in teaching careers in math or science. Financial assistance can be used for tuition, books, educational materials, and mentoring activities. These activities are essential to preparing the highly qualified math and science teachers needed to address documented needs in Wisconsin and elsewhere. This scholarship program assists students transitioning into careers as math and science teachers through the Alternative Careers in Teaching (act!) Program and provides professional development funding for those who have completed this teacher licensure program. Benefits to Wisconsin include retaining STEM professionals in the region and
developing their talents as teachers. Of 130 individuals admitted to the act! program, 12 hold terminal degrees, 33 a master’s degree and 85 a bachelor’s degree. STEM professionals admitted hold majors in genetics, microbiology, wood and paper science, chemical engineering, geology, environmental science, economics, law, and mathematics, to name a few. One individual holds a Ph.D. in mechanical engineering and 10 patents related to tissue manufacture and paper machine fabrics; others have taught at institutions of higher education but now prefer to share their knowledge, experiences and expertise in grades 6-12. In addition to deep backgrounds in content areas, these STEM professionals bring real-life experience to their teaching from fields such as engineering, cartography, accounting, quality control, nuclear medicine, statistical analysis, and information technology. Since 2008, 54 individuals have been funded through one of two Robert Noyce Teacher Scholarship Awards.

For more information, visit: www.uwosh.edu/coehs/news/collaborations/act

UW-Parkside students are benefitting from two grants to boost STEM education. The Department of Public Instruction provides a multi-year grant to provide professional development for educators to increase student achievement and teacher quality. Gates Foundation grant funding is helping to implement an innovative alternative to developmental math education to reduce enrollment in developmental mathematics courses and thereby accelerate student progress toward graduation.

UW-Platteville is a leader in STEM education, with high-quality programs in chemistry, computer science, engineering (civil, electrical, environmental, industrial, mechanical, physics and software) with 30 specialized labs, including the Fluid Mechanics Lab, Geotechnical Engineering Lab, Material Fabrication and Nano Characterization Lab, and Nuclear Magnetic Resonance Lab.

The university was awarded a $327,000 University of Wisconsin System grant, under the Elementary and Secondary Education Act, Title IIA, Wisconsin Improving Teacher Quality program, for support of a three-year, professional development project for STEM teacher education.

The STEM Scholars program is a five-year program funded by the National Science Foundation (NSF) started in fall 2010. The program annually awards 10 renewable scholarships of approximately $3,800 to incoming freshman or transfer students, increasing the group to 40 students in years four and five.

The Lois Cooper Scholars program comes from a $623,000 National Science Foundation grant to support underrepresented students pursuing the science, technology, engineering, and mathematics fields. The grant will support a new College of EMS and Office of Multicultural Student Affairs scholarship program, through which two cohorts of seven students will receive a scholarship of $9,300 per year.
In 2012, the National Science Foundation approved $899,888 in funding to the UW-Platteville for the College of Engineering, Mathematics and Science Recruitment and Retention Center creation and operation. The center works collaboratively with campus resources to help bring qualified STEM degree-seeking students to campus and to provide tailored support to help students get from admission to graduation quickly and find job placements.

UW-River Falls possesses a strong and distinctive array of basic and applied science programs in biology, biotechnology, physics, chemistry, math, broad field sciences, animal and food science, and plant and earth science. Newly approved is a degree in agricultural engineering slated to open in fall 2016. UW-River Falls ranks as a national leader in sending STEM students on to receive a Ph.D. The university's STEM education has received state and federal funding to support education, research and programs. Funding from the National Science Foundation is supporting the implementation of high-impact teaching and learning strategies such as flipped classrooms, incorporation of research into introductory courses, peer-led team learning, and proactive advising with great success. The newly developed STEMteach program, also funded through the National Science Foundation, is increasing the number and diversity of highly-qualified middle and high school science and math teachers in Minnesota and Wisconsin by building on the university's strengths and inspiring the next generation of scientists, mathematicians, technicians, engineers, and innovators. A STEM-trained workforce is vital for a prospering economy.

UW-Sheboygan's Dr. Mark Schmitz, assistant professor of biological sciences, is a sub-awardee on a National Science Foundation Portals of Discovery Grant awarded to UW Colleges and UW-Stout, which fosters collaboration across two-year and four-year institutions in Science, Technology, Engineering, and Mathematics (STEM) areas. He and his students are studying the relationship between walleye prey (food sources) and walleye color forms. He is collaborating with colleagues at the School of Freshwater Sciences at UW-Milwaukee who will conduct stable isotope analyses.

Manufacturing and Digital Fabrication Technologies

The UW-Stout Manufacturing Outreach Center (MOC) develops and delivers comprehensive process improvement and growth services to a broad range of industry clients. Deploying technical assistance professionals with focused UW-Stout faculty, staff and student resources, the MOC delivers measurable economic development impacts to industry. Partially funded by the U.S. Dept. of Commerce (NIST/MEP) and the Wisconsin Economic Development Corporation, the MOC leverages client revenue to develop and expand project scope and reach. Since 1994, MOC clients have reported creating or retaining over 4,000 jobs and realizing nearly $600 million in cost savings, sales retention/growth and investment as a result of MOC activities.

The UW-Stout Discovery Center Fab Lab is an association with the Massachusetts Institute of Technology's Center for Bits and Atoms focused on combining multi-disciplinary inputs and ideas with open-source software and industrial-grade technologies in a communal setting to enable a broad base of users to define problems and prototype solutions. UW-Stout's Discovery Center Fab Lab has emerged as a leader in the MIT fab lab network in researching the impacts of the personal fabrication movement, implementing the next generation of digital fab lab equipment and developing culturally appropriate curriculum to optimize user/learner experiences at a multiple geographic, age and skill levels. The Discovery Center has positioned itself well to operate in close association with MIT at the core of the Fab Foundation on issues related to new fab lab development projects, curriculum development and training. Working in collaboration with UW-Stout's National Institute of Standards and Technology (NIST) Manufacturing Extension Partnership (MEP) center, the Stout Manufacturing Outreach Center (MOC), the Discovery Center Fab Lab is currently engaged in applied research focused on digital manufacturing technologies and their integration into Wisconsin's small and medium sized manufacturers.

For more information, visit: www.uwstout.edu/moc/ and www.uwstout.edu/discoverycenter/fablab.cfm

For more information, visit: www.uwstout.edu/moc/ and www.uwstout.edu/discoverycenter/fablab.cfm
The UW-Stout McNair Scholars Program provides a two-year experience designed to encourage students from groups often underrepresented in graduate programs to pursue master’s and doctoral degrees; promote outstanding, specific activities, resources, and support to encourage students to pursue graduate studies; and develop skills critical to success at the graduate level including definition of goals, undergraduate research opportunities, and student/faculty mentor relationships. The McNair Scholars Program is a federally funded Department of Education program, and part of the federal TRIO program whose purpose is to address the lack of representation of disadvantaged groups in higher education. Included in the UW-Stout McNair Scholar Grant experience are a paid summer research experience or internship; GRE preparation; registration and travel costs for at least one conference; and travel costs for at least one graduate school visit.

For more information, visit: www.uwstout.edu/mcnair/overview.cfm

At UW-Superior, a STEM education is delivered through a multidisciplinary liberal arts curriculum. Students at UW-Superior have a unique opportunity to participate in research of national significance in fresh water aquatics and toxicology, ecology, and many other STEM disciplines.

Student researchers at Lake Superior Research Institute (LSRI) assist with research to identify ballast treatment technologies that will help inform invasive species prevention policies. Other LSRI student researchers assist with macroinvertebrate taxonomy, toxicity analysis, wetland remediation and surveying of coastal wetlands.

The chemistry faculty’s important investigation of micro-pollutants in the Great Lakes gives students the chance to analyze persistent organic pollutants (POPs) found in sediments, tissues, water, and plastic debris. Plastic contaminants in Great Lakes raise serious questions for aquatic and human health.

Students interning with the Lake Superior National Estuarine Research Reserve (Reserve) conduct Lake Superior ecosystem monitoring and collect data to discover how coastal estuaries feeding into the lake are responding to climate change. Additionally, interns assist in outreach and educational programming, conference design and planning, as well as community education. Interns are often mentored by Reserve staff in conducting their capstone undergraduate projects.

Earth science students also engage in climate-focused research. Students interested in geological inquiry may be trained to examine lake sediment records as a part of cutting-edge research to discover how ice sheet melting interacts with present day changes in climate and ocean circulation.

At UW-Superior, STEM education also includes the state and federally funded Transportation and Logistics Research Center. Transportation and Logistics students solve industry challenges with applied research beginning their sophomore year. These experiences shape students’ research skills and their application to industry early in the students’ education and has led to a 99% job placement rate with federal and private sponsors including the U.S. Department of Transportation and over 200 industry partners. The Transportation and Logistics Center supported two K-12 STEM outreach events. In June 2015, the first-ever Transportation Day for Girl Scouts was held. The 5th Annual Rail and Intermodal Summer Youth program was co-hosted with Michigan Technological University in August 2015. These two
events engaged 74 K-12 students in hands-on STEM activities.

These and other projects in math and computer science give students a chance to help solve real issues crucial to the regional economy and acquire the skills they need to enter the workforce and attain advanced STEM degrees.

**UW-Whitewater’s** accomplishments in STEM education include unique undergraduate research opportunities, development of STEM educators, and support/mentoring for groups that are underrepresented in STEM. With support from several Wisconsin Alliance for Minority Participation (WiscAMP) grants, a UW System Growth Agenda Institutional Change grant, federal STEM-related grants, and campus funding, UW-Whitewater has developed and maintained several programs aimed at enhancing student preparation in STEM fields and retention in STEM majors. Programs include:

- Science Boot Camp, which includes a two-week intensive summer program that prepares students for STEM courses,
- Academic Year Research Assistantships in STEM majors that build relationships with faculty mentors,
- Summer Independent Research, which funds 10 weeks of summer research for undergraduate students, and
- Science Academy, which provides comprehensive support and unique learning opportunities to STEM students in their first two years of their college career.

The Science Outreach program at UW-Whitewater combines the expertise of faculty, students, K-12 teachers, and community partners to provide high-quality science educational opportunities to area schools, the university, and the community. UW-Whitewater also actively recruits underrepresented minorities to major in STEM teacher education. This is an active part of the Future Teacher Program (FTP), which has proven to have a high retention and graduation rate.

For more information, visit [www.uww.edu/ce/scienceacad/](http://www.uww.edu/ce/scienceacad/), [www.uww.edu/cls/scienceoutreach](http://www.uww.edu/cls/scienceoutreach), and [www.uww.edu/coeps/offices-services/ftp](http://www.uww.edu/coeps/offices-services/ftp)

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**Digital Humanities**

UW-Milwaukee’s newest facility is the Digital Humanities Lab, a collaborative effort between the UW-Milwaukee Library, the Center for Excellence in Teaching and Learning, and the College of Letters and Science. It is designed to be an interdisciplinary, collaborative space for exploring digital humanities, investigating new approaches, and facilitating new research questions using the power of digital data. The Lab is a space for sharing technical skills and interacting with colleagues. The Lab facilitates these interactions through a program of talks and workshops, and by providing space and support for using digital data. One key goal of this initiative is to train students in the use of “big data,” which is transforming everything we do.
UNDERGRADUATE RESEARCH

The University of Wisconsin System is viewed as a national leader in undergraduate research. All the campuses of the UW System offer undergraduate research experiences. A UW System Symposium for Undergraduate Research and Creative Activity was established in 1999, and UW-Milwaukee will host the 15th annual symposium in 2016. In addition, UW-Whitewater and UW-La Crosse have hosted the National Conference of Undergraduate Research a total of three times. The “UW System Posters in the Rotunda: Showcasing UW Undergraduate Research” is held in the State Capitol Rotunda each year, since 2004. This strong institutional support of undergraduate research on every campus led to the formation of the Wisconsin System Council on Undergraduate Research (WiSCUR). Councilors meet annually to collaborate and share best practices.

UW-Milwaukee (UWM) has significantly invested in expanding undergraduate research activity. UWM is uniquely situated in the state to provide undergraduate students with high-quality research experiences. UWM’s dual mission focuses on growing top-tier research while also providing access for the most diverse student population in the state. Annually, the university provides hundreds of undergraduate students with fellowships to work as research assistants to faculty. Students and faculty can connect through UWM’s Office of Undergraduate Research on collaborative research opportunities. Through the Undergraduate Research Opportunity program, students and faculty research mentors are paired for academic credit. The Support for Undergraduate Research Fellows (SURF) program enables faculty research mentors to co-apply with top-performing students to provide a wage for the students’ work on a faculty-led research project. UWM also provides travel money to students both to participate in research activities in the United States and abroad, as well as to present the results of their work at national disciplinary conferences and annual campus-wide, system-wide, regional, and national undergraduate research symposia.

UW Colleges Online and Distance Education is developing an undergraduate research program under a UW System Discovery Grant. The first student in the program will be working with Dr. Renée Gralewicz in Spring 2016 on a project related to the Islamic State of Iraq and al-Sham (ISIS).

UW-Eau Claire is home to the UW System Center of Excellence for Faculty and Undergraduate Student Research Collaboration. This dynamic program engages more than 800 students each year, providing marketable skills valued in graduate school and in the workplace. UW-Eau Claire has a strong record of government and private sponsors for research involving undergraduates. Federal sponsors include the National Science Foundation through its Research in Undergraduate Institutions (RUI), Research Experiences for Undergraduates (REU), and Faculty Early Career Development (CAREER) programs and the U.S. Department of Energy through its Early Career Research program. The McNair Scholars program prepares first-generation or underrepresented students for graduate school. UW-Eau Claire’s Blugold Fellowship program supports 40 first-year and sophomore students each year in paid student-faculty research experiences. Students from these programs have a record of securing prestigious nationally competitive awards, including the Goldwater Scholarship, Rhodes Scholarship, and National Science Foundation’s Research Experiences for Undergraduates programs.

For more information, visit: www.uwec.edu/orsp/
UW-Green Bay’s funded undergraduate research is supported primarily through opportunities created by faculty who receive national to local extramural grants, although a number of additional opportunities occur through internal and donor-supported programs. To strengthen infrastructure, and thus grow opportunities for undergraduate research, the university has launched several new initiatives. First, the license for an electronic platform (CONTENTdm) for publishing undergraduate research findings, reports, and articles was purchased and implemented by the Cofrin Library (Phoenix Undergraduate Research Collection). Second, in an effort to broaden and institutionalize undergraduate research across campus, the campus sponsored a two-day CUR (Council on Undergraduate Research) Individualized Institute in spring 2015 focused on integrating undergraduate research into the curriculum. By the end of the Institute, the six participating budgetary units each produced undergraduate research mission statements, high-impact practice statements, and lists of specific goals and accompanying mechanisms to accomplish those goals. UW-Green Bay also piloted two new campus-wide undergraduate research grants focused on supporting undergraduate student research supplies and equipment and travel to professional conferences.

UW-La Crosse expanded its successful Policy Research and Non-profit Research Networks to include a Business Research Network and a Biomedical Research Partnership. The campus has its second full cohort of 25 Eagle Apprentices, incoming first-year students who are paired with faculty mentors to assist in their scholarship. The students will be paid $1,000 their first year, and 23 students who were in the program last year will receive $2,000 to continue in the program as sophomores. UW-La Crosse continues to support hundreds of students with research grants, scholarships, and presentation opportunities each year.

The UW-Oshkosh Student Scholarly and Creative Activities Program was approved by all campus governance groups in 2012. The program has grown out of efforts led by the Provost’s Office and the Office of Grants and Faculty Development to improve students’ access to a wide range of collaborative, hands-on scholarly and creative activities and provide students with an outlet to demonstrate their talents to the public at large. Likewise, students who participate in the program gain marketable skills valued in graduate school and the workplace. UW-Oshkosh
has a strong record of federal and private sponsors for STEM research that involves undergraduates, including the National Science Foundation through its Research in Undergraduate Institutions, Research Experiences for Undergraduates and Major Research Instrumentation programs; Research Corporation through its Cottrell College Science Award; the American Chemical Society through its Petroleum Research Fund; and the federally funded Ronald E. McNair Post-baccalaureate Achievement Program. In addition, the UW-Oshkosh Student Scholarly and Creative Activities Program is dedicated to supporting the creative endeavors of students in non-STEM fields, including the humanities and the fine and performing arts. Pilot projects underway include a reception paired with an advisory board meeting for program alumni, a web outlet for student creative activity, a Faculty Mentor Award, an Undergraduate Research Ambassadors program, and an undergraduate research scholarly and creative activities club.

For more information, visit: www.uwosh.edu/osscap

UW-Parkside is expanding the Undergraduate Research Apprenticeship Program (URAP), a longstanding program offering modest stipends to students and, in the past, faculty to pursue research collaborations over the course of a semester. A National Science Foundation grant allows Associate Professor of Biology Traci Lee to involve undergraduates in research on Combinatorial control of Met4-activated transcription – DHHS (NIH).

UW-Platteville’s Office of Undergraduate Research and Creative Endeavors is the resource for faculty and students who are curious about pursuing research and creative activities. UW-Platteville students majoring in one of the science programs in the College of Engineering, Mathematics and Science (chemistry or microsystems and nanomaterials) are required to register for one credit of research as part of their degree. The faculty members associated with these programs maintain active, state-of-the-art laboratories, and many students choose to participate in research beyond the minimum requirements. Students who complete undergraduate research projects have the opportunity to present their findings on campus and also regionally or nationally.

One particularly impressive opportunity is the Material Fabrication and Nano Characterization Lab, which houses state-of-the-art equipment such as an atomic force microscope, used to image and measure nanometer-scale structures; electron microscope to image and measure micrometer-scale structures; and a profilometer to measure thickness of thin films to a resolution of 0.1 nanometer. The 2,000-square-foot space is currently used both for undergraduate teaching and research and has provided services and support to Innotech, a startup company in Platteville/ Madison and A.Y. McDonald Manufacturing Company in Dubuque, Iowa, a brass manufacturer and foundry.
UW-River Falls is committed to making available to its undergraduates numerous high-impact practices that provide hands-on learning opportunities, especially in the realm of Undergraduate Research, Scholarly and Creative Activity (URSCA). Thanks to the concerted efforts of faculty and staff, along with the commitment of the student body through differential tuition funding that supports research grants, dissemination grants, trainings and celebration events, student participation in URSCA at UW-River Falls has increased 10-fold over the past three years. Funding for URSCA activities is provided by private donors as well, and several scholarship awards created at UW-River Falls in recent years directly fund student participation in this type of activity. Faculty involve undergraduates in research funded with federal grant awards through the National Science Foundation, U.S. Department of Agriculture, and U.S. Department of Education. URSCA at UW-River Falls is also a key component of the success of students enrolled in the McNair Postbaccalaureate Program, which has helped numerous undergraduates receive offers of full-ride scholarships for their Ph.D. programs.

In the past academic year, nearly 2,500 different opportunities were offered through the UW-River Falls URSCA office for students to be trained in and perform their research, scholarly and creative activities, as well as to present their results on campus, statewide, regionally and nationally. UW-River Falls takes pride in typically having one of the largest travelling delegations to the National Conference on Undergraduate Research every year.

UW-Stevens Point continues its strong culture of Undergraduate Research, Scholarship, and Creative Activities (URSCA). UW-Stevens Point faculty view participation with URSCA as teaching, and incorporate URSCA into their curriculum. The campus is particularly proud of its excellent record of students graduating and completing Ph.D.s in STEM fields (second only to UW-Madison in the past 10 years).

UW-Stevens Point sent over 130 students to the 14th Annual UW System Symposium for Undergraduate Research and Creative Activity at UW-Milwaukee. Over 60 of these students were enrolled in a pilot program for first-year students titled “Introduction to the Research Process” taught by tenured STEM faculty.

UW-Stout, through the Discovery Center and Research Services, continues to promote and develop student research from inception to dissemination. Last year, over $40,000 was awarded to student researchers to provide opportunities for research, travel, and dissemination of their research. UW-Stout continues to support, edit, and publish the Journal of Student Research (JSR). For more than a decade, the JSR has been a key vehicle in providing hundreds of students their first publication opportunity.

UW-Superior has made a significant investment in increasing undergraduate research opportunities for faculty, staff, and students. In 2014, UW-Superior established and staffed a Center for Undergraduate Research, Scholarly and Creative Activities. The Center is working with faculty and staff to increase undergraduate research opportunities across all disciplines in the liberal arts by providing professional development opportunities, promoting best practices, and providing internal grants to support the integration of undergraduate research into the curriculum.

The Center provides direct support to students by providing skill development workshops, small project grants, peer mentoring opportunities, and help matching student interests with research opportunities both on campus and in the community. Student research opportunities at UW-Superior include research assistantships, summer undergraduate research fellowships, a campus-wide showcase of undergraduate scholarship, and opportunities for students to travel to present their work at professional meetings and other events.
UW-Whitewater’s Undergraduate Research Program has experienced tremendous growth. The number of student participants has increased by about 10-fold in the last decade to well over 200 students per year, with major growth among arts and business majors, underclassmen, and students of opportunity. In addition to traditional undergraduate research grants that support student-initiated research projects, UW-Whitewater has also established programs that provide research assistantship opportunities to traditionally underserved student groups and underrepresented disciplines. These programs support a wide variety of faculty-mentored projects and entrepreneurship training in a regional business incubation program. For example, the Research Apprenticeship Program (RAP) has hired over 200 students in the last four years as paid research assistants and has significantly increased participation from students from underrepresented minority groups, low-income households, and first-generation backgrounds. RAP won the 2015 Board of Regents Diversity Award and was recognized as having a significant impact in promoting equity in educational outcomes from historically underrepresented student populations. UW-Whitewater continues to provide up to 15 Summer Undergraduate Research Fellowships each year to allow students to immerse themselves in research and applied learning experiences full time in the summer, and the campus supports students to disseminate their work in the National Conference for Undergraduate Research, UW System Symposium of Research and Creative Activity, and various international, national and regional professional conferences.

For more information, visit: www.uww.edu/urp
APPENDIX C

KEY FEDERAL FUNDING BY AGENCY

DEPARTMENT OF AGRICULTURE (USDA)

SUBAGENCY
Food and Nutrition Service

PROGRAM
Supplemental Nutrition Assistance Program (SNAP) Administrative Grants

DESCRIPTION
Provide federal financial aid to state agencies for costs incurred to operate SNAP.

EXAMPLES OF AWARDS DISBURSED
UW-Extension: Nutrition Education Program for SNAP eligible audiences

SUBAGENCY
Forest Service

PROGRAM
Research

DESCRIPTION
Sustain the health, diversity, and productivity of the nation’s forests and grasslands to meet the needs of present and future generations.

EXAMPLES OF AWARDS DISBURSED
UW-Green Bay: Nicolet Bird Survey

SUBAGENCY
National Institute of Food and Agriculture

PROGRAM
Cooperative Extension Activities

DESCRIPTION
Extension activities provide funding to the nation’s land-grant colleges and universities to disseminate practical applications obtained from agricultural research innovation. Specifically, these funds are provided to land-grant colleges and universities to support faculty members who teach, conduct research and provide outreach and technical assistance to farmers. This funding also requires matching funds from the state.

EXAMPLES OF AWARDS DISBURSED
UW-Extension: Smith-Lever, Expanded Food and Nutrition Education Program

SUBAGENCY
National Institute of Food and Agriculture

PROGRAM
Research and Education

DESCRIPTION
The Capacity Building Grants for Non-Land Grant Colleges of Agriculture (NLGCA) program supports programs that maintain and expand the capacity to conduct education, research, and outreach activities relating to agriculture, renewable resources, and other similar disciplines. NLGCA institutions may use the funds to conduct education, research, and outreach activities relating to agriculture, renewable resources, and other similar disciplines.

EXAMPLES OF AWARDS DISBURSED
UW-River Falls: Strategies to Improve Reproductive Performance in the U.S. Beef Cattle Industry, Capital Investment Decisions and Industry Structure in Wisconsin Dairy Farms
SUBAGENCY
National Institute of Food and Agriculture

PROGRAM
Integrated Programs

DESCRIPTION
Provide support for integrated research, education, and extension activities.

EXAMPLES OF AWARDS DISBURSED
UW-Extension: Water Equals National Education Campaign; Continuing Support for the Great Lakes Regional Water Program

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SUBAGENCY
National Institute of Food and Agriculture

PROGRAM
Agriculture and Food Research Initiative (AFRI)

DESCRIPTION
Competitive grants program to provide funding for fundamental and applied research, extension, and education to address food and agricultural sciences.

EXAMPLES OF AWARDS DISBURSED
UW-Extension: Evaluating Innovation and Promoting Success in Community and Regional Food Systems; Mobilizing Rural Communities to Assess and Improve the Ecological Environment to Prevent Childhood Obesity

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SUBAGENCY
Natural Resources Conservation Service

PROGRAM
Soil and Water Conservation

DESCRIPTION
Provide conservation technical assistance to private landowners, conservation districts, tribes, and other organizations through a national network of locally respected, technically skilled, professional conservationists and assist them in conserving, improving and sustaining our natural resources and environment.

EXAMPLES OF AWARDS DISBURSED
UW-Extension: Conservation Reserve Program Training

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SUBAGENCY
Rural Utilities Service

PROGRAM
Research and Development

DESCRIPTION
Provide much-needed infrastructure or infrastructure improvements to rural communities, including water and waste treatment, electric power and telecommunications services. All of these services play a critical role in helping to expand economic opportunities and improve the quality of life for rural residents.

EXAMPLES OF AWARDS DISBURSED
UW-Oshkosh: Solid Waste Management ($136,700)

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CORPORATION FOR NATIONAL & COMMUNITY SERVICE (CNCS)

PROGRAM
Volunteers in Service to America

DESCRIPTION
Supplement efforts of private, nonprofit organizations and federal, state, and local government agencies to eliminate poverty and poverty-related problems by enabling persons from all walks of life and all age groups to perform meaningful and constructive service as volunteers.

EXAMPLES OF AWARDS DISBURSED
UW-Extension: Wisconsin Campus Compact VISTA Project

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DEPARTMENT OF COMMERCE (DOC)

SUBAGENCY
National Institute of Standards and Technology (NIST)

PROGRAM
Manufacturing Extension Partnership

DESCRIPTION
Establish, maintain, and support manufacturing extension centers and services, the functions of which are to improve the competitiveness of firms accelerating the usage of appropriate manufacturing technology by smaller U.S.-based manufacturing firms, and partner with the states in developing such technical assistance programs and services for their manufacturing base.

EXAMPLES OF AWARDS DISBURSED
UW-Stout: Northwest Wisconsin Manufacturing Outreach Center

SUBAGENCY
National Oceanic and Atmospheric Administration (NOAA)

PROGRAM
Sea Grant Support

DESCRIPTION
Support the establishment and operation of major university centers for marine resources research, education, and training and to support marine advisory services. Some individual efforts in these same areas also receive funding.

EXAMPLES OF AWARDS DISBURSED
UW-Green Bay: Quantifying Coastal Wetland; Advisory Services; Long-term Health of the Green Bay/Lake Michigan Ecosystem

DEPARTMENT OF EDUCATION (DOED)

SUBAGENCY
Office of Student Financial Assistance Programs

PROGRAM
Student-Based Aid: Federal Direct Student Loans

DESCRIPTION
Federal Direct Student Loans provides loan capital directly from the federal government to vocational, undergraduate, and graduate postsecondary school students and their parents.

EXAMPLES OF AWARDS DISBURSED
In 2014-15, 92,960 UW System students received a Federal Direct Student Loan. The average loan received was $7,143.
SUBAGENCY
Office of Student Financial Assistance Programs

PROGRAM
Campus-Based Aid: Federal Work Study (FWS)

DESCRIPTION
FWS provides part-time jobs for students with financial need, allowing them to earn money to help pay education expenses. The program encourages community service work and work related to the recipient’s course of study.

EXAMPLES OF AWARDS DISBURSED
More than 8,200 UW System students receive Federal Work Study assistance, averaging $1,435 per recipient.

SUBAGENCY
Office of Student Financial Assistance Programs

PROGRAM
Campus-Based Aid: Supplemental Education Opportunity Grants (SEOG)

DESCRIPTION
SEOGs are for undergraduate students with exceptional financial need. Pell Grant recipients with the lowest expected family contributions are given priority status for SEOGs.

EXAMPLES OF AWARDS DISBURSED
More than 15,800 students at UW System campuses receive Supplemental Educational Opportunity Grant assistance, averaging $628 per recipient.
APPENDIX C — CONTINUED

SUBAGENCY
Office of Postsecondary Education

PROGRAM
TRIO Programs

DESCRIPTION
TRIO Programs are educational opportunity outreach programs designed to motivate and support students from disadvantaged backgrounds. TRIO services are provided through the following six programs:

- The Educational Opportunity Centers program provides counseling and information on college admissions to qualified adults who want to enter or continue a program of postsecondary education.
- The Ronald McNair Program prepares participants for doctoral studies through involvement in research and other scholarly activities.
- Student Support Services provides opportunities for academic development, assists students with basic college requirements, and serves to motivate students enrolled in postsecondary education.
- Talent Search provides academic, career, and financial counseling to its participants and encourages them to graduate from high school and continue on to pursue a postsecondary education.
- Upward Bound provides fundamental support to participants in their preparation for college entrance and success in postsecondary education.
- Upward Bound Math and Science Program funds specialized math and science centers designed to strengthen the math and science skills of participating students.

EXAMPLES OF AWARDS DISBURSED
Student Support Services - UW Colleges, UW-Eau Claire, UW-La Crosse, UW-Milwaukee, UW-Oshkosh, UW-Parkside, UW-Platteville, UW-River Falls, UW-Stout, UW-Superior
Talent Search - UW Colleges, UW-Milwaukee, UW-Stout
Upward Bound - UW Colleges, UW-Eau Claire, UW-Green Bay (UB and UB-RCMS), UW-La Crosse, UW-Milwaukee, UW-Parkside, UW-River Falls, UW-Stout, UW-Stevens Point, UW-Superior, UW-Whitewater
McNair Post-Baccalaureate Achievement - UW-Eau Claire, UW-La Crosse, UW-Milwaukee, UW-Oshkosh, UW-River Falls, UW-Stout, UW-Superior, UW-Whitewater. The McNair Scholars Program at UW-Whitewater (ED Award P217A120290) serves 30 low-income, first-generation, and underrepresented students each year. Participants are identified, recruited, and selected from an eligible population of more than 1,000 sophomores, with a focus on students with grade point averages of 2.75 or higher, are majoring in the STEM disciplines, receive strong recommendations, express an interest in earning Ph.D.s, and demonstrate motivation to attend graduate school directly after earning their bachelor’s degrees.

SUBAGENCY
Office of Postsecondary Education

PROGRAM
Higher Education - Institutional Aid

DESCRIPTION
TRIO Programs are educational opportunity outreach programs designed to motivate and support students from disadvantaged backgrounds. TRIO services are provided through the following six programs:

- The Educational Opportunity Centers program provides counseling and information on college admissions to qualified adults who want to enter or continue a program of postsecondary education.
- The Ronald McNair Program prepares participants for doctoral studies through involvement in research and other scholarly activities.
- Student Support Services provides opportunities for academic development, assists students with basic college requirements, and serves to motivate students enrolled in postsecondary education.
- Talent Search provides academic, career, and financial counseling to its participants and encourages them to graduate from high school and continue on to pursue a postsecondary education.
- Upward Bound provides fundamental support to participants in their preparation for college entrance and success in postsecondary education.
- Upward Bound Math and Science Program funds specialized math and science centers designed to strengthen the math and science skills of participating students.
EXAMPLES OF AWARDS DISBURSED

**UW Parkside:** Student Success - Title III A At-Risk Student Services

**UW-Eau Claire:** Strengthening Institutions Program (Title III): Transforming Our Future

**UW-Stevens Point:** Strengthening Academic Success: More Graduates for Wisconsin

**DEPARTMENT OF ENERGY**

**SUBAGENCY**
Office of Science

**PROGRAM**
Financial Assistance Program

**DESCRIPTION**
Provide financial support for the delivery of scientific discoveries and major scientific tools to transform our understanding of nature and to advance the energy, economic, and national security of the United States.

**EXAMPLES OF AWARDS DISBURSED**

**UW-Milwaukee:** Molecular-Level Design of Heterogeneous Chiral Catalysts; Toward the Realization of Room Temperature Ferromagnetic Semiconductors; Physics and Dynamics Coupling Across Scales in the Next Generation CESM

**ENVIRONMENTAL PROTECTION AGENCY (EPA)**

**SUBAGENCY**
Office of Water

**PROGRAM**
Great Lakes Program

**DESCRIPTION**
Restore and maintain the chemical, physical, and biological integrity of the Great Lakes Basin Ecosystem.

**EXAMPLES OF AWARDS DISBURSED**

**UW-Superior:** Lake Superior Research Center: Great Lakes Restoration Initiative (The project established over 75 stations to monitor the condition of coastal wetlands, tributaries and nearshore waters of Lake Superior in northern Wisconsin.)

**UW-Milwaukee:** Scaling the sublethal effects of MeHg to population level effects in Great Lakes Perch; Enhanced Tributary Monitoring to Support AOC & LaMP Activity; Nearshore Lake Michigan Food Web

**UW-Extension:** Product Stewardship Initiative; A1 Delisting Strategy

**UW-Oshkosh:** Great Lakes Restoration Initiative to improve water quality at eight Wisconsin beaches

**DEPARTMENT OF HEALTH & HUMAN SERVICES (DHHS)**

**SUBAGENCY**
Administration for Children and Families

**PROGRAM**
Foster Care Title IV-E

**DESCRIPTION**
The Title IV-E Foster Care program helps states, Indian tribes, tribal organizations and tribal consortia (tribes) to provide safe and stable out-of-home care for children under the jurisdiction of the state or tribal child welfare agency until the children are returned home safely, placed with adoptive families, or placed in other planned arrangements for permanency. The program provides funds to assist with the costs of foster care maintenance for eligible children; administrative costs to manage the program; and training for public agency staff, foster parents, social work students interested in careers in public or tribal child welfare, and certain private agency staff.

**EXAMPLES OF AWARDS DISBURSED**

**UW-Milwaukee, UW-Green Bay, UW-River Falls:** Child Welfare Staff & Foster Parent Training
**SUBAGENCY**
Administration for Children and Families

**PROGRAM**
Head Start

**DESCRIPTION**
Promote school readiness by enhancing the social and cognitive development of low-income children, including children on federally recognized reservations and children of migratory farm workers, through the provision of comprehensive health, educational, nutritional, social and other services; and involve parents in their children's learning and help parents make progress toward their educational, literacy and employment goals. Head Start also emphasizes the significant involvement of parents in the administration of their local Head Start programs.

**EXAMPLES OF AWARDS DISBURSED**
- **UW-Milwaukee**: Head Start Center on Quality Teaching and Learning
- **UW-Oshkosh**: Head Start program for the surrounding area

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**SUBAGENCY**
National Institutes of Health (NIH)

**PROGRAM**
Research Funding

**DESCRIPTION**
Provide research funding in many areas, including: Aging Research; Alcohol Research Programs; Allergy, Immunology and Transplantation Research; Biomedical Research and Research Training; Blood Diseases and Resources Research; Cancer Biology Research; Cancer Centers Support Grants; Cancer Detection and Diagnosis Research; Cancer Treatment Research; Cardiovascular Diseases Research; Child Health and Human Development Extramural Research; Drug Abuse and Addiction Research Programs; Extramural Research Programs in the Neurosciences and Neurological Disorders; Medical Library Assistance; Mental Health National Research Service Awards for Research Training; Mental Health Research Career/Scientist Development Awards; Microbiology and Infectious Diseases Research; Minority Health and Health Disparities Research; National Center for Advancing Translational Sciences; National Center for Research Resources; NIH Office of Research on Women's Health; Nursing Research; Oral Diseases and Disorders Research; Research Related to Deafness and Communication Disorders; Trans-NIH Recovery Act Research Support.

**EXAMPLES OF AWARDS DISBURSED**
- **UW-Milwaukee**: Children's Environmental Health Sciences Core Center; Microbial Community Profiles; Distributed synaptic plasticity in fear conditioning; Etiology of Sexual Risk, Substance Use, and Trauma; Effects of Physical Activity & Marijuana Use on Frontolimbic Functioning During Adolescence; Repeat STI Patients: Tailored Socio-Contextual Intervention to reduce HIV Risk; Pathways Linking Poverty, Food Insecurity, and HIV in Rural Malawi; Exploring Natural Language Processing, Image Processing, Machine Learning, and User Interfacing for Intelligent Biomedical Figure Search; Acceptance Enhanced Behavior Therapy for Trichotillomania; Mechanisms Underlying Nicotine Induced Neuronal Toxicity in Zebrafish; Mechanisms Underlying Perception of Speech; Antiviral potential of helicase inhibitors; Environmental Influence on T-cell Leukemia; Efficacy of a m-Health Self-Management Intervention; Heart Rate and Movement Integration to Improve Physical Activity Assessment.
SUBAGENCY
Health Resources and Services Administration

PROGRAM
Nursing Student Loans and Nurse Faculty Loan Program

DESCRIPTION
Increase educational opportunities by providing long-term, low-interest loans to students in need of financial assistance and in pursuit of a course of study in an approved nursing program; Provide loans to students enrolled in eligible advanced degree nursing programs (master’s or doctoral) with an education component(s) that will prepare the student to teach.

EXAMPLES OF AWARDS DISBURSED
347 students and nursing faculty at UW-Milwaukee and UW-Oshkosh received nursing student loans ranging from $221 to $9,900 in 2014-15.

DEPARTMENT OF THE INTERIOR

PROGRAM
Great Lakes Restoration

DESCRIPTION
Protect, conserve, manage, enhance or restore habitat or species on both public and private lands within the Great Lakes Basin.

EXAMPLES OF AWARDS DISBURSED
UW-Green Bay: Coastal Wetland Restoration; Restoring Fish Habitat; Ichthyoplankton Surveillance

SUBAGENCY
US Geological Survey (USGS)

PROGRAM
Research & Data Collection

DESCRIPTION
Support research complementary to USGS program efforts in classification of the public lands and examination of the geological structure, water, mineral, and biological resources, and products of the national domain.

EXAMPLES OF AWARDS DISBURSED
UW-Green Bay: Impact of Great Lakes Restoration Initiative through APEX Modeling

NATIONAL ENDOWMENT FOR THE HUMANITIES (NEH)

PROGRAM
Promotion of the Humanities

DESCRIPTION
Better teaching and research in the humanities through faculty development; Provide opportunities for the American public to explore human history and culture

EXAMPLES OF AWARDS DISBURSED
UW-Green Bay: Enduring Questions; 500 Years of Latino American History

NATIONAL AERONAUTICS & SPACE ADMINISTRATION

PROGRAM
Science

DESCRIPTION
Basic research, educational outreach, or training opportunities in the area of science.

EXAMPLES OF AWARDS DISBURSED
UW-Green Bay: In collaboration with several other campuses: Wisconsin Space Grant Consortium
UW-Milwaukee: U.S. Participation in the Extreme Universe Space Observatory on the Japanese Experiment Module; The Physics of White Dwarf Mergers and Detonations; The Eclipsing Millisecond Pulsar J1816+4510 and its Strange Companion

NATIONAL SCIENCE FOUNDATION (NSF)

SUBAGENCY
Division of Undergraduate Education

PROGRAM
Advancing Digitization of Biodiversity Collections (ADBC)

DESCRIPTION
ADBC seeks to enhance and expand the national resource of digital data documenting existing vouchered biological and paleontological collections and to advance scientific knowledge by improving access to digitized information (including images) residing in vouchered scientific collections across the United States. The information associated with various collections of organisms, such as geographic, paleogeographic and stratigraphic distribution, environmental habitat data, phenology, information about associated organisms, collector field notes, and tissues and molecular data extracted from the specimens, is a rich resource providing the baseline from which to further biodiversity research and provide critical information about existing gaps in our knowledge of life on earth.

EXAMPLES OF AWARDS DISBURSED
UW-La Crosse: Digitization TCN: Collaborative: Documenting the Occurrence through Space & Time of Aquatic Non-Indigenous Fish, Mollusks, Algae, & Plants Threatening North America’s Great Lakes
SUBAGENCY
Division of Undergraduate Education

PROGRAM
Research in Undergraduate Institutions (RUI), Atmospheric Chemistry

DESCRIPTION
RUI supports research by faculty members at predominantly undergraduate institutions (PUIs). RUI proposals support PUI faculty in research that engages them in their professional fields, builds capacity for research at their home institution, and supports the integration of research and undergraduate education.

Atmospheric Chemistry supports research to measure and model the concentration and distribution of gases and aerosols in the lower and middle atmosphere. It also supports research on the chemical reactions among atmospheric species; the sources and sinks of important trace gases and aerosols; the aqueous-phase atmospheric chemistry; the transport of gases and aerosols throughout the atmosphere; and the improved methods for measuring the concentrations of trace species and their fluxes into and out of the atmosphere.

EXAMPLES OF AWARDS DISBURSED
UW-La Crosse: RUI: Investigation of the Solubilities and Glass Formation Properties of Carboxylate Salts Important in the Upper Troposphere

SUBAGENCY
Division of Undergraduate Education

PROGRAM
Research in Undergraduate Institutions (RUI), Division of Environment Biology (DEB)

DESCRIPTION
RUI supports research by faculty members at predominantly undergraduate institutions (PUIs). RUI proposals support PUI faculty in research that engages them in their professional fields, builds capacity for research at their home institution, and supports the integration of research and undergraduate education.

DEB supports fundamental research on populations, species, communities, and ecosystems. Scientific emphases range across many evolutionary and ecological patterns and processes at all spatial and temporal scales. Areas of research include biodiversity, phylogenetic systematics, molecular evolution, life history evolution, natural selection, ecology, biogeography, ecosystem structure, function and services, conservation biology, global change, and biogeochemical cycles.

EXAMPLES OF AWARDS DISBURSED

SUBAGENCY
Division of Undergraduate Education

PROGRAM
Research in Undergraduate Institutions (RUI), Electronics, Photonics, & Magnetic Devices (EPMD)

DESCRIPTION
RUI supports research by faculty members at predominantly undergraduate institutions (PUIs). RUI proposals support PUI faculty in research that engages them in their professional fields, builds capacity for research at their home institution, and supports the integration of research and undergraduate education.

CMI supports research focusing on chemically-relevant measurement science and chemical imaging, targeting both improved understanding of new and existing methods and development of innovative approaches and instruments.

EXAMPLES OF AWARDS DISBURSED
UW-La Crosse: RUI: Measurement of DNA Thermal Denaturation™ on Surfaces to Quantify the Effects of Surface Interactions on the Stability of Hybridized DNA Structures
faculty in research that engages them in their professional fields, builds capacity for research at their home institution, and supports the integration of research and undergraduate education.

EPMD seeks to improve the fundamental understanding of devices and components based on the principles of micro- and nano-electronics, optics and photonics, optoelectronics, magnetics, electromechanics, electromagnetics, and related physical phenomena. The program enables discovery and innovation advancing the frontiers of nanoelectronics, spin electronics, molecular and organic electronics, bioelectronics, biomagnetics, non-silicon electronics, and flexible electronics.

EXAMPLES OF AWARDS DISBURSED

UW-La Crosse: RUI: Optimizing the Performance of Quantum-Dot-Based Single-Photon Detectors

SUBAGENCY
Division of Undergraduate Education

PROGRAM
Research in Undergraduate Institutions (RUI), Molecular Biophysics

DESCRIPTION
RUI supports research by faculty members at predominantly undergraduate institutions (PUIs). RUI proposals support PUI faculty in research that engages them in their professional fields, builds capacity for research at their home institution, and supports the integration of research and undergraduate education.

Molecular Biophysics supports fundamental biophysical and biochemical research projects that address the relationships among structure, function and dynamics in studies of individual biomolecules and their interactions.

EXAMPLES OF AWARDS DISBURSED

UW-La Crosse: RUI: Molecular Mechanism of Template-Assisted Pore Assembly

SUBAGENCY
Division of Undergraduate Education

PROGRAM
Research in Undergraduate Institutions (RUI), Nuclear Physics

DESCRIPTION
RUI supports research by faculty members at predominantly undergraduate institutions (PUIs). RUI proposals support PUI faculty in research that engages them in their professional fields, builds capacity for research at their home institution, and supports the integration of research and undergraduate education.

Nuclear Physics supports research at the frontiers of nuclear science, including properties and behavior of nuclei and nuclear matter under extreme conditions, and/or as they relate to astrophysical phenomena; the quark-gluon basis for the structure and dynamics of hadrons and nuclei; phase transitions of nuclear matter from normal nuclear density and temperature to the predicted high-temperature quark-gluon plasma; basic interactions and fundamental symmetries; and neutrino properties as determined through neutrino-less double beta decay.

EXAMPLES OF AWARDS DISBURSED

UW-La Crosse: RUI - Understanding 0+ States in Dysprosium

UW-La Crosse: New Statistical Methods for Modeling 3-Dimensional Rotations with Advances in the Study of Human Motion; Year 1 of 3

SUBAGENCY
Division of Undergraduate Education

PROGRAM
Research in Undergraduate Institutions (RUI), Statistics

DESCRIPTION
RUI supports research by faculty members at predominantly undergraduate institutions (PUIs). RUI proposals support PUI faculty in research that engages them in their professional fields, builds capacity for research at their home institution, and supports the integration of research and undergraduate education.

Statistics supports research in statistical theory and methods, including research in statistical methods for applications to any domain of science and engineering. The theory forms the base for statistical science. The methods are used for stochastic modeling, and the collection, analysis and interpretation of data. The methods characterize uncertainty in the data and facilitate advancement in science and engineering.

EXAMPLES OF AWARDS DISBURSED

UW-La Crosse: New Statistical Methods for Modeling 3-Dimensional Rotations with Advances in the Study of Human Motion; Year 1 of 3
APPENDIX C  — CONTINUED

SUBAGENCY
Division of Undergraduate Education

PROGRAM
Robert Noyce Teacher Scholarships

DESCRIPTION
This program seeks to encourage talented STEM majors and professionals to become K-12 STEM teachers. The capacity building award provides funds for institutions to develop evidence-based innovative models and strategies for recruiting, preparing, and supporting new teachers and to establish the infrastructure for implementing a future Noyce project.

EXAMPLES OF AWARDS DISBURSED
UW-River Falls: Development of a STEM Teaching Certification Program

SUBAGENCY
Division of Undergraduate Education

PROGRAM
Science, Technology, Engineering, and Mathematics Talent Expansion Program (STEP)

DESCRIPTION
STEP seeks to increase the number of students (U.S. citizens or permanent residents) receiving associate or baccalaureate degrees in established or emerging fields within science, technology, engineering, and mathematics (STEM).

EXAMPLES OF AWARDS DISBURSED
UW-River Falls: The GREAT “Graduate-Retain-Engage-Advise-Team Learning” Falcon Project

SUBAGENCY
Division of Undergraduate Education

PROGRAM
Transforming Undergraduate Education in STEM (TUES)

DESCRIPTION
This program seeks to improve the quality of science, technology, engineering, and mathematics (STEM) education for all undergraduate students by transforming undergraduate STEM education. The program supports efforts to create, adapt, and disseminate new learning materials and teaching strategies to reflect advances both in STEM disciplines and in what is known about teaching and learning.

EXAMPLES OF AWARDS DISBURSED
UW-River Falls: Collaborative Action Research: Immediate Feedback Assessment in Chemistry Courses; Video Bridge: Using Short Direct-Measurement Videos to Bridge the Gap Between Abstracted Physics Concepts and Their Applications

SUBAGENCY
Division of Undergraduate Education

PROGRAM
Wisconsin Alliance for Minority Participation (WiscAMP) Small Grants Program

DESCRIPTION
The purpose of the Small Grants Program is to allow participating institutions to submit proposals that will support their efforts in increasing the number of baccalaureate degrees awarded to underrepresented minorities in STEM fields. WiscAMP addresses retention and persistence of underrepresented minorities in STEM disciplines by expanding and improving on successful models already in place and fostering and sustaining an alliance among partner institutions.

EXAMPLES OF AWARDS DISBURSED
UW-La Crosse: UW-L Summer Research Program for Increasing Student Retention and Graduation

PROGRAM
Education and Human Resources

DESCRIPTION
Support programs across all levels of education in Science, Technology, Engineering and Mathematics (STEM). Specifically, the account supports activities that unite school districts with institutions of higher learning to improve precollege education. Funding through this account supports activities pertaining to student instruction, curriculum development, laboratory training, and instructional improvement.

EXAMPLES OF AWARDS DISBURSED
UW-Milwaukee: Milwaukee Mathematics Partnership; Fostering Opportunities for Tomorrow’s Engineers;
COMPASS: New Directions for Natural Science Students

UW-Platteville: CMN PEEC Proj Am Indian En; STEM Scholarships

UW-Oshkosh: Scholarships; Beeth Stipends

UW-Stout: Applied Science Poly Mission

**PROGRAM**

Research and Related Activities

**DESCRIPTION**

Address NSF’s three strategic goals: (1) People-developing a diverse, internationally competitive and globally engaged workforce of scientists, engineers, and well-prepared citizens; (2) Ideas-enabling discovery across the frontiers of science and engineering, connected to learning, innovation, and service to society; and (3) Tools-providing broadly accessible, state-of-the-art science and engineering facilities and shared research and education tools.

Research is funded primarily through the following directorates:

- Biological Sciences
- Engineering
- Mathematical and Physical Sciences
- Geosciences

**EXAMPLES OF AWARDS DISBURSED**

UW-Milwaukee: Advanced LIGO Data Handling; Enabling Gravitational-wave Astronomy on the LIGO Data Grid; Development of High-Performance Computing Facility for Gravitational-wave Data Analysis

UW-La Crosse: Experimental Investigation of the Physico-Chemical Properties of Aqueous Organic and Mixed Organic/Inorganic Systems Important in the Upper Troposphere; Molecular Mechanism of Template-Assisted Pore Assembly; New Statistical Methods for Modeling 3-Dimensional Rotations with Advances in the Study of Human Motion; Collaborations on Riverine Ecology (CORE); Vibrational Structure of the Gd Isotopes; Keeping the Focus on Disruptions to Food Production in Midwestern Farming Communities (via the National Hazards Center); Measurement of DNA Thermal Denaturation ™ on Surfaces to Quantify the Effects of Surface Interactions on the Stability of Hybridized DNA Structures; CS-10K: Collaborative Research: Priming the PUMP - Preparing the Upper Midwest for Principles of Computer Science (subcontract via Marquette); Beyer FY09-13

UW-Eau Claire: The Complexity of Global Change: Interactive Effects of Warming, Water Availability, CO2 and N on Grassland Ecosystem Function (collaborative with University of Minnesota); RUI: Continued Studies of Condensed-Phase Structural Effects on Complexes of BC13 and Group IV Lewis Acids; RUI: Supramolecular main-chain liquid crystalline networks as a probe of mesogen formation and stability

RUI: Analysis of Mutants Identified in Screens for Suppressors or Enhancers of a Red Light Hypersensitive E3 Upiquitin-Ligase Mutant; RUI: Spectroscopic and Computational Studies of Alpha Beta-Unsaturated Carbonyl Compunds in Triplet Excited States

**SMALL BUSINESS ADMINISTRATION (SBA)**

**PROGRAM**

Small Business Development Centers

**DESCRIPTION**

Provide management counseling, training, and technical assistance to the small business community through Small Business Development Centers

**EXAMPLES OF AWARDS DISBURSED**

UW-Extension: Administers The Small Business Jobs Act Program, a collaborative program with most campuses in the system participating.

**DEPARTMENT OF TRANSPORTATION**

**SUBAGENCY**

Maritime Administration

**PROGRAM**

Research and Development

**DESCRIPTION**

Oversee international and national maritime related standards, rules and regulations, as well as related research and development activities

**EXAMPLES OF AWARDS DISBURSED**

UW-Superior: Ballast Water Treatment Systems Testing ($1,000,022)

**SUBAGENCY**

Research and Innovative Technology Administration

**PROGRAM**

University Transportation Centers Program

**DESCRIPTION**

Provide grants to nonprofit institutions of higher learning for the purpose of establishing and operating university transportation centers that conduct research, education, and technology transfer programs addressing regional and national transportation issues.

**EXAMPLES OF AWARDS DISBURSED**

UW-Superior, UW-Milwaukee: collaborate with UW-Madison’s Center for Freight and Infrastructure Research and Education.
EXECUTIVE OFFICE OF THE PRESIDENT

PROGRAM
High Intensity Drug Trafficking Areas Program

DESCRIPTION
Reduce drug trafficking and drug production in the United States by (A) facilitating cooperation among federal, state, local, and tribal law enforcement agencies to share information and implement coordinated enforcement activities; (B) enhancing law enforcement intelligence sharing among federal, state, local, and tribal law enforcement agencies; (C) providing reliable law enforcement intelligence to law enforcement agencies needed to design effective enforcement strategies and operations; and (D) supporting coordinated law enforcement strategies which maximize use of available resources to reduce the supply of illegal drugs in designated areas and in the United States as a whole.

EXAMPLES OF AWARDS DISBURSED
UW-Milwaukee: Support the Milwaukee HIDTA office
LEGISLATIVE AND REGULATORY PRIORITIES

ISSUES AND RECOMMENDATIONS

On behalf of the University of Wisconsin System, the following issues are important to our students, institutions and our state in the upcoming legislative session.

Higher Education Act Reauthorization

ACCESS

Wisconsin and the nation need a larger segment of high school graduates to attend and complete college and more adult or non-traditional students to enter or return to college to complete their degrees. Financial aid and other resources are critical to ensuring greater access to a college education.

During the 2014-15 academic year, 68 percent of UW System students – more than 123,000 individuals – received financial aid. The Pell Grant, the largest federal need-based grant program, makes it possible for tens of thousands of students to attend UW System institutions each year. In 2014-15, almost a third of all UW resident undergraduate students – 40,125 students – received a Pell Grant, with an average award of $3,786.

UW Pell Grant History

Even with financial aid, the average unmet need after grants and scholarships for Wisconsin resident undergraduates is almost $10,000. The data clearly suggests that substantial financial need among our current students creates an additional hurdle to completing a college degree.
In addition to Pell Grants, the UW System relies on the Supplemental Education Opportunity Grant (SEOG), Federal Work-Study (FWS), and the Federal Perkins Loan Program to support students in financing college. We are pleased that late last year, Congress extended the Federal Perkins Loan Program for two years as Congress undertakes efforts to review the federal grant and loan programs.

In 2014-15, SEOG provided $10.0 million in grants to 15,865 UW System students. Federal Work-Study provided $11.8 million in aid to 8,239 UW System students. Perkins Loans, which are low interest loans to help financially needy students, provided $25.3 million in loans to 14,312 UW System students.

### Perkins Loans Awards by UW System Institution, 2014-15

<table>
<thead>
<tr>
<th>Institution</th>
<th>Perkins Awards</th>
<th>Perkins $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madison</td>
<td>3,405</td>
<td>$7,539,892</td>
</tr>
<tr>
<td>Milwaukee</td>
<td>2,009</td>
<td>$2,973,083</td>
</tr>
<tr>
<td>Eau Claire</td>
<td>883</td>
<td>$1,991,479</td>
</tr>
<tr>
<td>Green Bay</td>
<td>511</td>
<td>$850,045</td>
</tr>
<tr>
<td>La Crosse</td>
<td>396</td>
<td>$866,498</td>
</tr>
<tr>
<td>Oshkosh</td>
<td>487</td>
<td>$876,090</td>
</tr>
<tr>
<td>Parkside</td>
<td>432</td>
<td>$443,705</td>
</tr>
<tr>
<td>Platteville</td>
<td>819</td>
<td>$1,460,101</td>
</tr>
<tr>
<td>River Falls</td>
<td>508</td>
<td>$1,100,128</td>
</tr>
<tr>
<td>Stevens Point</td>
<td>2,010</td>
<td>$2,729,202</td>
</tr>
<tr>
<td>Stout</td>
<td>977</td>
<td>$2,569,497</td>
</tr>
<tr>
<td>Superior</td>
<td>278</td>
<td>$292,575</td>
</tr>
<tr>
<td>Whitewater</td>
<td>1,597</td>
<td>$1,652,888</td>
</tr>
<tr>
<td>UW Colleges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UW System</td>
<td>14,312</td>
<td>$25,345,183</td>
</tr>
</tbody>
</table>

It is essential that the Higher Education Act reauthorization address the significant need for financial aid to both allow and increase access to postsecondary education.

**Recommendations:**

- Support continued increases to the Federal Pell Grant maximum award and maintain the Pell Grant surplus for students in the future.

- Support the overarching themes in the Financial Aid Simplification and Transparency Act (FAST) that would simplify and streamline the financial aid process for families and students. At the same time, ensure that simplification does not increase the administrative burden for financial aid offices and ensure financial aid goes to students with need.

- Oppose two-question Free Application for Federal Student Aid (FAFSA) applications. This oversimplified approach has the potential to inadvertently divert funds from low-income to higher-income applicants with better resources and also overly burden financial aid officials who have limited access to financial records and backgrounds.

- Support implementation of the change to utilizing “Prior-Prior Year (PPY)” data. In the 1st Session of the 114th Congress, the Administration endorsed using income data from one year earlier to file the FAFSA.

- Support and expand funding for campus-based aid programs. The campus-based aid programs, which include the Supplemental Education Opportunity Grant (SEOG), Federal Work-Study (FWS) and Federal Perkins Loan Program, serve as significant components of the strategies our campuses employ to boost access and completion, and consider restoration of Perkins eligibility for graduate students.

- Support continuation beyond 2017 of the American Opportunity Tax Credit for qualified educational expenses. The American Opportunity Tax Credit was previously extended through December 2017.

- Increase support for TRIO and GEAR UP. These programs are critical to encouraging and supporting low-income and first-generation students in their efforts to pursue and succeed in postsecondary education. These programs provide support services, such as college awareness counseling, academic tutoring, and mentoring. TRIO programs also provide support services for first-generation and low-income students once they have enrolled in college to help them persist and succeed in reaching their goals.
The UW System strongly promotes expansion of the McNair Scholars Program/TRIO and Federal Work-Study programs that support low-income students and growing the availability of undergraduate research opportunities at two- and four-year institutions. Undergraduate research plays a significant role in promoting persistence in postsecondary study and increased completion rates, especially among students from disadvantaged backgrounds. The McNair and Federal Work-Study programs provide crucial aid and support for low-income students to participate in undergraduate research.

AFFORDABILITY

More and more Wisconsin students and their families need financial help to make obtaining a UW System degree a reality. Both the number of students with need and the amount of need is growing.

Average Unmet Need without Loans

As a result, students have more loans and more unmet need. In 2014-15, almost 97,000 UW System students received a student loan.

In 2014-15, 74% of Wisconsin resident baccalaureate recipients had outstanding student loan debt averaging $30,650. Average student unmet need after grants and scholarships was $9,992.

Decreasing state support per student has contributed to increased tuition to supply a greater share of the cost to educate a student. These tuition increases, in turn, have led to higher levels of unmet need and loan debt.
Although the percentage of students graduating with loan debt has increased in the past several years, the three-year student loan default rate for UW System students (4.6%) remains low compared to the national average (11.8%). Overall, the vast majority of student loan borrowers remain committed to making their loan payments. Programs such as Pay As You Earn and Revised Pay As You Earn, which cap a borrower’s payments at 10% of a borrower’s income and forgive any remaining balance on student loans after 20 years of qualified repayment, are important. Programs that allow student loan borrowers to refinance at more favorable interest rates and income-based repayment plans make it easier for students to deal with debt.

RECOMMENDATIONS:

■ Oppose elimination of subsidized loan programs if Congress moves to consolidate grant and loan programs.

■ Support programs that allow student loan borrowers to refinance at more favorable interest rates.

■ If consolidation of student repayment programs occurs, continue to support the Pay As You Earn and Revised Pay As You Earn programs, along with the standard 10-year federal loan plan. Doing so widens the pool of borrowers with access to these programs, allows graduates to repay less of their student loans based on income, and helps graduates who are underemployed struggling to make payments, or are working in valuable professions that offer modest salaries.

■ Support a move to income-based repayment as the default option. Fixing the back-end of repayment, like expanding income-driven repayment, will not fix those problems nor will it leave students better off in the long run. In fact, it will likely make it even more expensive for students and will expand the reliance on loans to finance educational opportunities.
CAMPUS SAFETY

There has been a great deal of attention around campus sexual assault and violence and how institutions of higher education prevent and respond to allegations of sexual misconduct on their campuses. For many years, the UW System and its institutions have had robust and well-publicized policies in place for the effective prevention of and response to sexual misconduct. These policies are enforced by trained and experienced administrators. Policies include Board of Regents’ policies governing nondiscrimination broadly, sexual harassment, and consensual relationships; Administrative Code provisions governing student misconduct (including sexual violence) and disciplinary processes for faculty and staff; and institution-level anti-discrimination policies and complaint processes. These policies are consistent with federal law, including the Jeanne Clery Act, and state law requirements that mandate dissemination of information to students and staff related to sexual assault, and federal and state requirements to compile statistics on reports of sexual assault, including sexual assault against acquaintances.

Nevertheless, we are always in the process of evaluating our policies to ensure they continue to be effective. In 2014, UW System President Ray Cross created a systemwide task force to provide leadership and coordination in policy development and education to promote awareness of the issues, and to serve as a clearinghouse for resources for institutions as they develop and implement some of their own efforts. The task force is currently conducting its work. The following are concerns and recommendations under consideration.

RECOMMENDATIONS:

- A complainant seeking to file a complaint with the Office for Civil Rights should be required to demonstrate an affiliation with the institution of higher education and demonstrate the personal impact of an action or inaction by the institution of higher education before his or her complaint is considered. Currently anyone can file a complaint with OCR, regardless of whether that individual has any affiliation with the institution or whether that individual was personally affected by the alleged action or inaction. This triggers a lengthy and involved investigation into the complaint by OCR, requiring a substantial investment of human and financial resources by the institution.

- An OCR investigation should be conducted in a cooperative manner, allowing OCR to share more information about the nature and particulars of the complaint and to continue to share information with the institution throughout the process. This would benefit the institution because currently the institution receives little to no access to the specifics of the complaint.

- It should be clarified that sub-regulatory guidance is recommended, but voluntary. Such substantive guidance should go through the notice and comment rule-making process, with appropriate input from institutions of higher education. The Department of Education, in particular the Office for Civil Rights, has published significant guidance in the past few years and is enforcing that guidance as if it were law. However, none of the guidance has gone through the rule-making process. This has many implications, including the fact that the guidance has not had the benefit of comments by those who work in this area at universities, as well as continued uncertainty in the application and enforcement of such guidance.

- The proposed Campus Safety and Accountability (CASA) Act has advanced the concept that institutions should have Memorandums of Understanding with local law enforcement concerning investigation, information-sharing, and other areas related to Title IX. While this is
a worthy objective, the language is problematic as drafted. We understand, particularly from the law enforcement community, that there are many challenges surrounding this expectation that have not been fully vetted with stakeholder groups.

- There is a concern that compliance with the reporting requirements of laws such as Clery, Violence Against Women’s Act, and the Administration’s interpretation of Title IX, has resulted in the diversion of limited resources from areas traditionally within the responsibility of colleges and universities, including education about safety and prevention of sexual violence and the provision of resources for survivors. When new compliance expectations are proposed, educational priorities and limited resources should be taken into account.

- Higher education, schools, community organizations, faith organizations and others should be encouraged to work together to address this broad societal problem. Cooperation is critical if efforts to create and maintain an anti-violence culture are to be successful.

INNOVATION

We believe that innovation in higher education is critical. In the UW System, we are committed to delivering quality online, residential and hybrid courses, certificates and degree programs. We support regulatory changes as well as waivers for experimental and demonstration sites that reinforce high-quality, low-cost innovations in higher education.

For many years, the credit hour has been the basic unit of measurement within higher education. While universally utilized across the postsecondary landscape, the credit hour is a measure of time spent learning; it is not a measure of what a student has learned, how much was learned, or what can be done with the learning. To get at the outcomes of learning, we need a new standard and process. Competency-based education has emerged as one new standard because competencies are applied learning outcomes. Unfortunately, because all regulations governing Title IV revolve around the credit hour and time on task, providing financial aid to students in competency-based programs has been extremely difficult. We urge that the next iteration of the Higher Education Act provides new ways to offer financial aid for competency-based education and greater clarity about the process.
For examples of how competency-based education works and some of the challenges in applying financial aid to students in competency-based programs, consider the University of Wisconsin System. Beginning in January 2014, the UW System began enrolling students in the UW Flexible Option (“UW Flex”), a new direct-assessment competency-based education program designed especially for returning adult students. UW-Extension, the institution leading the effort, is working across multiple UW System institutions to offer degree programs and curricula through competency-based delivery. Students who enter UW Flex do not complete credit hours. Rather, they advance towards their degree by demonstrating mastery of program competencies, taking assessments designed to measure and document what the student actually knows and can do. Competencies (the outcomes of learning) – not credit hours – are the measure of student learning and success.

RECOMMENDATIONS:

- Modify HEA Section 103: Distance Education to provide a modern definition of distance education that would include interactive technology and a better blending of technology and access to faculty, as well as recognition that distance education technology is used in regular classrooms.

- Update and clarify the current definition of “regular and substantive” (SAP, R2T4, etc.). The meaning of “regular and substantive interaction” and how it is applied in evaluating program eligibility for Title IV is the single most significant challenge for competency-based programs. The reason for this, as noted above, is because “regular and substantive” focuses on the inputs of learning – time students spend on task – rather than on the outcomes of learning, or what students know and can do with that knowledge. A modern, new meaning of “regular and substantive” is sorely needed to support current and future innovations in higher education.

- Amend Title IV requirements to enable students to engage in various academic modalities simultaneously, i.e., taking assessments in competency-based programs while also enrolling in traditional, online and/or face-to-face classes beyond the 2014 Experimental Sites initiative. This will allow students much greater flexibility in how they learn, increase access to higher education, and improve outcomes.

- Amend Title IV requirements so that (especially adult) students can access the entire spectrum of federal student aid funds with greater ease when enrolling in and completing employment-directed alternative credentials that are shorter than one year in length.

INTERNATIONAL

The Title VI programs address critical national needs in foreign language and regional expertise, as well as fostering general cultural and historical understanding. The ability to function in a global society has never been more important. An individual’s ability to live and work in a dynamic world community requires a basic understanding of, respect for, and appreciation of cultural differences. In addition to the on-campus presence of international students and faculty, UW System institutions offer international exchange and study abroad opportunities to help students gain these valuable skills. Sharing international exchange opportunities with other UW System institutions also allows students to take advantage of specialized programs offered by other universities.

Many of the students who attend the UW System’s freshman-sophomore UW Colleges campuses cannot afford an international student abroad experience. There are barriers, especially at the federal level, for our two-year colleges to compete for study abroad funding, particularly in the current era of limited
availability of funds and growing competition for those funds.

RECOMMENDATIONS:

- We ask Congress to reaffirm its historical support for those collegiate-level programs which have been recognized by the National Academies of Sciences as the “foundation for international and foreign language education in the United States.” This includes continuation of global undergraduate exchange programs for underserved and disadvantaged students and the Fulbright and Gilman Scholars programs. UW System supports continuation of the 100,000 strong initiatives in the Americas and in China, and the Critical Languages Scholarship program.

- Amend Title VI to specifically state that allocations for the Undergraduate International Studies and foreign Language program funds administered by the Office of Postsecondary Education include funding for two-year colleges to plan, develop and carry out programs to improve undergraduate instruction in international studies and foreign languages.

- Authorize and fund a program to encourage international teacher exchanges.

REGULATION

UW System institutions appreciate and recognize the necessary laws to safeguard public funds, fulfill academic program requirements for student success, and to be accountable to taxpayers. However, the trend toward substantial, lengthy, and complex regulation over higher education has reached a tipping point. Institutions are struggling to utilize staff time and resources to assure understanding of and compliance with increasingly voluminous federal regulations. Further, there is duplication with state and local laws that create unnecessary redundancy in the collection and reporting of data.

The regulatory burden has also caused a significant impact on our universities’ research enterprises by federal agencies imposing duplicative, costly and inconsistent regulations and reporting requirements. As regulations increase exponentially, the ability of faculty and staff to focus on the core research being funded at institutions such as UW-Madison and UW-Milwaukee has been restricted.

Finally, as part of its program integrity rulemaking package, the Department of Education issued final rules that altered state authorization requirements on distance education programs. The regulations, scheduled to take effect on July 1, 2011, were blocked
by a federal court. The Department still seeks to implement policies that would fundamentally shift longstanding procedures with respect to distance education.

With the pending reauthorization of the Higher Education Act (HEA), we urge Congress to closely examine the report of the Task Force on Federal Regulation of Higher Education, "Recalibrating Regulation of Colleges and Universities." The report offers a set of recommendations aimed at streamlining and simplifying regulations that may undermine the ability of colleges and universities to serve students, while still reaffirming the important role regulations play in ensuring institutional accountability and responsible stewardship of taxpayer dollars.

The UW System supports the following recommendations from the task force related to campus safety, consumer information, and the clarification and elimination of unnecessary regulations. Additionally, the UW System outlines additional efforts that should be undertaken to reduce regulatory barriers affecting the ability to effectively and efficiently conduct research.

RECOMMENDATIONS:

Campus Safety

- The federal government should rely on the expertise of the Department of Justice (DOJ) in creating the standard definitions for crimes, and the Clery Act should require reporting on crimes as they are defined in the Uniform Crime Reporting (UCR) or National Incident-Based Reporting System (NIBRS). This would allow for statistics that are comparable across institutions and provide useful information to consumers, while ameliorating the need for campus police to juggle competing definitions of crimes; and if Congress believes campuses should report on other “crimes” that are not currently a part of the UCR or NIBRS, it should instruct DOJ to modify the UCR/NIBRS to include these definitions. This would ensure that new crime definitions are developed by experts in law enforcement and crime reporting protocols, and would provide a common definition for both local policy and campus security officials.

- Campus law enforcement should have clear authority to use its own expert judgment to determine when a serious or continuing threat exists and when they have the appropriate information to issue a timely warning. The Department, except in cases of clear negligence, should defer to the judgment of the law enforcement professionals who implement these rules on campus day in and day out, and it should acknowledge good faith efforts by institutions to protect their campus communities by appropriately informing them of safety threats.

- The definition of “noncampus property” should be clarified and narrowed to focus more directly on property that is a core part of a college or university. Guidance from the Department of Education has created many instances where institutions have had to spend considerable time obtaining information from third parties, such as hotels and police departments from across the country and around the world. At a minimum, it should exclude all foreign locations as well as short-term stays in domestic hotels.

Consumer Information

- Congress and the Department of Education should make sure that information and data being collected from institutions and provided to consumers will actually be useful before imposing additional information and data requirements. Congress and the Department are encouraged to carefully test any new disclosures before they are imposed.

- Institutions should not be subjected to new information collection requirements from Congress or the Department of Education when the same or substantially similar information is already in
the possession of other federal agencies. Instead, the Department should be required to work with other federal agencies to obtain the necessary information.

Regulations Unrelated to Education, Safety or Stewardship

- Congress should use the upcoming HEA reauthorization as an opportunity to review all of the HEA’s provisions, identify the federal purpose behind their inclusion, and strike requirements that are not clearly related to the core mission and responsibilities of higher education. Congress and the Department of Education should refrain from regulating in these areas and give colleges and universities more latitude to determine the most effective ways to deliver information to students and families.

Research

- Effort Reporting: Effort reporting is an attempt to apply accounting principles to faculty research activities. It is estimated to cost UW-Madison $1.8 million per year to meet effort reporting requirements. These expenditures deter investment in science and require repeated involvement of researchers while not strengthening the research enterprise.

- Monitoring Subcontracting: The new Uniform Guidance provides new monitoring and reporting requirements for universities who act as the prime recipients of research awards and who then pass through part of the programmatic activities to sub-recipients, including other universities. The new policy is far more prescriptive and burdensome than previous regulations. It is duplicative to require prime recipients to monitor and report on other research universities that regularly receive federal awards.

- Human Subject Research and Research Using Animals: Burdens associated with protocols, training and compliance with regulations for human and animal subjects are significant and have increased dramatically over the last 10 years. Federal agencies should consider setting regulations based on risk.

- Harmonize Regulations Across Federal Departments or Agencies When Possible: Many agencies respond individually to federal requirements. Therefore, expectations may differ depending on funding source. This is burdensome to those who provide the training and to those who are funded by two or more agencies.

State Authorization and Distance Education

- Congress should clarify that requirements on institutions to meet state authorization requirements apply only to states in which an institution is physically located.

Teacher Preparation

The reauthorization of the Higher Education Act represents an important opportunity for education programs where future teachers are prepared and educators developed. The UW System is supportive of efforts to stimulate and reward innovation in the preparation of future educators. Our Colleges of Education are leading the way in establishing a new performance assessment for teacher candidates to ensure that there is a qualified and effective teacher in every classroom. UW System Schools and Colleges of Education remain committed to working with local school districts, the state, and the federal government to meet the goal of high-quality educator preparation.

RECOMMENDATIONS:

- Through the FY2017 appropriations process, oppose funding for the portion of the law referred to as the “Great Teaching and Leading for Great Schools Act,” in Title II of the Every Student Succeeds Act. We believe that all students should be taught by a profession-ready teacher who has completed preparation, demonstrated content knowledge and effectiveness, and achieved full state certification or licensure.

- Title II of the Higher Education Act should be reauthorized with a focus on three areas of educator preparation: investing in reform of educator preparation; strengthening accountability for programs that prepare teachers; and providing incentives for prospective teachers to teach in high-need subject fields in high-need schools. The UW System strongly supports adoption of The Educator Preparation Reform Act (S. 1062/H.R. 2172), introduced by Senator Jack Reed and Representative Mike Honda. This legislation is supported by a wide array of P-12 and higher education organizations that include advocates and practitioners.
OTHER LEGISLATIVE AND REGULATORY PRIORITIES

FAIR LABOR STANDARDS ACT

In March 2014, President Obama directed the Secretary of the U.S. Labor Department to make changes to the regulations governing exemptions to the Fair Labor Standard Act’s (FLSA’s) overtime pay requirements for executive, administrative, and professional employees (known as the “white collar” exemptions). Under FLSA overtime regulations, employees are designated as nonexempt hourly employees who are eligible to receive overtime pay or as exempt salaried employees who are not eligible to receive FLSA overtime pay.

On June 30, 2015, the DOL proposed changes to FLSA regulations that will increase the minimum salary threshold. The current salary threshold is $455 per week (or $23,660 annually); the proposed salary threshold is $970 per week (or $50,440 annually). The final rule will be issued not sooner than the summer of 2016.

Approximately 5,000 UW System employees currently designated exempt earn less than $50,440 and are potentially impacted by this change. Institutions are analyzing potential costs.

The UW System is concerned that the proposed regulations increase the threshold too quickly for institutions to understand, plan, and develop implementation strategies. Further, the range of options available to meet the new threshold is challenging from a fiscal perspective, especially on public institutions of higher education that have sustained deep cuts in state support.

RECOMMENDATIONS:

■ The U.S. Department of Labor (DOL) should consider lowering the proposed salary threshold for all employers. DOL’s proposal is far higher than the levels it has considered in the past and fails to account for regional and industry differences in pay. It is recommended that the DOL consider lowering the proposed salary level to one of the levels it contemplated in the proposed rule’s preamble, which are more in line with historic trends.

■ Alternatively, the DOL should provide lower thresholds for nonprofit and public employers and/or consider expanding the exemption for teachers from the minimum salary level to others integral to the education process (i.e., expanding the exemption to postdoctoral researchers).

■ The DOL should phase in the new salary level over time to allow employers and employees sufficient time to make adjustments to help mitigate the financial consequences of changing the status of employees from FLSA exempt to nonexempt.

■ The DOL should not automatically update the salary levels as increasing the minimum salary level each calendar year would create serious uncertainty for colleges and universities in their budgeting and planning process. Instead, the DOL should proceed through the standard formal notice and comment process when making adjustments to the threshold levels.
IMMIGRATION

UW System has a tradition of excellence in research and attracting the best and brightest researchers from across the United States and the world. Competition for these researchers is becoming increasingly challenging given the growth of opportunities globally for science and research. The following recommendations have broad, bipartisan support – many of which could be carried out at the federal level administratively – and would help maintain the excellence of the UW System.

RECOMMENDATIONS:

■ Create Standard Occupational Classification (SOC) Codes specific to post-doctoral researchers. Post-doctoral researchers are the backbone of research universities like UW-Madison and UW-Milwaukee, which provide training opportunities for recent graduates. These positions are often shoe-horned into fully professorial occupational classifications that do not reflect real-world wages for post-docs. Creating Standard Occupational Classification (SOC) Codes specific to post-doctoral researchers would allow UW institutions to recruit and retain the best and brightest foreign post-docs.

■ Simplify the green card self-petition process for U.S.-educated graduates. This would reduce processing costs for UW System institutions and American employers and put the onus on foreign nationals to apply for a green card. This would take employers out of the way of the relationship between an immigrant and his or her attorney and family.

■ Eliminate artificial per-country caps for employment based immigrant visas. Nationals of large countries, such as China and India, have long wait times to “adjust status” to become permanent residents of the U.S. This increases processing costs for universities and can cause problems in recruiting and retaining faculty.

■ Make F visas “dual intent.” Under the current system, a number of the best and brightest foreign students who come to the U.S. to study will ultimately be able to obtain residence through a job or a spouse. However, they have to maintain a pretense of wanting to leave the U.S. while in F status. Not requiring an intent to leave the country will allow the UW System to continue to recruit and retain the best and brightest foreign students and help them obtain jobs, continuing to maintain America’s technological dominance.

■ Expand temporary visas for U.S.-educated graduates, particularly F-1 OPT and H-1B. A year is frequently too short a time for an F-1 OPT student to transition to an H-1B. Allowing qualified foreign students to obtain jobs in American industries more easily after graduation will allow American businesses and universities to keep America the most technologically advanced nation on earth.

■ Give all H-4 dependents work authorization, not just those with an approved I-140. To date, H-4 dependents have been prevented from working in the U.S. while J-2 dependents can work and those same H-4 dependents will be able to apply for work authorization after receiving their approved I-140. Giving all H-4 dependents work authorization, not just those with an approved I-140, will help UW System institutions retain foreign faculty members whose families are often separated by economic necessity.

■ Allow non H-1B dependent employers to use their own actual wage data for prevailing wages. Before 2008, UW System institutions could demonstrate the prevailing wages for their jobs by pointing to actual wages paid to U.S. workers at our institutions. Currently, UW System institutions are forced to apply a federal algorithm that is based on incomplete data and produces results that do not match real-world wages. This could be limited to American Competitiveness and Workforce Improvement Act (ACWIA) institutions.
VETERANS

The UW System is committed to serving Wisconsin veterans and their families who have earned and deserve our support. Nearly 5,000 veterans currently attend UW System institutions, and eligible students are covered by the Wisconsin GI Bill – the most comprehensive state higher education benefit for veterans in the nation. In addition to benefits, many UW System institutions have opened student veteran centers to focus on the academic and social supports that veterans find useful as they transition to college life. To further aid the transition and ensure efficient use of their valuable state and federal benefits, veterans also receive priority registration at all UW System institutions.

RECOMMENDATIONS:

- Support continued dialogue with U.S. Department of Veterans Affairs (VA) around the innovations proposed in the Veteran and Service Member Education Benefit Data Flow Re-Engineering Project developed by the National Student Clearing House (NSC) in partnership with institutions of higher education, Student Veterans of America (SVA) and the National Association of Veterans Programs Administrators (NAVPA). Initially, the project will allow the NSC to submit student data to the VA in the same way NSC submits student data to the U.S. Department of Education. If realized, the project can improve efficiency, accuracy, and produce data to improve student outcomes and free campus staff to address higher level student needs.

- Support innovative competency-based and alternative degree programs that attract student veterans. The VA should be encouraged to support and fund competency-based and other hybrid degree programs that would attract student veterans and help to alleviate student debt.

- Restore payments made by the VA to institutions to support the cost of administering benefit programs and attending VA-sponsored training conferences. This is particularly important for public institutions of higher education that are working hard to serve student veterans and struggling at the same time with cuts to state funding.

- Support the VA classification of hybrid or blended classes as “in residence” rather than “distance learning” to reduce reporting errors and allow for an accurate calculation of the Basic Allowance for Housing (BAH).

- Given the extended time many student veterans have been away from school and the attractiveness of online courses to older students with family commitments, support the use of VA benefits for developmental courses that are delivered online. The VA currently prevents the use of benefits to support enrollment in these courses.

- We further request that the VA join the Department of Education and consistently recognize an institution’s published academic calendar as the basis for establishing the first date of an academic term.
# CONTACT INFORMATION FOR UW SYSTEM OFFICES AND INSTITUTIONS

## System Offices

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