



Board of Regents of the University of Wisconsin System
Office of the Secretary

1860 Van Hise Hall
1220 Linden Drive
Madison, Wisconsin 53706
(608)262-2324

DATE: August 15, 2012

TO: Each Regent

FROM: Jane S. Radue *JSR*

MEETING NOTICE

Meetings of the UW System Board of Regents and Committees to be held at
Van Hise Hall, 1220 Linden Drive, Madison, Wisconsin 53706 on August 23 and 24, 2012

Thursday, August 23, 2012

9:00 a.m. All Regents – Room 1820

1. Calling of the roll
2. Introductions
3. *Presentation and Discussion: 2013-15 Biennial Operating Budget, including economic development efforts and flexible degrees*
[Resolution 3.]
4. *Presentation and Discussion: 2013-15 Biennial Capital Budget*
[Resolution 4.]
5. *Presentation and Discussion: UW System Accountability Report/Investing in Wisconsin's Future*
6. *Presentation and Discussion: Act 32 Performance Reports*
 - a. UW System, except UW-Madison
 - b. UW-Madison

12:00 p.m. Box lunch

1:00 p.m. Capital Planning and Budget Committee – Room 1920

1:00 p.m. Research, Economic Development, and Innovation Committee – Room 1820

2:30 p.m. Education Committee – Room 1820

2:30 p.m. Business, Finance, and Audit Committee – Room 1920

Friday, August 24, 2012

7:45 a.m. All Regents – Closed Session – Room 1820

8:45 a.m. Annual Regent Photo – Room 1920

9:00 a.m. All Regents – Room 1820

The closed session may be moved up for consideration during any recess in the regular meeting agenda. The regular meeting will reconvene in open session following completion of the closed session.

Information about agenda items can be found at <http://www.uwsa.edu/bor/meetings.htm> or may be obtained during the week of the meeting from Jane Radue, Secretary of the Board of Regents, 1860 Van Hise Hall, Madison, WI 53706, (608)262-2324. The meeting will be webcast at <http://www.uwex.edu/ics/stream/regents/meetings/> on Thursday, August 23, 2012, from 9:00 a.m. until approximately 12:30 p.m. and Friday, August 24, 2012, from 9:00 a.m. until approximately 12:00 p.m.

2013-15 UW System Biennial
Operating Budget Request

BOARD OF REGENTS

That, upon the recommendation of the President of the University of Wisconsin System, the Board of Regents approves the submission of its 2013-15 Biennial Operating Budget request, totaling \$20.8 million biennially in GPR/Fees for a Flexible Degree program and improvements in Quality, Access, and Economic Development (QAED), \$1.2 million for Program Revenue increases, and recommended Statutory Language Changes. The Board delegates authority to the UW System President to approve unavoidable costs requests and seek an extension to the September 17, 2012 submission date, if needed. The unavoidable costs requests will be provided to the Board of Regents in October.

The Board is not requesting increased funding for pay plan increases or fringe benefit increases in the 2013-15 biennium at this time. Consistent with past biennial requests, pay plan and future fringe benefit increases will be requested later.



2013-15 Biennial Operating Budget

The University of
Wisconsin System
August, 2012

BOARD OF REGENTS 2013-15 BIENNIAL BUDGET

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A. EXECUTIVE SUMMARY AND BACKGROUND

2013-15 BIENNIAL BUDGET REQUEST

EXECUTIVE SUMMARY

BACKGROUND

Since its April 2012 meeting, the Board of Regents has had a series of conversations centered around ways that the state's public colleges, universities, and extension networks can advance Wisconsin's economy by strengthening the workforce, supporting job creation, and bolstering vibrant local communities.

Regents expressed strong support for these priorities and for greater management flexibilities that would let UW System institutions use limited resources more effectively to serve students and the state as a whole. 2011 Wisconsin Act 32 provided new flexibilities to the UW System institutions, but additional statutory revisions are needed to fully implement those changes. This 2013-15 Biennial Budget proposal addresses both funding and flexibility that UW System institutions require to boost statewide economic development and pursue research and education goals.

The Board of Regents is required to submit a budget request to the Department of Administration by September 15 of each even numbered year. Because September 15 falls on a weekend this year, the submission has been extended to September 17. Although the Governor's Major Budget Policy memo directs most state agencies to assume there will be no new funding other than for unavoidable inflationary costs (also known as cost-to-continue), the University was informed that there will be an exception for its economic and workforce development initiatives. The UW's recommended request meets those parameters, and seeks funding that will move Wisconsin along a path towards greater economic prosperity.

REQUESTED ACTION

Approval of Resolution 3. That, upon the recommendation of the President of the University of Wisconsin System, the Board of Regents approves the submission of its 2013-15 Biennial Operating Budget request, totaling \$20.8 million biennially in GPR/Fees for a Flexible Degree program and improvements in Quality, Access, and Economic Development (QAED), \$1.2 million for Program Revenue increases, and recommended Statutory Language Changes. The Board delegates authority to the UW System President to approve unavoidable costs requests and seek an extension to the September 17, 2012 submission date, if needed. The unavoidable costs requests will be provided to the Board of Regents in October.

The Board is not requesting increased funding for pay plan increases or fringe benefit increases in the 2013-15 biennium at this time. Consistent with past biennial requests, pay plan and future fringe benefit increases will be requested later.

DISCUSSION

Investments in the UW System will yield measurable dividends. 2011 Act 32, the 2011-13 biennial budget bill, included a list of performance indicators that the Legislature and Governor determined to be important for the University of Wisconsin System. Each of those performance indicators will be included in the annual accountability reports. If the 2013-15 biennial budget request is approved, each UW System institution will focus on at least four of those performance measures with specific performance benchmarks and goals for improvement. For each institution, at least one of those measures will focus on economic development. The list of performance goals are shown in Appendix A.

UW System institutions are actively engaged in a variety of activities that promote economic development in Wisconsin. For example, faculty, staff and students are working directly with businesses and community organizations through class projects and internships, and encouraging more students to major in one of the STEM disciplines (science, technology, engineering, and math). About 70 pages of examples are provided in Appendix B.

To address these needs during the 2013-15 biennium, **the UW System requests GPR/Fee block grant increases of \$20.8 million biennially.**

Institutions require flexible funding to address the performance goals described above. Flexible GPR/Fee resources, in combination with institutional reallocations, will enable UW System colleges, universities, and extension to address high priority areas, thereby better serving students and the state. Additional flexible funding could be used to:

1. Hire faculty and instructional academic staff to teach high-demand courses in biology, chemistry, mathematics, so more UW students can access classes they need to graduate on time;
2. Expand electronic access to contemporary research materials for students, faculty, and staff across the UW System;
3. Improve advising services for students to help them stay on a path that leads to faster graduation and lower student debt;
4. Encourage more students to pursue degrees in high-growth STEM disciplines;
5. Increase access to courses that provide high school and college credits, enabling more students to get a head start on their college experience and to graduate faster; and
6. Better serve Wisconsin businesses and communities by connecting more faculty and students to Wisconsin businesses and community organizations through classwork, internships, and service-learning experiences.

The UW System also requests funding to develop new flexible degree options that will provide new pathways for working adults and other nontraditional students, while also recognizing competencies gained outside the traditional classroom setting.

UW System institutions will continue to be frugal managers of available GPR/Fee resources. **Administrative costs for the UW System are less than half of the national average per**

student. Although this low funding for administration comes with some risks, UW System institutions will continue to focus on directing as many of their resources as possible to direct services to students and to spurring economic development across Wisconsin.

In addition, resources will be needed to attract and retain high quality faculty and staff members—the highly sought-after professionals responsible for nurturing Wisconsin’s educated citizenry and developing the talented workforce of tomorrow. These same faculty and staff provide direct support to Wisconsin businesses, and engage in world-class scientific research. UW faculty members and many of the academic staff are recruited from a national market. In that competitive pool, top quality educators and other personnel can often choose where to live and work. To attract and retain these individuals, UW institutions must be in the position to offer a competitive compensation package. Today, **faculty salaries at UW System institutions have fallen more than 18% below the national average. This large gap is the greatest threat to quality for UW System institutions.**

The legislature’s Special Task Force on UW Restructuring and Operational Flexibilities recommended that the University pay plan request be included in its biennial budget. However, the Board of Regents does not yet have the authority to determine pay plan increases for its employees, but is seeking this authority as part of its recommended statutory language changes.

Unavoidable Costs (Cost-to Continue)

To sustain its vital work and enhance the impact on Wisconsin’s economy, UW System institutions need adequate resources to cover routine inflationary costs and previous commitments. These include debt service for new academic facilities and the higher costs of utilities and employee health insurance premiums. These inflationary costs need to be covered to maintain educational quality and improve student success, while increasing service to Wisconsin businesses and communities. The unavoidable costs for fringe benefit costs in the 2011-13 biennium, along with increases to leases, financial aid, and the student technology fee are estimated at \$58 million.

Consistent with past practice, UW System will submit an advisory request related to utilities costs, which will be added by the state as part of the Governor’s budget along with debt service amounts. Additional funding for health insurance rate increases or increased cost of other fringe benefits in the 2013-15 biennium will be requested later..

Program Revenue Funding Requests

The Board of Regents requests \$1.2 million biennially in Program Revenue funds for the State Laboratory of Hygiene (SLH), and the Aquaculture Demonstration Facility. The SLH is administratively attached to the University of Wisconsin System. Their request is approved by their board and submitted along with the University System’s budget. Funding to support the operation of the Aquaculture Demonstration Facility is requested from tribal gaming revenues.

Statutory Language Changes

The University of Wisconsin System seeks increased management responsibility in the areas of Procurement and Personnel Management. A summary of the statutory language changes being requested is included on Pages B7-8.

RELATED REGENT POLICIES

None.

B. 2013-15 BIENNIAL OPERATING BUDGET REQUEST

UNIVERSITY OF WISCONSIN SYSTEM
 2013-15 BIENNIAL BUDGET
 NEW GPR/FEE FUNDED INITIATIVES

	<u>FY 14</u>	<u>FY15 Increase</u>	<u>Ongoing Base 14-15 FY</u>	<u>Biennial Increase</u>
Quality, Access and Economic Development	\$665,100	\$16,474,500	\$17,139,600	\$17,804,700
Flexible Degree	\$1,000,000	\$1,000,000	\$2,000,000	\$3,000,000
GPR Request	\$1,082,300	\$11,358,400	\$12,440,700	\$13,523,000
Fee (Tuition) Request	\$582,800	\$6,116,100	\$6,698,900	\$7,281,700
GPR/Fee Request	\$1,665,100	\$17,474,500	\$19,139,600	\$20,804,700

UNIVERSITY OF WISCONSIN SYSTEM
 2013-15 BIENNIAL BUDGET
 ESTIMATED COST TO CONTINUE

	<u>FY 14</u>	<u>FY15 Increase</u>	<u>Ongoing Base FY 14-15</u>	<u>Biennial Increase</u>
Full Funding of 2013-15 Fringe Benefits	\$25,000,000	\$0	\$25,000,000	\$50,000,000
M&D Financial Aid Increases	\$829,500	\$875,000	\$1,704,500	\$2,534,000
Full Funding of Lease & Directed Moves	\$735,700	\$61,100	\$796,800	\$1,532,500
Student Technology Fee Increases	\$1,297,500	\$1,368,900	\$2,666,400	\$3,963,900
GPR Request	\$19,262,700	\$936,100	\$20,198,800	\$39,461,500
Fee (Tuition) Request	\$8,600,000	\$1,368,900	\$9,968,900	\$18,568,900
GPR/Fee Request	\$27,862,700	\$2,305,000	\$30,167,700	\$58,030,400

Quality, Access and Economic Development

REVISED

	<u>2013-14</u>	<u>Increase in 2014-15</u>	<u>Ongoing Base Increase</u>
GPR	\$432,300	\$10,708,400	\$11,140,700
Fees (Tuition)	\$232,800	\$5,766,100	\$5,998,900
GPR/Fees	\$665,100	\$16,474,500	\$17,139,600

Each UW institution has chosen at least four of the Accountability Measures that were included in the 2011 Act 32 biennial budget, established a baseline for their current level of performance and developed improvement goals for 2015-16. Every campus has included at least one improvement goal in the area of Economic Development. The goals are included in Appendix A.

The improvement goals are dependent upon a strong system of Colleges, Universities, and Extension. The strength of the Colleges, Universities, and Extension is dependent upon the ability to recruit and retain high-quality faculty and staff. Without the faculty and staff, the research, public service and high-quality instruction that our citizens rely upon would not be possible.

The University of Wisconsin System is committed to addressing the state's needs for more graduates, more jobs, and stronger communities by providing increased economic and workforce development, increasing access, and ensuring the success of students. The Colleges, Universities, and Extension have been working with businesses and communities to provide knowledge transfer, create jobs, and utilize new technology to engage students in ways that ensure success. Examples of the work that is being done at the institutions can be found in Appendix B of this document.

Some examples of the work that is being done by UW institutions include: (1) the development of dual enrollment programs for K-12 students with the UW Colleges; (2) the development of Capstone and Master's programs for increased access to UW-Madison; (3) increased collaboration between campuses on degree programs and research; (4) joint ventures to increase K12 participation in STEM areas; (5) increased support to businesses from UW-Milwaukee and comprehensive institutions; (6) increased access and support for transfer students, nontraditional students and students of color; (7) increased opportunities for internships, service learning, and undergraduate research; (8) greater efforts to compete for external federal and gift funding; and, (9) a commitment to helping students succeed and be prepared to contribute to the workforce by utilizing professional training, critical thinking skills, or experiences in the community.

In the 2013-15 biennium, the UW System requests \$665,100 in the first year and an additional \$16,474,500 in the second year to support increased economic development efforts; the development of dual enrollment programs; additional access; and improvements in student retention, graduation and satisfaction.

Flexible Degree

REVISED

	<u>2013-14</u>	<u>Increase in 2014-15</u>	Ongoing Base <u>Increase</u>
GPR	\$650,000	\$650,000	\$1,300,000
Fees (Tuition)	\$350,000	\$350,000	\$700,000
GPR/Fees	\$1,000,000	\$1,000,000	\$2,000,000

At a time when the pool of younger college-bound students is predicted to shrink, Wisconsin must do more to enroll adult students. More than one-fifth of all Wisconsin adults have some higher education credits, but no degree. While many Wisconsin citizens are looking for work, many employers are struggling to find qualified workers with the specific knowledge and skills they need to fill available positions. As the economy continues its slow recovery, Wisconsin will need an educated workforce to compete in the new knowledge economy.

As an aggressive move to better position Wisconsin in the post-recovery economy, the UW System and Governor Walker recently announced a competency-based, self-paced Flexible Degree Initiative that will make baccalaureate degrees more accessible to working adults across Wisconsin. One element of this initiative will be the expanded ability for students to demonstrate college-level competencies based on material that they already learned in school, on the job, or on their own.

While some for-profit colleges may also offer degrees that provide some measure of flexibility to adults, the Flexible Degree Initiative will be led by world-class UW faculty, and the degrees offered in this format will reflect the University of Wisconsin’s high standards for quality and dedication to affordability. “This new model for delivering higher education will help us close the skills gap at an affordable price to get Wisconsin working again,” said Governor Walker. “As states across the country work to improve access and affordability in higher education, I am proud to support this exciting and innovative University of Wisconsin solution.”

The UW System has laid the foundation for this advancement with existing online degree programs and tools that help students move credits between institutions easily. Successful efforts to open their doors to adult students taught UW institutions valuable lessons. The competency-based degree will take this foundation another step further.

In the 2013-15 biennium, UW institutions request \$1,000,000 in the first year and an additional \$1,000,000 in the second year to support development of the Flexible Degree Initiative (\$2,000,000 ongoing). These resources will be used to ensure that the degrees offered in this new format meet the same high standards of other degrees offered by UW institutions across the state.

Because adult students may have work or family obligations that keep them away from campus or may be returning to their education after a long break, there must be a strong support infrastructure in place from application to graduation. This request will also fund advisors and tools to support students who enroll in the program.

UNIVERSITY OF WISCONSIN SYSTEM
2013-15 STANDARD BUDGET ADJUSTMENTS

This section includes items that could potentially be submitted in the UW System’s 2013-15 Biennial Budget as Standard Budget Adjustments, if the Department of Administration agrees. Specific dollar amounts that will be submitted to DOA in the final budget request have not yet been calculated. These amounts will be reported to the Board in October.

The following list includes those anticipated items that the UW System will request as Standard Budget Adjustments:

<i>Summary of the UW System’s 2013-15 Standard Budget Adjustments</i>

Full Funding of Fringe Benefits
This item requests full funding of the Department of Administration (DOA) approved fringe benefit rate changes from the 2011-13 approved rates to the new 2013-15 rates.
Minor Transfers within the Same Appropriation
This will make minor position or funding realignments within the same alpha appropriation without any overall dollar or position impacts.
Increases for Minority and Disadvantaged Financial Aid Programs
This item requests funding for the Ben R. Lawton Undergraduate Minority Retention Grant (LUMRG) and the Advanced Opportunity Program (AOP) financial aid programs to increase financial aid at the same percentage as estimated tuition increases for the 2013-14 and 2014-15 fiscal years.
Full Funding of Lease and Directed Move Costs
This request will fully fund lease rental costs through the 2013-15 biennium.
Student Technology Fee Increases
This request increases funding for student technology fee initiatives. The Student Technology Fee is a percentage of tuition and increases as general tuition revenue grows.

UNIVERSITY OF WISCONSIN SYSTEM
2013-15 PROGRAM REVENUE REQUESTS

The following list includes those known items that the UW System will request as Program Revenue increases:

Summary of the UW System's 2013-15 Program Revenue Requests (Ongoing Increase Amounts)	
State Laboratory of Hygiene	\$398,600
The board of the State Laboratory of Hygiene at UW-Madison will submit a budget request for Program Revenue funds to support alcohol and drug testing as an attached entity of the UW System.	
UW System Aquaculture Facility Increases	\$210,400
This request increases the UW System's Program Revenue funding levels to reflect the increased operating budget requirements associated with the UW-System Aquaculture Facility at UW-Stevens Point in 2013-15.	

STATUTORY LANGUAGE CHANGE REQUESTS

1. AUTHORITY TO CONTINUE AND EXPAND DISCRETIONARY MERIT COMPENSATION ADJUSTMENTS USING FUNDING FROM ANY SOURCE FOR ALL EMPLOYEES

Existing authority for providing discretionary merit pay for employees will no longer be available to any University employees once separate and distinct personnel systems are in place under Wis. Stat. 36.115. Wis. Stat. 36.09(1)(j) currently states as follows:... “The board may not increase the salaries of employees under this paragraph unless the salary increase conforms to the proposal as approved under s. 230.12 (3) (e) or the board authorizes the salary increase to correct salary inequities under par. (h), to fund job reclassifications or promotions, or to recognize competitive factors.” Exceptional performance is not an approved reason to use base funds to adjust salaries.

The Board seeks statutory authority to continue and expand discretionary merit compensation adjustments using generated and/or reallocated base funding from any source for all employees.

2. AUTHORITY FOR THE BOARD OF REGENTS AND THE UW-MADISON CHANCELLOR TO APPROVE COMPENSATION PLANS FOR ALL EMPLOYEES.

Effective July 1, 2013, the Board of Regents and the Chancellor of UW-Madison must submit separate recommendations to OSER for adjusting compensation for all employees. OSER then submits a proposal for adjusting compensation to JCOER for approval.

The Board of Regents seeks modifications to Wis. Stat. 230.12(3)(e) and Chapter 111 to allow the Board of Regents and the UW-Madison Chancellor to approve compensation plans for all employees. UW System’s need for institution-specific competitive compensation was most recently highlighted through the work of the 2010 Competitive University Workforce Commission (CUWC). The findings of the CUWC revealed significant and varied gaps in compensation with existing peer institutions. This recommended change will provide the UW System with an additional tool that is needed to address the findings of the CUWC.

3. MODIFICATIONS THAT PROVIDE FOR CONTINUATION OF EXISTING ETF BENEFITS ADMINISTRATION AUTHORITY

Employees in the UW System and UW-Madison personnel systems will remain a part of the Wisconsin Retirement System (WRS). However, it may be that laws which govern the WRS have not yet been amended as necessary to authorize the Department

of Employee Trust Funds (ETF) to continue to administer benefit programs on behalf of UW System employees. Technical changes will be needed in Chapter 40.

4. AUTHORIZE THE BOARD OF REGENTS TO MAKE PURCHASING DECISIONS FOR UW SYSTEM INSTITUTIONS

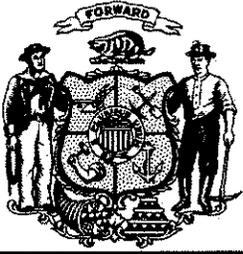
Under Wis. Stat. 16.71, the Department of Administration holds the authority to purchase and delegate purchasing authority.

The Board of Regents requests independent purchasing authority. This authority would streamline the purchasing process and allow the university to respond quickly and efficiently to the rapidly changing higher education purchasing environment. Flexibility would also allow the UW System to use higher education consortia contracts without seeking approval. In addition, sole source processing time could be streamlined by reducing the number of approval levels.

If a mandatory state contract exists, a UW institution would continue to purchase from said contract unless it can demonstrate that the purchase is available at a lesser cost. The Board of Regents would also agree to extend all UW contracts to any state agencies, county, city, village, town, school district, board of school directors, vocational, technical and adult education district, federally recognized indian tribes or any other public body whenever authorized to do so.

In moving purchasing authority to the UW System, DOA would continue to provide appropriate oversight through a post-award audit process.

C. REFERENCE



SCOTT WALKER
OFFICE OF THE GOVERNOR
STATE OF WISCONSIN

P.O. BOX 7863
MADISON, WI 53707

August 14, 2012

Dear Agency Head:

When our administration took office on January 3, 2011, Wisconsin suffered under a \$3.6 billion budget deficit. Prior administrations delayed payments, raided segregated funds and used federal stimulus for ongoing operational expenses. For years, Wisconsin relied on one-time fixes, accounting gimmicks, and tax increases to balance the state budget. Those days are over.

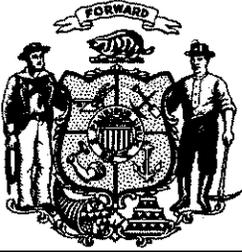
Facing a fiscal crisis on the day of my inauguration, our administration vowed to take immediate action to implement long overdue reforms and fiscal responsibility. By the end of my first year, Wisconsin increased revenue by 6.4 percent, balanced the state budget, and placed \$14.8 million into the budget stabilization fund. Furthermore, we are now poised to deposit an even greater amount as we close this fiscal year.

Other economic indicators continue to move in the right direction. Personal income increased at a rate of 5.2 percent, exceeding the national average. The unemployment rate declined year-over-year. Above average gains in both durable and non-durable manufacturing highlighted our GDP growth of 1.1 percent with manufacturing jobs growing a substantial 2.6 percent in 2011. The new days of responsible fiscal policy are here, and our broader economic recovery is building speed.

The building blocks of our recovery began with Wisconsin Acts 10, 13, 27, and 32. Act 32 brought our spending and revenue in balance. It was a test of our frugality and moderation as we sought sustainable solutions to Medicaid, state employment costs, and local government budgets. Without raising taxes, we solved the \$3.6 billion deficit left by the previous administration.

Wisconsin's financial outlook grows more sustainable. While cost pressures remain in Medicaid, Corrections, K-12, and the higher education systems, the tools and cost saving measures implemented in Act 10 and Act 32 can be more fully realized in the coming biennium. With the reforms we enacted, we saved the hard-working Wisconsin taxpayers more than \$1 billion, helped lower property taxes on a median-valued home for the first time in 12 years, and turned a budget deficit into a surplus. As our fiscal momentum builds, I plan to guide Wisconsin into increasingly stronger fiscal climates, where budget surpluses and positive economic growth become the norm and not the exception.

Others are beginning to take notice of Wisconsin's renewed momentum. After our first year in office, Wisconsin moved up 12 spots to 17th from 29th on CNBC's "America's Top States for Business" rankings and moved up to 20th from 41st on Chief Executive magazine rankings, the biggest jump of any state in the nation. Moving forward, we are



SCOTT WALKER
OFFICE OF THE GOVERNOR
STATE OF WISCONSIN

P.O. BOX 7863
MADISON, WI 53707

intensely focused on building a better job-creating business climate without raising taxes and encouraging the kind of innovation it will take to build a 21st century economy. We will channel some of this momentum into the Wisconsin Economic Development Corporation to foster the efforts of would-be job creators. We will implement various venture capital initiatives to push for and provoke much needed entrepreneurial development. Attracting and fostering job creators in the modern world requires we embrace the tools today's entrepreneurs need at their disposal.

Another critical tool for the job creator is a skilled and modern workforce. By implementing programs to train our friends and neighbors, we can substantially increase our state's reputation for tech-savvy, hard-working and ready-to-go workers. High-end manufacturers must never fear a lack of capable workers, and it is our mission to strengthen the confidence of any employer in Wisconsin as perennially open and ready for business. With innovative and strategic worker training, we will continue to grow a capable and dependable workforce.

Our workforce readiness depends on our ability to transform Wisconsin's education system. We will continue to strive to provide merit-based staffing to give us the best possible education providers and facilities. Reforms include implementation of the teacher evaluation model, a continuing focus on 3rd grade reading proficiency, and improved overall education outcomes. With these priorities, school districts and higher education institutions can build successful models, which fit unique local needs and bridge our workforce skills gap.

Economic success requires strong integration of the private sector and educational institutions. Wisconsin curriculum must have a better balance of employment-based learning and liberal arts so our graduates have the right skills for currently available jobs. We must also leverage new technology to increase online learning and allow students across Wisconsin access to world-class educators and industry leaders in other parts of the state. Our students deserve to learn from top-quality educators, so we must reform the system to reward excellent teachers, mentor struggling teachers, and replace failing teachers. With these reforms, Wisconsin will strive to provide educational excellence for all our children.

Investments in our infrastructure, such as transportation, telecommunications and energy, are vital to Wisconsin's economic recovery and competition in a global marketplace. We must diversify our energy supply based on a balance of cost and sound science, ever aware of the environmental impact. We should lift Wisconsin's nuclear moratorium to encourage this clean energy option, as well as continue to invest in energy transmission to move power from outside Wisconsin across the state. We must also get back to the basics of planning for transportation projects, funding common sense projects, and ending the raids on the transportation fund, so we can adequately maintain our roads and bridges. Wisconsin currently enjoys competitive advantages in the Midwest due to our transportation system we cannot afford to lose.



SCOTT WALKER
OFFICE OF THE GOVERNOR
STATE OF WISCONSIN

P.O. BOX 7863
MADISON, WI 53707

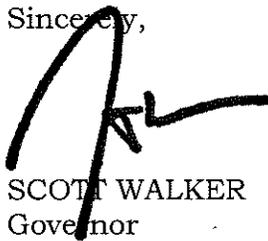
Wisconsin government exists to serve our people and one of our greatest responsibilities is meticulously tending a sound budget. We strive to be good stewards of the taxpayer's trust, while promoting both transparency and efficiency in government. Our continuous reform of government will remain fiscally prudent and will not raise taxes. We will seek every opportunity to re-tool existing programs and fashion additional programs as needed to ensure the most current and beneficial services. To avoid the temptation to once again resort to the gimmicks or one-time fixes typical of Wisconsin's recent past, we will prioritize growing the budget stabilization fund. By removing unwise and unsound budget gimmicks, by seeking a smaller and more efficient government, and by requiring transparency in these efforts, we aim to recover the trust of Wisconsinites and grow their faith in state government.

Given our shared goals, I am calling on most agencies to maintain their overall fiscal year 2013-14 and fiscal year 2014-15 GPR budgets at the fiscal year 2012-13 adjusted base levels minus the statutory and discretionary lapses. The same zero-growth targets will apply to the SEG-funded administrative operations. Agency requests should focus on enhancing the state's economy and advancing the goals discussed above. Funding to accomplish these priorities through modifying existing programs or developing additional programs should be offset by improvements in efficiency of agency operations or by reallocation of base funding.

Agency budget requests are due on September 17, 2012. Please review the Major Budget Policies and Budget Instructions carefully as you prepare and prioritize your requests. Technical budget instructions will be available on the State Budget Office SharePoint site.

Thank you for all your hard work. Together along with our professional state employees, we will meet the challenges before us and exceed the expectations of the people of Wisconsin.

Sincerely,



SCOTT WALKER
Governor

MAJOR BUDGET POLICIES 2013-15

BUDGET TARGETS

- Agencies should prepare their 2013-15 biennial budget requests based on 100 percent of their fiscal year 2012-13 adjusted base level minus the annualized amount of their total 2011-13 biennial GPR lapse related to 2011 Wisconsin Act 32, Section 9255(1)(b). In addition, as required under Section 9255(1)(e)2. of Act 32, agencies must prepare their biennial budget requests to include reductions to their GPR appropriations to reflect the GPR lapses included under Section 9255(1)(d) of Act 32.
- The 2013-15 biennium will present many fiscal challenges brought on by global economic conditions and the continued slow national economic recovery. Addressing these challenges will be the overriding factor in GPR spending decisions for the next budget. As such, there will need to be restraint and reductions in most GPR appropriations in the next budget.
 - In addition to making the lapses permanent, all agencies should assume there will be zero growth in overall GPR appropriations in each fiscal year during the 2013-15 biennium, and specific program needs should be managed within this general constraint.
 - Exceptions will occur only for K-12 school aids; required basic cost-to-continue needs for the state's institutions, i.e., the Department of Corrections and the Department of Health Services institutions; entitlement and related assistance programs in the Department of Health Services (e.g., Medical Assistance), the Department of Children and Families' Division of Safety and Permanence, and the Department of Workforce Development's Division of Vocational Rehabilitation; and housekeeping adjustments like standard budget adjustments, fuel and utilities, and debt service.
 - All agencies that were assigned lapse amounts in the schedule shown in Section 9255(1)(d) of Act 32 must submit a budget request that reduces their GPR appropriations by the GPR portion of the lapses (the difference between the 2011-13 fiscal biennium listed annual amount and the 2013-15 fiscal biennium listed annual amount). This adjustment is required under Section 9255(1)(e)2. of Act 32.
- Under Act 32, the Department of Administration secretary is authorized to lapse or transfer \$174.3 million to the general fund in the 2011-13 and 2013-15 biennia. Agencies have submitted plans for fiscal year 2011-12 and will receive additional information for submitting plans to meet the lapse requirement for fiscal year 2012-13. The GPR portion of the reductions must be built into agency requests for the 2013-15 biennium to make the reductions permanent.
 - The amount of assigned lapse differs between fiscal years in the 2011-13 biennium, but agencies should allocate the reductions to reflect an equal split between fiscal years in the 2013-15 biennium (i.e., half of the 2011-13 biennium's amount in each fiscal year of the 2013-15 biennium).
 - If an agency plans to allocate any portion of its reduction to the permanent or project position salary and/or fringe benefit lines, a corresponding reduction in position authority must be made.

- Agencies will be notified separately of their target reductions related to this item.
 - The remainder of the \$174.3 million biennial lapse requirement for 2013-15 (i.e., the PR transfer portion) will be allocated out to agencies in the next biennium, so agencies should plan accordingly.
 - The Department of Justice, University of Wisconsin System, Department of Children and Families, Department of Workforce Development and the Office of State Employment Relations will not be required to make these reductions; however, the zero growth limitation and Section 9255(1)(c), (d) and (e)2. lapses and reductions do apply to these agencies.
- The zero growth policy will also apply to the SEG-funded administrative operations appropriations in all agencies that are supported by the transportation fund, the conservation fund, the environmental fund and the lottery fund.
 - Agencies are reminded that the program revenue (PR) transfer requirements under Section 9255(1)(c) and (d) of Act 32 continue into the 2013-15 biennium. Agencies should plan accordingly to ensure sufficient funds are available to meet these annual transfers.
 - Funding requests for other types of appropriations and other funding sources in both years should be limited to revenue availability and only the highest priority programmatic needs.
 - Except for standard budget adjustments, routine budget items should be handled in agencies' base budgets regardless of fund source.
 - Proposals that transfer functions or programs, including related costs and staff, between agencies should result in zero growth in overall state appropriations (i.e., the transferring agency should have lower overall appropriations to offset the increase at the receiving agency). All agencies involved in the transfer should notify the State Budget Office during the initial stages of considering any such proposal to facilitate review of the request and allocation of any projected savings between the agencies.

PLANNING FOR REDUCTIONS

- Agencies should use this exercise to fundamentally review missions and priorities, exploring opportunities to reallocate resources, integrate programs and consolidate functions.
- Where reductions and efficiencies in state operations result in reductions in positions, agencies should avoid filling vacancies and make other plans to accomplish this reduction without layoffs.
- Any areas needing additional staff must be met through base reallocations.

Note: Agencies must receive approval from the State Budget Office before proposing to use funding sources in another agency to stay within budget targets, to absorb operations' reductions or to fund any new initiatives.

PERFORMANCE MEASUREMENTS IN BUDGETING

- Agencies need to report on the performance measures they identified for previous biennial budgets. These measures should relate to agencies' broad Chapter 20 budget programs. If needed to capture significant shifts in agency function, additional measures could be added; however, only a few measures should be presented so there is a clear focus on results.
- For the 2013-15 budget, agencies need to report actual outcome measures through fiscal year 2010-11 and fiscal year 2011-12. Planned outcome measures should be listed for fiscal year 2012-13, fiscal year 2013-14 and fiscal year 2014-15. Agencies should track and maintain data going forward to present actual performance data for a fiscal year compared to planned performance. (A calendar year may be used if data is collected on that basis. Please note where calendar years are used.)
- The State Budget Office will include performance measures developed by an agency in the Executive Budget Book, and agencies should reference measures in decision items, where relevant.
- Agency descriptions and performance measures will be included in the state budget system and must be updated in that system. It is important for agencies to follow the prescribed format to ensure consistency and compatibility.

BUDGETING FOR INFORMATION TECHNOLOGY

Requests for funding of information technology projects should identify the link between the project and the state's business goals, conformity to the Department of Administration's Policies and Procedures for Information Technology Management, and provide specific information about each project, including executive sponsorship. Consistent with information technology strategic planning, project definitions must include a standard return on investment (ROI) calculation.

BUDGETING FOR DEPARTMENT OF ADMINISTRATION RATE CHANGES

Agencies should not reflect anticipated rate changes from the various divisions within the Department of Administration in their 2013-15 budget requests. Forecasting of rates and impacts on individual agency budgets will be addressed by the Department of Administration in developing the Governor's 2013-15 budget.

FEDERAL FUNDS

The state has a goal of increasing the ongoing receipt of federal funds where the use of federal funding is consistent with state program goals. In order to increase the amount of federal funds received, agencies should conduct the following review:

- Examine existing grant awards to ensure that they are fully utilized and consistent with agency priorities. If unexpended grant authority is available, the agency should reallocate the funds to other activities to the extent possible under state and federal rules.

- Agencies may also identify, in the form of a policy paper submitted on September 17, additional federal grant opportunities that were not included in the agency's request. Such opportunities may be considered for funding by the State Budget Office during budget deliberations.

STATUTORY LANGUAGE GUIDELINES

- Agencies should seek to limit policy items unrelated to appropriation changes for inclusion in the Governor's budget.

Note: Please contact your State Budget Office analyst to discuss whether a particular initiative is appropriate for submission as a budget request.

- Agencies should not submit extensive lists of technical or housekeeping changes for inclusion in the Governor's budget. Proposed changes for separate nonbudget legislation can be submitted to the State Budget Office for review and approval, separate from the budget request.

Note: Please contact your State Budget Office analyst if these types of changes are sought.

- As in past budgets, prior to September 17, agencies may work directly with the Legislative Reference Bureau in preparing statutory language items related to the budget. After September 17, all drafting and redrafting requests related to the budget must come from the State Budget Office.
- The Legislative Reference Bureau strongly discourages agencies from submitting budget bill drafts that agencies have drafted. Instead, agencies should submit memoranda identifying what they are seeking to accomplish.
- The detailed budget instructions will provide more information on statutory language submittal requirements.

BUDGET SUBMITTAL DUE DATES AND PROCEDURES

- Formal budget requests are due Monday, September 17, 2012. Send four (4) copies to the State Budget Office and two (2) copies directly to the Legislative Fiscal Bureau.
- State Budget Office staff will be available to meet with individual agencies to explain budget policies and procedures, and discuss any agency concerns.
- Implementation of the new budget development system may result in changes in policies and procedures. Additional information will be forthcoming on any changes.

INFORMATION ON THE WEB

- The Budget Instructions will be available on the State Budget Office Web site at <http://www.doa.state.wi.us/debf/index.asp>.
- Periodic information updates will be posted to this Web site and the State Budget Office SharePoint site, so agencies should check these sites regularly.

UNIVERSITY OF WISCONSIN SYSTEM
SHARE OF STATE GPR

	<u>UW GPR</u> <u>EXPENDITURE</u>		<u>STATE OF</u> <u>WI GPR</u> <u>EXPENDITURE</u>	<u>UW AS %</u> <u>OF STATE</u>
1973-74	278,743,147		1,933,571,053	14.42%
1974-75	298,522,282	7.10%	2,166,752,155	13.78%
1975-76	310,446,570	3.99%	2,307,619,718	13.45%
1976-77	340,074,169	9.54%	2,470,900,111	13.76%
1977-78	363,899,880	7.01%	2,634,551,777	13.81%
1978-79	390,977,741	7.44%	3,148,901,910	12.42%
1979-80	420,677,864	7.60%	3,278,297,185	12.83%
1980-81	434,183,806	3.21%	3,446,856,743	12.60%
1981-82	478,941,747	10.31%	3,450,863,890	13.88%
1982-83	508,368,220	6.14%	4,078,030,140	12.47%
1983-84	540,472,131	6.32%	3,977,740,308	13.59%
1984-85	555,568,482	2.79%	4,588,188,276	12.11%
1985-86	583,885,301	5.10%	4,868,026,430	11.99%
1986-87	594,259,601	1.78%	5,070,256,284	11.72%
1987-88	633,625,206	6.62%	5,246,094,384	12.08%
1988-89	660,137,195	4.18%	5,451,877,458	12.11%
1989-90	698,155,838	5.76%	5,802,999,036	12.03%
1990-91	740,757,863	6.10%	6,364,528,649	11.64%
1991-92	759,887,369	2.58%	6,650,683,407	11.43%
1992-93	771,832,665	1.57%	6,922,128,169	11.15%
1993-94	814,538,009	5.53%	7,276,614,107	11.19%
1994-95	849,762,860	4.32%	7,789,976,441	10.91%
1995-96	847,482,297	-0.27%	8,131,598,722	10.42%
1996-97	853,360,473	0.69%	9,283,406,651	9.19%
1997-98	883,660,451	3.55%	9,694,461,511	9.12%
1998-99	903,691,964	2.27%	10,009,395,000	9.03%
1999-00	953,800,000	5.54%	11,293,969,000	8.45%
2000-01	1,047,000,000	9.77%	11,077,681,000	9.45%
2001-02	981,400,000	-6.27%	11,265,100,000	8.71%
2002-03	1,063,800,000	8.40%	11,047,900,000	9.63%
2003-04	949,000,000	-10.79%	10,784,000,000	8.80%
2004-05	996,900,000	5.05%	11,859,700,000	8.41%
2005-06	1,011,600,000	1.47%	12,727,100,000	7.95%
2006-07	1,039,500,000	2.76%	13,130,800,000	7.92%
2007-08	1,074,600,000	3.38%	13,526,300,000	7.94%
2008-09	1,136,100,000	5.72%	12,744,300,000	8.91%
2009-10	1,027,400,000	-9.57%	12,824,000,000	8.01%
2010-11	1,100,700,000	7.13%	13,579,300,000	8.11%
2011-12*	1,001,508,980 (a)	-9.01%	14,194,976,500 (b)	7.06%
2012-13*	1,135,221,084 (a)	13.35%	14,832,954,300 (b)	7.65%
Five Year Average		1.52%	(Includes budgeted amounts in FY12 and FY13)	
Ten Year Average		0.95%		
Twenty Year Average		2.15%		

Source for Actuals: State Annual Fiscal Report, Tables 2/3, Department of Administration

Source for budgeted figures, which are indicated by *:

(a) UW System Annual Operating Budget Document

(b) Legislative Fiscal Bureau, Comparative Summary of Budget Recommendations, Table 1

APPENDIX A

APPENDIX A
UNIVERSITY OF WISCONSIN SYSTEM
2013-15 PERFORMANCE IMPROVEMENT GOALS BY INSTITUTION

The following shows 2013-15 performance indicators by institution, including the specific goals for improvement by the end of the 2015-16 academic year, subject to the receipt of the requested funding.

UW-Madison

Performance Indicator	Baseline Level	Improvement Goal
Undergraduate time-to-degree average	4.1 years	4.0 years
Freshmen to sophomore retention	93.9%	95%
Four year graduation rate	55.5%	60%
Six year graduation rate	82.8%	85%
Access: low-income students	16.9%	18%
Institutional need-based financial aid	\$36,800,000	\$40,000,000
Participation in high impact practices	89%	95%
Enrollment in alternate delivery sections	200	2,500
Capstone certificates	3 programs	10 programs
Master's programs in flexible format	10 programs	15 programs
Patent disclosures	356	427
Madison: Milwaukee research teams	20	68
Madison: Milwaukee research funding	\$1,000,000	\$3,400,000

UW-Milwaukee

Performance Indicator	Baseline Level	Improvement Goal
Number of graduates	3,740	3,950
Access: low-income students	37%	39%
Access: minority new freshmen	23%	25%
Extramural research	\$38,300,00	\$42,000,000
Corporate-sponsored research	\$2,200,000	\$2,380,000
Businesses receiving assistance	882	900
Madison:Milwaukee research teams	20	68
Madison:Milwaukee research funding	\$1,000,000	\$3,400,000

Additional UW-Milwaukee Performance Goals

- 50% of all recent graduates will remain in the Milwaukee area
- Freshmen to sophomore retention will increase to 72%
- Patent filings will increase to 22
- Invention disclosures will increase to 45

UW-Eau Claire

Performance Indicator	Baseline Level	Improvement Goal
Access: minority students	6%	8%
Students doing research work with faculty	25%	28%
Graduates employed or pursuing further study		95%
UW-Eau Claire's total annual economic impact		\$161 million

UW-Green Bay

Performance Indicator	Baseline Level	Improvement Goal
Credits to degree	136.6	130
Access: transfer students	1,121	1,440
Number of graduate and professional degrees	4	10

UW-La Crosse

Performance Indicator	Baseline Level	Improvement Goal
Bachelor's degrees	1,626	1,800
Freshmen to sophomore retention	85%	87%
Six year graduation rate	71%	72%
Federal research funding	\$2,451,636	\$2,500,000

UW-Oshkosh

Performance Indicator	Baseline Level	Improvement Goal
Access: headcount enrollments	13,513	13,863
Undergraduate degrees awarded	1,924	2,075
Non-university jobs created in NE Wisconsin	10	150
Businesses/Organizations hosting internships or co-ops	577	697
Service learning, volunteer partnerships	153	185
Cultural or arts partnerships	21	25
Businesses receiving business development assistance	194	234
Businesses hosting clinical/legal/social work placements	583	705
Schools hosting student teachers	181	218
Academic program collaborations with UW institutions	39	47

UW-Parkside

Performance Indicator	Baseline Level	Improvement Goal
Research grants	\$900,000	\$1,200,000
Students working on economic growth projects	292	350
Internships for course credit	7.7%	10%
Access: Pell recipients	1,630	1,751
Percent of majors involved in economic growth projects	34%	40%

UW-Platteville

Performance Indicator	Baseline Level	Improvement Goal
Freshmen to sophomore retention	78%	80%
Percent of students receiving financial aid	78%	80%
Closing the achievement gap		By 2%
Students in service learning projects	700	1,000

UW-River Falls

Performance Indicator	Baseline Level	Improvement Goal
Freshmen to sophomore retention	71.9%	76.2%
Foundation scholarship dollars (with need component)	\$68,275	\$380,275
Work with faculty on research project	37%	44%
Research grants	\$2,644,552	\$3,702,372

UW-Stevens Point

Performance Indicator	Baseline Level	Improvement Goal
Access: underrepresented minorities	585	917
Freshmen to sophomore retention	80%	83%
Retention of transfer students	75%	82%
Four year graduation rate: new freshmen	22%	26%
Four year graduation rate: transfer students	56%	57%
Six year graduation rate: new freshmen	61%	63%
Six year graduation rate: transfer students	64%	64%

UW-Stout

Performance Indicator	Baseline Level	Improvement Goal
Increase undergraduate degrees	1,545	1,685
Increase graduate degrees	296	330
Reduce credits to degree	138	130
Increase fall transfers	649	705

Additional UW-Stout Performance Goals

- Increase income from UW-Stout related spending by 3%
- Increase business clients served by 10%
- All undergraduate programs will require 120 credits for a degree by fall 2013.
- Move from #6 ranking in total transfers within the UW Comprehensives in 2010-11 to #2 ranking by 2016-16.
- Maintain #1 ranking in transfers from the Wisconsin Technical Colleges within the UW Comprehensives through 2015-16.

UW-Superior

Performance Indicator	Baseline Level	Improvement Goal
Access: headcount enrollment	2,825	3,200
Freshmen to sophomore retention	68%	74%
Six year graduation rate	44%	52%
Extramural funding: number of submissions	45	60
Extramural funding: number of awards	34	45
Extramural funding: number of engaged faculty	19	23

UW-Whitewater

Performance Indicator	Baseline Level	Improvement Goal
Four year graduation rate	26.5%	27.5%
Five year graduation rate	49.5%	50.5%
Credits to degree	136	135
Access: fall transfer students	641	700
Access: non-traditional students	752	900
Access: veterans	230	260
Access: underrepresented minorities	864	1,000
Total student involvement in high impact practices	10,196	11,000
Students involved in U-Lead program	96	120
Student satisfaction with advising, seniors	2.83/4.0	3.0/4.0
New business ventures facilitated	33	40
New jobs created in region	533	600
Private investment facilitated in region	\$5,725,000	\$7,000,000
Dollar value of incentives facilitated	\$2,572,694	\$3,000,000

UW Colleges

Performance Indicator	Baseline Level	Improvement Goal
Freshmen to sophomore retention: full-time students	59%	61%
Freshmen to sophomore retention: part-time students	46%	48%
Six year baccalaureate graduation rate: students transferring to other UW institutions	71%	73%
Collaborative degree programs with other UWs	29	40
Course and support service collaborations with Wisconsin Technical Colleges	6	10
Limit the annual increase in costs paid by students after financial aid is applied		Less than a 5% increase annually

UW-Extension

Performance Indicator	Baseline Level	Improvement Goal
Number of new businesses created or spun-off	115	190
Number of jobs created statewide	471	550
New capital infusion into the state	\$40,000,000	\$55,000,000

APPENDIX B

APPENDIX B
UNIVERSITY OF WISCONSIN SYSTEM
PROVIDING FOR THE 21ST CENTURY ECONOMY

August 23, 2012

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Economic Impact

In 1997, an economic impact report concluded that University of Wisconsin graduates return more than \$3 for every dollar invested in their education through taxes. In 2002, the annual economic impact of the UW System was \$9 billion. Now, with UW-Madison alone providing a \$12 billion economic impact, the annual impact of the UW System is conservatively estimated to fall between \$15 and \$20 billion.

For comparison, the UW's economic impact is 15 to 20 times the \$1.1 billion in GPR funding that the state provides – an extraordinary return on Wisconsin's investment.

Seven UW System institutions have completed individual economic impact studies in recent years. A summary of the findings from these studies follows.

UW-Madison

UW-Madison has a \$12.4 billion total impact on the Wisconsin economy. In 2011, the university brought in \$808 million in new revenue to Wisconsin through research and instructional activities and \$1.1 billion from all activities and sources. In addition, the university generates \$614 million in tax revenue.

In 2010, 109 patents were filed on behalf of UW-Madison researchers, and 133 patents were issued. Sixty-two new licenses or options were executed in 2010. In total, all licensed patents based on research at UW-Madison generated \$54.3 million in 2010.

The University Research Park, which fosters technology transfer and new start-up companies, is home to 126 companies and more than 3,500 employees. In total, the Research Park has an \$826 million economic impact in Wisconsin, including more than 9,300 jobs. It also generates more than \$43 million in local and state tax revenue.

As of October 2011, 279 start-up companies had a UW-Madison association. Of those, 105 were formed around a technology licensed by the Wisconsin Alumni Research Foundation. Directly and indirectly, the University creates and supports 128,146 Wisconsin jobs.

UW-Milwaukee

UW-Milwaukee is vital to the state's economic health. Direct spending by students, employees, visitors, event participants, and the University itself totals about \$713 million per year. Visitors and event participants alone spend \$140 million in the community each year. When indirect spending is included, the institution's economic contribution increases to about \$1.5 billion. Based on an analysis for the 2009-10 academic year, this is a \$13 dollar return for every dollar of state investment.

About 29,400 Wisconsin jobs are attributable to UW-Milwaukee's presence, which excludes individuals directly employed by the university. Based on the same report, estimated construction spending at UW-Milwaukee over three to five years is expected to sustain about 5,300 construction and supplier jobs.

UW-Oshkosh

UW-Oshkosh has a significant direct and indirect economic impact on the state and region. Data from 2009 place the annual economic impact at more than half a billion dollars. The campus helped create more than 9,000 jobs in recent years and generated \$37.5 million in tax revenue. Students and staff also gave well over \$4 million in time and money to local charities.

UW-Parkside

UW-Parkside's Small Business Development Center (SBDC) helps fuel the local economy in Southeastern Wisconsin. In 2011, the SBDC's support of local businesses generated \$37.61 of new business revenues for every State dollar invested. In addition, the SBDC was responsible for \$3.7 million in capital infusions into the regional economy.

UW-Parkside is developing an economic impact statement that will be published in September 2012.

UW-Platteville

Using the IMPLAN model, the combined direct, indirect, and induced contributions of UW-Platteville to the economy of Southwest Wisconsin are estimated at \$168.4 million during 2007-08.

UW-River Falls

UW-River Falls' graduates contribute to Wisconsin through higher levels of discretionary spending and by paying higher taxes. Ninety percent of Wisconsin residents who graduated from UW-River Falls remained in the state.

Degrees in high-need and leading edge fields are important to meet the demand for workers in fast growing occupations such as science, technology, engineering, and mathematics (STEM) fields. In 2010-11, UW-River Falls conferred 347 STEM degrees.

UW-Stevens Point

UW-Stevens Point contributes nearly \$408 million per year to the Wisconsin economy, supports 5,690 Wisconsin jobs, and generates \$16.7 million in state tax revenue. Direct spending in the state by the institution, faculty, staff, students, and visitors total more than \$171 million. This spending feeds the economic engine to generate more than \$236 million in indirect and induced spending.

UW-Stout

The annual economic impact of UW-Stout on the economy is \$347.2 million, or \$9.59 in economic activity for every \$1 invested. UW-Stout supports 7,096 Wisconsin jobs and generates \$18.3 million in state and local sales tax revenue.

UW-Superior

A study based on fiscal year 2007 showed that spending by UW-Superior and its 471 full-and part-time employees generates approximately \$31.7 million and sustains 574 jobs in Superior and Douglas Counties. UW-Superior student spending adds another \$8.1 million and sustains an additional 179 jobs. Tourists who come to Superior to visit students, to attend university conferences, and to participate in athletic contests contribute \$1.5 million, which supports about 32 local jobs.

UW-Whitewater

Two studies by the UW-Whitewater Fiscal and Economic Research Center evaluated the impact of the university on the regional economy. The first examined the economic impact of the Global Education Program, which facilitates international student enrollment at UW-Whitewater. This program alone added 46 jobs, generated \$1,267,386 in employment income, and created \$3,745,119 in spending in Walworth, Jefferson, and Rock Counties.

A second study by the Fiscal and Economic Research Center based on fiscal year 2008-09 showed that spending by UW-Whitewater's 1,018 full- and part-time employees generated an estimated \$53.6 million in direct and indirect expenditures—supporting approximately 497 additional local jobs. Direct and indirect UW-Whitewater student spending totaled \$14.3 million and supported 158 additional local jobs. UW-Whitewater visitors (employee visitors, student visitors, athletic event attendees, and student athletic camp participants) generated \$11.4 million of direct and indirect spending and supported approximately 164 local jobs.

Working with Businesses and Communities

Over the last decade more and more Wisconsin businesses are being created, rejuvenated, or expanded through partnerships with UW System institutions. The services that UW institutions provide to communities are also considerable. Examples of these activities follow.

UW-Madison

New Businesses Created or Spun Off

The University Research Park (URP), which fosters technology transfer and new start-up companies, is home to 126 companies and employs more than 3,500 people. The average URP employee earns more than \$64,000, substantially higher than the average state earnings of \$39,156.

The total direct and indirect economic impact of URP activity in Wisconsin is estimated to be over \$826 million, more than 9,300 jobs created, and more than \$43 million in state and local tax revenue.¹

As of October 2011,² 279 startup companies were directly associated with the university.³ Of the direct start-ups, 105 were formed around a technology licensed by WARF, and 105 had a link to UW-Madison students.

An additional 68 UW-Madison related start-up companies were founded by any UW-Madison community member who may have launched the company more than one year after ending UW-Madison affiliation.

Secondary Businesses Affiliated with System or System-Sponsored Research

UW-Madison supports Wisconsin businesses through the products and services it purchases. In 2011, more than 407 Wisconsin vendors supplied \$2.9 million in supplies and services to UW-Madison.⁴ This figure does not include electronic purchasing, which accounts for 29 percent of purchasing activity. Data from 2009, when e-business accounted for a smaller share of activity, showed 1,262 vendors in Wisconsin.

Support Provided To Existing Industries

UW-Madison provides support to business and industry through a range of venues. An estimated 2,790 businesses or other organizations received business development support in 2010-11.

¹ The Economic Contribution of the University Research Park, Northstar Economics Inc., August 2010

² Creation of UW-Madison start-up companies is tracked by the INSITE Entrepreneurship Census (www.bus.wisc.edu/insite).

³ One or more founders were affiliated with the university as faculty, staff, or a student at the time of founding or within one year of ending their UW-Madison affiliation, or the firm was founded around a university technology.

⁴ Limited to accounts that represent federal funding and gifts and grants to research projects

UW-Madison hosts 32 consortia in six schools and colleges that provide faculty and staff support to businesses.⁵ In 2011, the consortia served 327 businesses, 162 of which are based in Wisconsin.

For example, the meat industry contributes \$12 billion annually to Wisconsin's economy, provides 88,000 jobs, and \$450 million in state and local taxes.⁶ The University's technical expertise and experimental results are extended to the industry through websites, conferences, and direct communication. Companies can contact the Food Research Institute, UW-Extension, and the Meat Science Lab with questions. UW-Madison also serves the industry by providing graduates for employment.

Dairy Processing is a \$26.5 billion industry in Wisconsin. The Center for Dairy Research offers 22 short courses to 1,400 students annually and provides technical assistance to more than 200 companies per year. The University also trained 52 Wisconsin-based master cheese makers and developed recipes for Pleasant Ridge Reserve and Seymour Dairy blue cheese. Seymour Dairy alone has grown from 3 employees to 54 in four years.

UW-Madison invests roughly \$2 million in research and outreach to support the state's \$20 million potato industry. Support includes activities on three research stations, training students, and knowledge transfer in partnership with UW-Extension.

Support Provided to Wisconsin's PK12 Students

The Translational Research Initiative with the 4K PD⁷ Program is led by Curriculum and Instruction professors in partnership with Madison Metropolitan School District. This initiative helps four-year-old kindergarten (4K) teachers draw on the knowledge children bring from home and use it to support early mathematics development. The program is funded through a National Science Foundation grant with supplementary funds from the school district, which allows teachers to participate at no cost. The School of Education plans to use the 4K PD program as a pilot for a new "engaged research" initiative between the Wisconsin Center for Education Research and the Education Outreach and Partnerships Office.

Wisconsin Leads in Math and Science (WI Leads) offers an innovative partnership that establishes two new professional development programs in mathematics and science at the middle school level. The program also supports general outreach activities in the sciences like Science Alliance and the UW-Madison Darwin Days committee. It also supports Developing Science Futures, a collaboration between UW-Madison, UW-Oshkosh, and the Wisconsin Society of Science Teachers that is supported by \$250,000 in federal funding.

Art Education Alumna Helen Burish created the Art Outreach Fund to connect high school teachers to the University. Burish organized a series of workshops that provides high school art teachers with hands-on professional development and gives the Art Department's graduate students and recent alumni an opportunity to share their expertise. The Art Outreach Fund will also support

⁵ College of Agricultural and Life Sciences (CALS), Business, Engineering, Human Ecology, Letters and Science, and Pharmacy

⁶ Based on a 2007 study by Agriculture and Applied Economics professor Steve Deller.

⁷ "PD" is short for "Professional Development"

sending graduate students to visit high schools each semester for short-term residencies and bringing high school students to the Department for workshops led by graduate students.

The Partner School Network is made up of 18 schools across four local districts and various programs in the School of Education. While a key function of this network is to prepare future educators and to secure consistent high-quality sites for clinical experiences, partnerships are also established that enable UW-Madison to play a greater role in strengthening school communities and improving student outcomes. Educational research and professional development activities (supported at over \$26,000 this year) in the partner schools can be more directly connected with the needs of the schools.

World-Class Instructional Design and Assessment (WIDA) advances academic language development and academic achievement for linguistically diverse students through high-quality standards, assessments, research, and professional development for educators. WIDA also facilitates interaction among educators, state and local educational agencies, researchers, policy-makers, and experts worldwide.

UW-Milwaukee

Small Business Development Center

In 2011, the UW-Milwaukee Small Business Development Center (SBDC) provided almost 1,500 one-on-one business counseling hours to more than 350 clients, over 2,300 hours of training to 165 participants interested in starting a business, and over 400 hours of business skill training to 160 participant. The SBDC helped start 38 new businesses with a capital infusion of \$4.4 million and sales growth of \$11.7 million.

The SBDC continues to work with local chambers of commerce to offer educational programming and one-on-one business assistance to their members. The SBDC has also worked with the Department of Workforce Development's HIRE Center to train dislocated workers to start a business.

Beyond education, the SBDC also partners with numerous organizations to support economic development across Milwaukee, Washington, and Ozaukee Counties. Some examples are listed below:

Chambers of Commerce	Business Improvement Districts
Wisconsin Innovation Network	Community Development Corporations
New Venture Business Plan Contest	Inventor and Entrepreneur Clubs
BizStarts Milwaukee	Wisconsin Women's Business Initiative Corp.
SBA Emerging 200	Economic Development Washington County
Ozaukee Economic Development	Silver Street Main Street Milwaukee
Wisconsin Procurement Institute	Milwaukee Urban League
VETransfer	Wisconsin Technology Council
Milwaukee Small Business Development Office	UW-Milwaukee Research Foundation
Wisconsin Economic Development Corporation	The Mosaic on Burleigh
Wisconsin Supplier Development Council	Creative Alliance Milwaukee
Statewide SBDCs	Milwaukee Water Council
Milwaukee Economic Development Corporation	

Bostrom Center for Business Competitiveness, Innovation, and Entrepreneurship

The Bostrom Center serves as an interdisciplinary applied research center to develop and disseminate policies and strategies that enhance the vitality of innovation and business competitiveness in entrepreneurial firms. The Center's research projects engage Lubar School of Business faculty, doctoral students, and area corporations to advance topics of business competitiveness and innovation.

One focus area is the Real Time Enterprises Research Program. In the 21st century, time may be the most important factor affecting enterprises. Real Time Enterprises can quickly sense and respond to opportunities and threats using massively distributed decision making. Organizations can access up-to-the-minute information on all critical aspects of the organizational environment and operations using intelligent cyber devices attached to objects.

In addition, the Center's activities have broadened the business curriculum and provided additional learning opportunities for students. For example, the Entrepreneurship Certificate offers undergraduate business students the opportunity to study venture financing, business-to-business transactions, marketing, and other entrepreneurship topics.

The Center also supports the La Macchia Enterprises Entrepreneur Internship Program. Since its inception in 2002, over 100 business students interned with entrepreneurs. The program is now supported by a major gift from La Macchia Enterprises and additional gifts from the Brady Corporation and private donors. Nearly 50 percent of the interns have been offered full-time jobs by the sponsoring firms, which contribute to the entrepreneurial ecosystem of the region.

The New Venture Business Plan Competition also fosters an entrepreneurial spirit by inviting students and recent alumni to develop practical business skills and to create new ventures. Thanks to the support of La Macchia Enterprises, the top three winners share \$12,000 in awards. Of the competition's winners, 75 percent launched their proposed start-up ventures.

Business and Industry Partnerships

As a regional leader, UW-Milwaukee is integrally engaged with industry. The following are some examples of that engagement.

- The Wisconsin Energy Research Consortium (WERC) brings together UW-Milwaukee, UW-Madison, Marquette University, Milwaukee School of Engineering, and three technical colleges with the mission of making Wisconsin a nationally recognized center of expertise in energy, power, and control technologies. WERC facilitates innovative research, workforce development, the recruitment of complementary businesses, and strategic partnerships. Since its formation in 2010, the Consortium has grown to 19 industry members and has sponsored 18 seed-funded research projects.
- A new era of collaboration began in Milwaukee when the National Institutes of Health awarded a \$20 million grant to the Clinical and Translational Science Institute of Southeast Wisconsin. The five-year award is being used to create a borderless, synergistic biomedical research enterprise that will accelerate the translation of research discoveries into new and improved medical treatments. The institute's goal is to diminish the barriers between disciplines and institutions in order to encourage novel solutions to complex medical problems. Partners include UW-Milwaukee, the Medical College of Wisconsin, Marquette University, the Milwaukee School of Engineering, the Blood Center of Wisconsin, Children's Hospital and Health System, Froedtert Hospital, and the Clement J. Zablocki VA Medical Center.
- As part of the Department of Energy network of Industrial Assessment Centers, faculty and graduate students in the College of Engineering and Applied Science conduct energy audits with local manufacturers to improve productivity, to reduce waste, and to save energy. Audits typically identify about \$55,000 in potential annual savings.⁸ Students also gain hands-on training and experience with industrial process systems, plant systems, and energy systems. These experiences prepare them to contribute directly to a company's bottom line after graduation.
- The Children's Environmental Health Sciences Core Center is a partnership between UW-Milwaukee, the Medical College of Wisconsin, and the Children's Research Institute, and is supported by an \$8.5 million National Institutes of Health grant. The Center unites the university's expertise in basic developmental toxicology with its partners' expertise in clinical childhood diseases. Investigators convert scientific understanding into effective strategies to prevent environmentally-dependent childhood disease. For example, one project is evaluating the effects of an industrial chemical used in plastics (BPA) on normal development.

⁸ U.S. Department of Energy. "Industrial Assessment Centers (IACs)."
http://www1.eere.energy.gov/manufacturing/tech_deployment/iacs.html

- The ANSYS Institute for Industrial Innovation (AI³) provides world-class facilities to local industries seeking to partner with the College of Engineering and Applied Science. AI³ offers clients the ability to investigate new markets or new projects without a significant investment of company resources, access to potential employees already trained in their core technology, and the ability to get an out-of-the-box perspective on product development. Just as important, AI³ will provide students hands-on experience with state-of-the-art engineering software tools and real-world industry experience. AI³ is unique in the Milwaukee area and helps to foster economic growth and development.
- The Great Lakes Transportation Enterprise Institute is dedicated to promoting safe, efficient, and cost-effective surface transportation in the Great Lakes region through innovative research and development. The Institute leverages the collective strengths of UW-Milwaukee, UW-Madison, Marquette University, the Medical College of Wisconsin, and business partners. These partnerships facilitate innovations in green technology, transportation safety, and workforce sustainability.
- The new School of Freshwater Sciences (SFS) expands on a tradition of freshwater studies at UW-Milwaukee to become the first graduate school in the nation dedicated solely to the study of freshwater. The mission of SFS is to train freshwater professionals and to advance fundamental and strategic science. SFS works with business partners including the Milwaukee Water Council, Lake Express Ferry, and Sweet Water Organics.
- The Institute of World Affairs (IWA) supports programs on international trade and economic security issues. For example, IWA recently facilitated a special program on U.S. Energy Policy, Green Jobs, and the Wisconsin Economy. IWA collaborates with the Metropolitan Milwaukee Association of Commerce on initiatives to expand trade relations and organizes meetings for regional economic development officers and business leaders. The IWA assistant director serves on the board of the Milwaukee World Trade Association and leads the planning committee of the Wisconsin International Trade Conference.
- The Consortium for Advanced Research in Gas Industries is primarily dedicated to improving ergonomics, safety, productivity, and quality in gas industries. For example, the Consortium has developed training on how to protect against injuries while working on a gas meter. The consortium is made up of member companies representing gas utilities, ancillary organizations, suppliers, and consultants.

Technology Transfer

Scientific discovery at UW-Milwaukee has led to a growing portfolio of intellectual property that now includes 38 issued or applied-for patents and additional copyrighted matters. This intellectual property spans a range of disciplines that includes biological sciences, materials, imaging, water, energy, and communications.⁹ The following are some examples of UW-Milwaukee's technology development and transfer activities:

- The Water Equipment and Policy (WEP) research center is a collaborative organization formed by UW-Milwaukee, Marquette University, and industry members to pursue water industry research. Badger Meter, Inc, a charter member of the initiative, already has a patent pending as a result of the research. "We certainly couldn't get the same amount of research (internally) out of putting in the same amount of money," said Badger Meter's vice president of business development.¹⁰ Other technologies with potential commercial application include a polymer foam that removes lead from water, passive wireless sensors that can be read remotely, and ultrasonic sensor technology.
- The UW-Milwaukee Center for Advanced Materials Manufacturing (CAMM) was formed to facilitate advanced materials manufacturing research and application. Backed by a \$1.2 million federal grant, CAMM will support the transfer of UW-Milwaukee's research in bulk nanostructured materials to the manufacturing industry. If these materials can be mass produced, they have the potential to revitalize foundries. CAMM researchers will work with Oshkosh Corporation and other companies to develop an infrastructure for scaling up their production.
- Johnson Controls, the world's leading automotive battery supplier, has partnered with UW-Milwaukee to test and identify innovations with enough commercial potential to warrant more focus. The partnership has led to construction of two research labs supported by Johnson Controls on the UW-Milwaukee campus. In addition, the company is supporting the Johnson Controls Endowed Professorship in Energy Storage Research and graduate fellowships at both UW-Milwaukee and UW-Madison.
- The Milwaukee Institute for Drug Discovery advances research and later-stage development from discoveries at UW-Milwaukee and collaborating institutions. The Institute serves as a unique resource to build the cross-disciplinary collaborations essential in drug development and coordinates research strengths to address major needs in disease therapy. The Institute also develops linkages to the greater Milwaukee community to promote regional economic development. Recent Institute research on a naturally-produced chemical with anticancer properties has promising potential for development.

⁹ University of Milwaukee Research Foundation. *2011 Progress Report*. <http://www.uwmresearchfoundation.org/getdoc/81dc6dc9-7560-4ca4-8082-6dc674268483/2011-UWMRF-Progress-Report.aspx>

¹⁰ "Water research venture yielding results." *The Business Journal*. May 18, 2012.

- Dr. Ching-Hong Yang is collaborating with Wilbur-Ellis, an international agricultural company, to develop and test a new generation of antibacterial compounds. Despite the constant threat of disease in agriculture, says John Frieden, a biologist and manager with Wilbur-Ellis, the industry has not had access to any new antibiotics in many years. U.S. regulatory agencies do not allow agribusiness to use antibiotics that are also used for human health.¹¹ “The thing that caught my attention,” Frieden says, “was that this was not an antibiotic, but it accomplishes the same thing as an antibiotic.” The company hopes to move to field trials with promising compounds in the near future.
- Dr. Peter Geissinger partnered with Advanced Chemical Systems (ACS), a local water-industry company, to develop and test his laser-based system for detecting impurities in water. Advanced sensors for water monitoring are one of the key technologies identified by many of the water-related companies in the Milwaukee water cluster.¹² Chris Fox, a vice president at ACS said, “We are eager to work with UWM researchers to further develop the technology and ultimately take it to commercialization.” Working with Dr. Geissinger and Paul Henning, his post-doc, the company won a Small Business Innovation Research grant backed by the National Science Foundation.¹³
- When operators of Bell Aquaculture decided to add yellow perch, the Midwest’s fish-fry favorite, to the company’s product line, they initially came up empty-handed. “We went looking for the fingerlings on the market and we couldn’t find them,” says Bell President Norman McCowan. “So we knew early on we would have to partner with someone.”¹⁴ Partnering with Dr. Fred Binkowski, Bell Aquaculture accessed perch-raising techniques that are not available anywhere else in the world. Today, Bell runs the nation’s largest yellow perch farm and recently broke ground on a \$5 million expansion at its production facility in Albany.¹⁵ Binkowski's patented work is licensed to Bell through the UW-Milwaukee Research Foundation.
- Zhen “Jason” He partnered with Mark Murphy, a local entrepreneur, to launch HydroTech Innovations. Hydrotech uses relatively new microbial fuel cell technology to clean water and generate electricity at the same time. Continuing development and commercialization is supported by \$50,000 in National Science Foundation funding. The company is also working on a greener method to soften water.¹⁶

¹¹ Hunt, Lisa L. “An antibiotic effect without the threat of resistance.” <http://www5.uwm.edu/news/2011/09/07/an-antibiotic-effect-without-the-threat-of-resistance/#.UA7tjOz5nTo>

¹² “New local partnership to develop water technology.”

http://www4.uwm.edu/news/stories/details.cfm?customel_datapageid_11602=1374775

¹³ Hunt, Laura L. “Sensing in a flash.” <http://www5.uwm.edu/news/2012/01/11/sensing-in-a-flash/#.UA7xvez5nTo>

¹⁴ University of Wisconsin Milwaukee. *Research that energizes: Research Report 2012*.

<http://www4.uwm.edu/research-impact/report.cfm>

¹⁵ “Bell Aquaculture is Expanding.” <http://www.bellaquaculture.com/2011/06/bell-aquaculture-is-expanding/>

¹⁶ University of Wisconsin Milwaukee. *Research that energizes: Research Report 2012*.

<http://www4.uwm.edu/research-impact/report.cfm>

- Aurora Spectral Technologies (AST), founded by UW-Milwaukee physicist Valerica Raicu and entrepreneur Thomas Mozer, has developed the first tools for determining the internal structure of protein complexes in living cells. The National Science Foundation’s Partnership for Innovation Program has recently awarded UW-Milwaukee a grant to support the collaborative development of laser-scanning microscopy between AST, Madison-based NeoClone, and PolarOnyx of San Jose. The trio’s technology already has the attention of a Danish company working in identifying rare cancer cells.
- NanoAffix Science LLC, founded by Associate Professor Junhong Chen, aims to commercialize technologies that Chen has developed. “We have found new ways of combining nanocomponents to produce valuable technologies which are superior to existing approaches,” said Chen. His methods of combining structures are not only low-cost, but also yield very high-performance materials that have potential uses in medical diagnostics, green energy technology, and sensors.¹⁷ The company has received grants from the National Science Foundation.
- Promentis, a Milwaukee company that is developing drugs for schizophrenia and other central nervous system disorders, has licensed compounds developed by UW-Milwaukee’s James Cook.

Workforce-Specific Training and Education

UW-Milwaukee supports state industries by providing a well-trained and well-educated workforce. The following are some examples:

- The Sheldon B. Lubar School of Business is filling a knowledge gap in southeastern Wisconsin and beyond with its curriculum emphasizing SAP, a business software suite. The Lubar School’s new set of Management Information Systems elective courses focus on SAP skills and offer graduates SAP certification prior to entering the job market. A recent study estimated the shortage of SAP-skilled professionals at over 40,000, creating a high demand for skilled college graduates. Leading Wisconsin companies utilizing SAP include Rockwell Automation, Harley-Davidson, Johnson Controls, and Kohler.
- The College of Nursing is Wisconsin’s largest nursing school and one of only two schools to offer students the full range of nursing degrees. The College provides the largest number of new graduate nurses in the state each year. In 2010, the College graduated 189 new registered nurses; 90 percent of whom remain in Wisconsin to work. The Department of Workforce Development lists nursing as one of the high growth occupations over the next decade.¹⁸ Established in 1965, the College is consistently ranked in the top ten percent by U.S. News & World Report.

¹⁷ “Startup licenses UWM nanotechnology.”

http://www4.uwm.edu/ceas/details/details.cfm?custome1_datapageid_72827=3998839

¹⁸ Please see the following website for more information:

http://worknet.wisconsin.gov/worknet/joblist_highgrow.aspx?menuselection=js

- Executive Programs offered by the Lubar School are a unique educational opportunity for organizations to develop quality programs tailored to executive-level individuals and teams in their critical areas of need. With the expertise of Lubar faculty and experts, Executive Programs works with hundreds of clients annually to identify, customize, and deliver specific programs to meet the unique management and leadership development needs of their executives and executives-to-be.
- The UW-Milwaukee School of Education is convinced that education's best days lie ahead. The School's mission is to provide leadership and inspiration for learning and human development in urban communities. The School of Education partners with more than 200 schools and community programs to graduate and place more teachers than any other school in the state. There are more than 22,000 alumni of the School of Education, many of whom live and work in Wisconsin. The School also offers the only Deaf education program in Wisconsin.
- The Masters in Human Resources and Labor Relations is the only graduate program in the state that trains professionals equally in human resource management and labor relations. The program prepares students for careers as practitioners and emphasizes a firm educational grounding in both the liberal arts and business administration. Graduates remain largely in the state and can be found in leading corporations, unions, governments, and non-profits. Faculty members have served as sources of expertise to the local office of the Equal Employment Opportunity Commission, the Milwaukee Public Schools, local governments, and private firms.
- Both the undergraduate and graduate programs in the Department of Mathematical Sciences supply numerous alumni to work as actuaries. Actuaries solve financial problems involving future uncertainty by applying their knowledge of mathematics, probability, statistics, and risk theory. Actuaries are also involved in determining the value of a company that is about to merge with another company, projecting Social Security benefits, designing new retirement programs, and many other projects. Of the UW-Milwaukee alumni, at least 8 have achieved an actuarial designation (e.g., Associate or Fellow of the Society of Actuaries) and work in the Midwest. Due to the strength of recent graduates in the actuarial science major, the number of alumni achieving an actuarial designation is expected to double within several years.

UW-Eau Claire

Small Business Development Center

The UW-Eau Claire Small Business Development Center (SBDC) serves the entrepreneurs and small businesses in the eight counties of Northwest Wisconsin. The SBDC builds partnerships with economic development corporations, main street associations, chambers of commerce, and extension community agents to leverage resources and to engage the larger Northwest Wisconsin community. With these collaborations and the hard work of the staff members, the SBDC achieved the following results in fiscal year 2011:

- Held 29 educational programs with over 533 attendees
- Counseled over 110 entrepreneurs and small businesses
- Assisted with 18 business starts
- Helped bring \$4,819,333 into the economy through business starts and expansions
- Worked with over 42 businesses for more than 5 hours per business
- Helped retain 16 jobs
- Facilitated the connection of UW-Eau Claire's College of Business student projects with area businesses

Materials Science Center

The Materials Science Center (MSC) faculty and staff provide elemental analysis, electron microscopy, materials characterization, cooperative research, development support, and consulting to both commercial partners and academic researchers. The MSC supports Wisconsin businesses, and it has ongoing projects with the following companies:

- Super Vitamin D, NanoRite Facility (Eau Claire, WI)
- Rapid Diagnostek, Inc. (Hudson, WI)
- Fiberstar Bio, NanoRite Facility (Eau Claire, WI)
- Minnesota Wire (St. Paul based with a facility in Eau Claire, WI)
- Silicon Graphics (Chippewa Falls)
- OEM Fabricators (Baldwin-Woodville, WI)
- Linetec (Wausau, WI)
- Siemens (Wausau, WI)
- Resonant MicroSystems (Richmond, CA)

In particular, Super Vitamin D, Rapid Diagnostek, Inc., and Fiberstar Bio are startup companies which benefit tremendously from access to the MSC. Technology startups have a significant potential for growth, but tend to lack the financial resources to purchase instrumentation. These companies are also still in the development mode where characterization of their product or process is essential. The MSC can provide both expertise and instrumentation to these companies.

Department of Chemistry

The Department of Chemistry has made specialized scientific equipment available to Wisconsin businesses (e.g., US Filter and Vitamin D) to help with product development and quality control. These efforts are typically coordinated through the Materials Science Center.

Department of Physics and Astronomy

The Department of Physics and Astronomy has collaborations with local businesses including Northern Crossarm of Chippewa Falls, Turbine Technologies in Altoona, and Hutchison Technology in Eau Claire. These collaborations have resulted in internship opportunities for students, student-faculty collaborative research projects that help companies improve their products, and consulting work to improve industrial processes.

UW-Green Bay

During the past federal fiscal year, the Small Business Development Center (SBDC) met the performance goals set by the Wisconsin SBDC Network State Office in the areas of clients served, clients who opened their businesses, and clients who received capital infusion through loans or equity. Of special note, UW-Green Bay SBDC clients received over \$12 million in capital infusion in a year when access to capital was still very difficult to obtain.

	2010	2011 ¹⁹
Jobs Created	26	106
Jobs Retained	758	868
Clients Counseled	271	348
Counseling Hours	1,544	1,434
Capital Infusion	\$3.8 Mil	\$9.9 Mil
Sales Increase	\$2.2 Mil	\$12.4 Mil
Number of New Businesses	22	22

Scott Koffarnus is an example of the successful work of the SBDC. Koffarnus launched his first business, Freshpaintdigital, in Green Bay in 2003. The business quickly earned recognition as a leader in the digital media industry. In 2008, Koffarnus added a second business, Cineviz, which provides interactive brand experiences and advanced visual display technologies. Together, these companies combine innovative thinking with digital technology to create unique promotional brand experiences for national and international companies including Tyco, Intel, Symantec, Nickelodeon, and Verizon. To gain the expertise he needed to strategically grow his businesses, Koffarnus attended the Entrepreneur Training Program at the UW-Green Bay SBDC.

The Entrepreneurship Certificate, developed by the SBDC, is a 12-credit program that provides undergraduate students with the opportunity to learn about business ownership and the skills needed to launch a new venture. Entrepreneurship students will learn from a select team of faculty members and business leaders distinguished by their ability to teach, model, and inspire the entrepreneurial process. This certificate offers critical skill learning in the entrepreneurial approach to acquiring and managing resources, understanding of the planning process, opportunities to network with successful entrepreneurs and business leaders, and participation in experiential learning opportunities.

¹⁹ Based on the federal fiscal year.

The SBDC also participated in the second Young Entrepreneurs' Program. This international training project, funded by the Department of State, provided entrepreneurial development to nine potential business owners from Israel and Jordan who traveled to Wisconsin for workshops, site visits, mentorship, and cultural activities in the Green Bay area.

UW-La Crosse

UW-La Crosse has positioned itself among the country's best public universities, ranking in the top three Midwestern public institutions by US News & World Report and Kiplinger's Top 100 Best Values. UW-La Crosse offers Wisconsin's only nationally-accredited recreation management and therapeutic recreation degrees, the UW's only nuclear medicine technology program, and the Midwest's only undergraduate archaeology major.

Academic Programing

The academic programs at UW-La Crosse directly interface with PK-12 education endeavors, health care needs (e.g., occupational therapy, physical therapy, radiation therapy), and business support (e.g., health economics, MBA program). UW-La Crosse also has programs in information systems, computer science, computer engineering, and software development that provide employees to local businesses like TRANE Company and SAP.

Small Business Development Center

The UW-La Crosse Small Business Development Center (SBDC) serves seven counties in its region.²⁰ In 2011, SBDC served over 360 counseling clients, including 17 business starts, and supported over \$4.9 million in capital infusion in regional businesses.²¹

SBDC continues to be a key supporter of local economic development activities. Its efforts have led to the establishment of industry clusters, such as the Equipment and Metal Manufacturers Association, the Food and Restaurant Association Network, and the 7 Rivers Alliance. SBDC also provides support for incubator businesses, local angel investment activities, loan funds, and regional Inventors and Entrepreneur Clubs.

Current SBDC initiatives include increasing export readiness and area collaboration in connection with regional loan funds.

The following are some examples of the support that SBDC can provide to local businesses:

- Dynamic Recycling, which has participated in various courses since 2007, is an example of the impact that SBDC has on local businesses. The company is an electronics and appliance recycling business that has shifted from about 22 employees to 50 employees. Sales have grown by 240 percent from 2009 to 2010. In 2011, the company expects to grow by 85 percent. Dynamic Recycling outgrew their old site, which was 15,000 square feet, and moved to a much larger site with 41,000 square feet.

²⁰ La Crosse, Vernon, Trempealeau, Buffalo, Juneau, Monroe and Jackson Counties

²¹ Based on the federal fiscal year

- As another example, Linda O'Connell completed the Entrepreneurial Training Grant Program and finished her business plan with assistance from SBDC. Since then she took third place in a local business plan competition and was featured in Coulee Region Women's magazine. Linda now is the founder and owner of Take 5 Productions, a full-service video production company specializing in home movie transfer services, video slideshows, business video production, wedding video production, video editing, and DVD duplication.

Take 5 Productions shows a 30 percent increase in sales and profits over 2009 and was chosen to produce the background video for the Miss Wisconsin Pageant. O'Connell says, "The SBDC provided me excellent insight and expertise and has been instrumental in helping to develop my small business. With their help, a hobby has now turned into my full time business."

- Mark Harrell contacted the SBDC in early 2010 for assistance with increasing online sales and overall business planning. Bad Axe, his company, specializes in producing high-end wood working saws. The SBDC staff helped Mark identify short-term online marketing strategies. With these suggestions, Mark conducted a photo shoot with a local photographer to obtain the visual assets he needed to introduce two new high-end saws. Mark also developed an e-mail campaign and distributed it to customers and prospects.

Bad Axe closed 30 new orders for its high-end saws within about 72 hours of sending the e-mail campaign. The number of Bad Axe Facebook fans also increased from approximately 140 to 217.

- Wacique AK BeMende engaged SBDC to further his passion for financial literacy. He grew up poor, but he realized that saving money and learning to invest was the way out of poverty. He taught himself how to save and invest using dividend reinvestment stock plans in order to grow his money. He then started programs to teach children how to save money and created a new "piggy bank" design to help them visualize the "save then invest" idea. He has also served in several branches of the military and has used his investor experience to reach out to military members.

The UW-La Crosse SBDC assisted Wacique in developing a strategy for his business, his invention, and in forming his business. Wacique considered the SBDC's focus and customized approach instrumental in assisting him to achieve his business objectives. "No one had taken the time to really understand the vision and then give guidance like the La Crosse SBDC did. It was service that was customized specifically to me, instead of cookie cutter."

- Jamie Heiden, a student in the SBDC's "Learning Community of Artists: Best Business Practices" seminar, was featured in a UW-La Crosse newsletter article Jamie's photography business has blossomed since taking the class. She has also received recognitions from Madison's Art Fair Off the Square, Art Fair on the Green, and the Driftless Area Art Festival. She has also been featured in the national publication "The Digital Studio."²²

²² The article can be found at <http://spotlight.uwlax.edu/uw-l-students-find-steps-to-success/>.

Emerging Technology Center in Pharmaceutical Development

The Emerging Technology Center in Pharmaceutical Development is an interdisciplinary community of UW-La Crosse scientists and scholars whose primary purpose is to engage in the discovery and development of new medicines to treat human diseases and save lives. The work being done to isolate anti-microbial agents has significant potential for future development.

La Crosse Medical Health Science Consortium.

As one of five founding partners in the La Crosse Medical Health Science Consortium, UW-La Crosse works with Western Technical College, Viterbo University, Gunderson Lutheran Health System, Mayo Clinic Health System, the La Crosse School District, and the La Crosse County Health Department in collaborative efforts to improve health, enhance health science education, and strengthen the healthcare workforce.

Continuing Education and Extension

In 2011, UW-La Crosse had a total of 4,950 non-credit continuing education course enrollments with 104 non-credit programs offered through Continuing Education and Extension (CEE). CEE offered 247 credit courses in which 1,674 students enrolled with 172 of the courses offered in partnership with school districts, CESA#4, and professional organizations.

New collaborations this past fiscal year include the Wisconsin Space Grant Consortium²³ and the International Environmentrics Society.²⁴

UW-Oshkosh

Business Development Activities

The University of Wisconsin Oshkosh Business Success Center (BSC) is a unique consulting firm that connects local businesses with University resources. The BSC offers faculty experts, student interns, research facilities, a data survey center, and more. BSC's staff and students directly assisted 78 companies in the Oshkosh region in 2010.

Within the College of Business, UW-Oshkosh's Wisconsin Family Business Forum (WFBF) and Small Business Development Center (SBDC) are resources for regional entrepreneurs. In 2010-11, the WFBF provided assistance to more than 37 Wisconsin family businesses and nearly 160 other businesses. The consultations are highly strategic for small- and medium-sized enterprises looking for financing and other resources necessary to expand and to hire new employees. Students work alongside faculty and staff, giving them hands-on opportunities to assist local businesses whose success is crucial in the state's economic recovery.

UW Oshkosh, in partnership with Chamco, Inc., is exploring the feasibility of establishing a business accelerator similar to those in Whitewater and Madison. The UW-Oshkosh Business Accelerator would be designed to benefit faculty, staff, and students along with tech entrepreneurs and researchers throughout northeastern Wisconsin.

²³ For more information, please see <http://www.uwgb.edu/WSGC/about/default.aspx>.

²⁴ For more information, please see <http://www.environmentrics.org/>

Downtown Development and Revitalization

The partnership between the University foundation and external development groups to acquire the City Center Hotel is a bold effort to diversify resources and to make a \$9 million investment in downtown Oshkosh. These efforts not only provided 150 construction-industry jobs, but the hotel will also support roughly 200 jobs in the hospitality industry when fully operational.

Technology Transfer

The University's biodigester project represents a new form of partnership involving the University's Foundation, external development partners, faculty, and students in applied research activities. The biodigester, which is the first of its kind in the Western hemisphere, produces gas and electricity from decomposing food and agricultural waste. The renewable energy facility is expected to initially produce up to five percent of the campus' electricity and heat.

This effort reduces the University's carbon footprint, creates many new green jobs, strengthens Wisconsin's dairy industry, serves as an applied learning lab for scientific and technological advancement, and will generate revenues to support scholarship and faculty development.

As another example, Professor Charles Gibson started his research on nanomaterials soon after he joined UW-Oshkosh in 1991. With help from WiSys, Gibson formed Shamrock Energy Corp., which is studying better electrical energy storage devices and enhancing green technologies.

Economics Professor M. Ryan Haley is also starting a new business, CoreTxt Plus Inc., to distribute a free digital statistics textbook to UW-Oshkosh students.

K-12 Connections

Following the Wisconsin Association of School Boards' call for UW System institutions to promote their distinct services and programs to local school districts, Chancellor Wells commissioned a comprehensive audit of the University's established, and in many cases long-standing, K-12 collaborations and partnerships. The final report revealed more than 60 programs and campus connections with school districts.

Among the biggest and most directly connected programs is UW-Oshkosh's nationally accredited and acclaimed Cooperative Academic Partnership Program (CAPP). CAPP is the state's largest college-transcripted credit program for high school students. With more than 2,400 enrolled students from 42 Wisconsin high schools, the program had more students than all others in the state combined.²⁵

The audit also revealed a tremendous diversity in the partnerships, from a program placing UW-Oshkosh nursing students alongside Madison-area school nurses to a nimble program that serves the professional development needs of school districts in western Wisconsin. As another example, the Child Care and Learning Center is offering four-year old kindergarten in partnership with the Oshkosh Area School District.

²⁵ 2010-11 academic year

UW-Parkside

Small Business Development Center

UW-Parkside's Small Business Development Center (SBDC) helps businesses and entrepreneurs to operate more profitably, which contributes to employment growth and the region's economy. The following chart shows the progress of the SBDC.

Fiscal Year	2005	2006	2007	2008	2009	2010	2011	2012
Counseling Clients	143	202	142	88	119	129	130	214
Training Clients	384	253	226	224	263	310	260	208
Business Starts				6	11	16	17	5
Capital Infusion				\$1.2M	\$1.7M	\$7.3M	\$8.2M	\$3.7M

The SBDC offers and coordinates classes and workshops for youth entrepreneurs, nascent entrepreneurs, and stage-one companies. In addition, the SBDC is planning to work with clients to prepare complete loan packages that are "bank ready" and acceptable to the Small Business Administration.

Ralph Jaeschke Solutions for Economic Growth Center

The Ralph Jaeschke Solutions for Economic Growth Center (SEG Center) is a premier vehicle for project-based learning at UW-Parkside. The SEG Center, located in the College of Business, Economics, and Computing, brings together local businesses and non-profit organizations with students and faculty to create a joint venture that benefits all parties involved. During the 2011-12 academic year, the SEG Center produced 84 projects for 73 clients involving 333 students and 11 faculty and staff.²⁶ Over 36 percent of students in business and computer science participate in project-based learning each year as part of the curriculum.

The Information Technology Practice Center (ITPC), which is a part of the SEG Center, has also helped students gain valuable project-based experience with regional businesses and nonprofit organizations. In particular, Computer Science and Management Information Systems students, backed by their faculty, are assigned to real-world computer-based projects. The organizations involved gain new perspectives from individuals outside of their operations without a financial burden for the services provided. Businesses also have the opportunity to "preview" the quality of the talented workforce educated at UW-Parkside.

Wisconsin Small Company Advancement Program (WiSCAP) Projects

In March 2011, UW-Parkside, the WiSys Technology Foundation, and two regional businesses - Ictect, Inc. and Procubed - were awarded funding from the Wisconsin Small Company Advancement Program. Ictect, Inc. is developing an Intelligent Content Innovation Program

²⁶ The SEG Center website has lists of previous projects dating back to 2003, and can be found at: <http://www.uwp.edu/colleges/business.economics.computing/seg.center/index.cfm>.

designed for organizations looking to improve the delivery and presentation of their content or products on the iPad and other devices. The program will offer technical assistance, resources, and an exceptional learning experience to participating organizations. A UW-Parkside MIS professor is leading this project effort, and is working closely with Ictect, Inc. to bring the Intelligent Content Innovation Program to businesses in southeastern Wisconsin. The project team also includes current and former UW-Parkside graduate students.

Procubed, a start-up mechanical engineering firm, is focused on designing and building a more versatile wheelchair with a modern drive system. Procubed is led by two UW-Parkside graduates, and they have created a testing center for the new wheelchair on campus. Three student teams, led by a UW-Parkside marketing professor, are working with Procubed on engineering, business management, and marketing for the project.

The Center for Community Partnerships

The Center for Community Partnerships (CCP) bridges the University's presence in southeastern Wisconsin to the surrounding Racine/Kenosha communities and supports projects which develop lasting community partnerships. The following are some examples of CCP projects:

- CCP provides strategic planning, program evaluation, and facilitation for various businesses, schools, and nonprofit organizations including: DeltaHawk Engines, Racine YMCA, Kenosha and Racine Unified School Districts, Racine County Workforce Development Center (WDC), the Racine County Youth Coalition, and the Kenosha Union Park Project.
- CCP partnered with the WDC to create the Summer Youth Employment E3 program, which employed over 400 youth in its first three years.²⁷ The program received local, national, and international recognition. Over 35 youth in the 2011 program were offered employment beyond the summer.
- CCP, the UW-Parkside Small Business Development Center (SBDC), and the WDC partnered to offer "Launching Green Businesses." The conference attracted 100 people and over 25 entrepreneurs who enrolled in a UW-Parkside entrepreneurial class.
- The CCP and SBDC partnered with the Racine County Economic Development Corporation to complete an analysis and recommendations for the Racine "Launch Box" initiative. Launch Box is a new partnership designed to enhance the growth of small businesses in the City of Racine and to streamline the regulatory and launch process for entrepreneurs.

UW-Platteville

University Support of Business and Industry

UW-Platteville is committed to supporting regional economic development and bringing the resourcefulness of its students to Wisconsin's challenges. The Pioneer Academic Center for Community Engagement (PACCE) is where students, community partners, and faculty experience,

²⁷ 2009 to 2012

grow, and make a difference for each other by working on real community projects. Community partners include businesses, non-profit organizations, municipalities, and governmental agencies.

For this academic year, 1,090 students were involved with 127 community partners. These projects are in real situations and have real consequences. Some projects also involve technology transfer.

In addition to PACCE, the university has engaged with businesses and the community in the following ways:

- Mechanical Engineering undertakes 30-40 projects each year for companies and community partners including: John Deere-Dubuque, MGA Research, John Deere-Horicon, 3M, IBM, Monroe Truck, Rite Hite Doors, Weir Minerals, Columbia Par Car, Kimberly Clark, and Oshkosh Corp. Industrial Engineering students have completed projects for companies in the region including Frito-Lay, HyPro, Bodine Electric, the Wisconsin Department of Health Services, Sauer-Danfoss, Orchid, Nu-Pack, and the Mendota Mental Health Institute.
- Xolve is an early stage nanomaterials company whose core technology was developed at the UW–Platteville. It recently closed a \$2 million financing round to advance commercial application of its proprietary method for dissolving previously insoluble materials in common industrial solvents.
- In 2011, Standard Imaging of Middleton engaged in two independent projects with student teams. The teams developed solutions to improve their manufacturing process that were well received and implemented by the company.
- In 2012, MPC Inc of Walworth engaged two student teams to improve the efficiency of internal manufacturing and testing processes.
- AlfaLight Inc., with the aid of a Wisconsin Applied Research Grant, developed semiconductor laser design software that improved and simplified their design process.
- Ohio Valley Testing, Inc. benefited from a device built by two students that takes pressure measurements across a large pipe.
- Driftless Market in Platteville has two students working on a project to provide an easy assessment of can integrity. The project will reduce the market's waste.
- A class traveled to Ghana with grant support to develop a biodiversity project on cocoa farms. With the support of the Cocoa Research Institute of Ghana and cocoa farmers, students identified a channel for earning extra income by using material from cocoa beans and pods.

Student Entrepreneurship

Launch Lab, a student incubator, began in Spring 2012 with six students accepted. Projects range from idea inception to start-up companies to established business expansion.

UW-Platteville also developed and coordinated two student entrepreneurial competitions called Elevator Pitch (13 student teams) and Business Plan (8 student teams).

There have also been four student entrepreneurial events: Catch the Culture Symposium (175 participants), Meet-n-Eat with an entrepreneur (50 participants), and two Business Plan workshops (40-50 participants).

Farm Analysis

UW-Platteville provides anaerobic digestion analysis for dairy farms in Wisconsin, Minnesota, California, Italy, and Korea.

Industry Support of the University

UW-Platteville and its students also benefit from broad engagement with industry. The following are some examples of how industry supports UW-Platteville:

- BouMatic helps students pay for college and allows students to have a variety of experiences with innovative technology by donating scholarship money, providing internships, and donating two robotic milkers.
- Neenah Foundry hires students as interns and full-time employees. The company also funded projects like the Hot Wheelz Trailer, which is a mobile foundry for portable demonstrations. The company has also donated a significant amount of materials (e.g., coke and steel scrap) for the industrial studies laboratories. Foundry employees serve as guest speakers and support university research projects. Like other industries in Wisconsin, Neenah Foundry struggles to find qualified candidates to fill positions at their company and hopes to prepare students to enter the industry.
- Case IH provides over one million dollars of farm equipment each year at a minimal cost to the University. And, Case IH product specialists are available to support classroom instruction and to participate in hands-on field demonstrations. This support broadens agriculture students' educational experience and better prepares them for farming careers.
- Pointe Precision, Inc. donated machining tools, materials, and other equipment to the industrial studies program. Pointe Precision has a strong affinity for UW-Platteville students because students have the knowledge, background, and experience to be successful in the industry.
- John Deere financially supported the first years of our Systems Analysis Products (SAP) software. John Deere supports the university because of the quality of the graduates and the exceptional applied experience that they receive on campus.
- OnMedia provided guest speakers for classes, has participated in UW-Platteville's Media Day, and has given demonstrations in radio, sales, and other areas of communication.

UW-River Falls

The Center for Economic Research

The UW-River Falls Center for Economic Research encourages all areas of economic research and promotes economic development in the upper Midwest region. The Center assists faculty in the pursuit of research grants, assists in local economic research, supports student research initiatives, provides consulting services to local communities, and organizes a seminar series.

The Center also provides a wealth of regional economic data, like the St. Croix Valley Dashboard and Momentum West Dashboard, through its website.²⁸ The St. Croix Valley Dashboard, developed in partnership with St. Croix Economic Development Corporation is a snapshot of the economic condition of the labor, consumer, and housing markets in the St. Croix Valley. The Momentum West Dashboard, developed in partnership with Momentum West Development, is a snapshot of the economic condition of Western Wisconsin.

The Center also partnered with the Dunn County Economic Development Corporation and Xcel Energy to conduct a study on the economic impact of a typical Wisconsin fracturing sand mine.

St. Croix Valley Educational Collaborative: Economic Development Group (SCVEC)

The SCVEC represents a compact between educational partners to enhance educational opportunities in the St. Croix Valley with a primary focus on Wisconsin's St. Croix and Pierce Counties. The initial partners in the SCVEC are the Hudson School District, the School District of River Falls, Wisconsin Indianhead Technical College, Chippewa Valley Technical College and UW-River Falls.

UW-River Falls understands that education plays an important role in the economic development of the region and in the lives of those calling the St. Croix Valley their home. It is committed to working with its partners in innovative ways to meet the needs of all learners across their lifespan.

Tissue and Cellular Innovation Center

The Tissue and Cellular Innovation Center fosters research and economic development opportunities related to tissue engineering and stem cell biology research. The Center collaborates with industrial partners including Spring Point Project, River Cancers Center, and Marshfield Clinic. The program provides mentored undergraduate research to between 25 and 30 students per year.

Center for Dairy Farm Safety (CDFS)

The Center for Dairy Farm Safety was established through a collaborative effort with the Wisconsin Extension Center for Agricultural Health and Safety. The CDFS is supported by a Susan Harwood Occupational Safety and Health Administration (OSHA) grant to address dairy farm safety in Wisconsin. The CDFS's goal is to provide information to dairy farmers to better understand OSHA regulations and implement effective health and safety programs on their farms.

²⁸ <http://www.uwrf.edu/CenterForEconomicResearch/AboutCER.cfm>

The information and tools provided to farmers will assist them in laying the groundwork for having an OSHA compliant farm.

UW-River Falls Hudson Center

Opened in August 2010, the UW-River Falls Hudson Center serves the St. Croix Valley with a focus on non-traditional and working adults seeking to complete a baccalaureate degree or to enroll in select graduate and certificate programs. Enrollments at the Hudson Center have grown every semester, reaching 421 in Spring 2012.

The fastest growing degree program offered at the Hudson Center is the undergraduate adult degree completion program in business administration. The average age of a student in this program in Spring 2012 was 41. The Hudson Center also hosts numerous community events, including a recent economic briefing co-sponsored by UW-River Falls and Competitive Wisconsin, Inc.

UW-Stevens Point

The Wisconsin Institute for Sustainable Technology (WIST)

WIST at UW-Stevens Point was founded in 2009 to create a fresh approach for today's environmental and economic challenges. Through its three divisions, WIST offers laboratory services, outreach education, and research to create sustainable solutions for businesses and organizations. The technology and ideas developed by WIST and its partners will spur economic growth in the region and across Wisconsin while helping to protect a healthy environment for future generations. WIST also maintains a pilot paper machine for raw material and/or chemical additive studies, equipment evaluation, grade development, and production runs.

The president of Integrated Paper Services in Appleton said that his firm's partnership with the institute could open more doors for the private sector to work with the academic community. "UW-Stevens Point brings a range of technical skills and they have the resources of the state and the people who teach the science (of paper making), plus we can utilize their professors in a consulting role, so there are many opportunities."²⁹

WIST signed a Memorandum of Understanding in 2011 with Integrated Paper Services to provide comprehensive research, development, and testing services to the paper and allied industries. This has almost tripled extramural revenue generation in paper services on campus (\$125,000) with funds being invested back into the pilot paper machine and the Paper Science and Engineering Department. The partnership sets the stage for future growth in paper services and end-of-life management options.

²⁹ Please see full coverage of the article in The Post-Crescent (<http://www.postcrescent.com/article/20111027/APC03/110270478/Integrated-Paper-UW-Stevens-Point-partnership-seen-door-opener>)

Northern Aquaculture Demonstration Facility

Located in Bayfield, the Northern Aquaculture Demonstration Facility (NADF) promotes and advances the development of commercial aquaculture in a northern climate. The NADF is designed with high-tech aquaculture production systems and equipment to allow a wide range of applied research and demonstrations to be carried out.

The NADF promotes development by conducting applied research, providing training opportunities, and developing best management practices for the industry. The facility also serves to strengthen the cooperative relationships among commercial aquaculturists and with tribal, state, and federal agencies.

Technology Transfer

UW-Stevens Point signed agreements in 2012 with Virent and Badger State Ethanol, both from Wisconsin, and Myriant in Massachusetts to evaluate the performance of chemicals derived using a process patented by UW-Stevens Point. These agreements will form the basis for further technology transfer activities.

UW-Stevens Point has also signed non-disclosure agreements with two companies to discuss the development of a proprietary bio-based isoprene technology. This technology has the potential to create a stable supply of rubber for the automotive and defense industries in the United States.

Student Entrepreneurship

The Entrepreneurship Center in the School of Business and Economics helps undergraduate students in all majors develop into entrepreneurs. These students start businesses that are often located in Central Wisconsin.

The Small Business Development Center (SBDC) also teaches an entrepreneurship class in the School of Business and Economics Department that links students to projects for small businesses.

School of Health Care Professionals

The School of Health Care Professionals provides a constant inflow of skilled health care practitioners and clinicians to local health care facilities. Employment information from Ministry St. Michael's Hospital, Aspirus Wausau Hospital, and Marshfield Clinic will show a high percentage of their employees are UW-Stevens Point graduates.

Support for Regional Businesses and Economic Development

UW-Stevens Point actively engages with the community to support local development:

- The Central Wisconsin Economic Research Bureau (CWERB) provides quarterly local economic data to Central Wisconsin businesses and advises local business on topics of interest. The CWERB staff holds quarterly meetings and presentations throughout Central Wisconsin. Most recently, meetings were held in Wausau, Marshfield, and Stevens Point.

- The School of Business and Economics connects with local businesses through the Business Advisory Council, which is a group of 15 CEOs from some of the largest employers in Central Wisconsin. This group keeps the School's academic programs focused on the business and personnel needs of Central Wisconsin.
- Business Outreach and Training, a community outreach component of the School of Business and Economics, is devoted to the development and delivery of exceptional business improvement programming. Business Outreach works to foster practical initiatives, to establish partnerships, and to consistently deliver quality projects.
- The Entrepreneurship Training Program certificate series offered through the SBDC guides participants through the process of creating a written business plan. So far, 553 participants have led to approximately 302 business starts and expansions.
- Continuing Education is partnering with UW-Marathon County and Northcentral Technical College to form a training consortium that is focused on supporting regional economic development. This support may include education and training, grant writing, and company-specific research and development.

Community Engagement

- Faculty members in the School of Communicative Disorders provide services five days a week at St. Michael's Hospital and provide both in-patient and out-patient speech and language services. The School receives referrals from medical centers and hospitals across the region. Many of the individuals who are seen also take advantage of an Augmentative and Alternative Equipment lending program developed by Dr. Gary Cumley at UW-Stevens Point.
- The Center for Communicative Disorders at UW-Stevens Point is a clinical training facility with a reputation for excellence in serving the University and the Central Wisconsin area. The Center provides unique speech and hearing services and helps residents who may have lost insurance coverage through a fee waiver. Annually, approximately 150 clients are seen at the Center for speech and language services and about 100 patients are seen for hearing tests and hearing aid fittings.
- The Special Needs Aquatic Program, offered through the School of Physical Education and Athletic Training, is affiliated with the Arthritis Foundation of Wisconsin. The program serves between 50 and 70 adults with arthritis from the community each semester.
- The National Information Center for Polymer Education (POLYED) is a consortium of groups interested in general science education and polymer education in particular. The major purpose of POLYED is to nurture education at all levels, from kindergarten through post-graduate. POLYED has working relationships with many education-oriented technical groups.

UW-Stout

UW-Stout is a comprehensive, career-focused polytechnic university where students, faculty, and staff use applied learning, scientific theory, and research to solve real-world problems, to grow the state economy, and to serve society. Matching business challenges with research questions, the UW-Stout Discovery Center is intent on accelerating technology innovations, advancing economic development, and enhancing global competitiveness in the service region. UW-Stout and its Discovery Center are focused on measuring the impacts of its economic development activities, reporting:

- Over 5,000 technical assistance activities with more than 2,500 companies since 1994. These activities in areas like business and product development, technology deployment, workforce optimization, strategic planning, and quality and process system implementation have resulted in client-reported impacts of more than \$450 million.
- Over \$8.5 million in contracts and grants awarded in 2010-11.
- About 319 jobs created or retained from Discovery Center assistance while also generating over \$23 million in cost savings and increased sales.
- 137 unduplicated company or entrepreneur contacts, four revenue-based financing loan closings, and \$13.4 million in commercial industrial building permits in 2010-11 by UW-Stout staff contracted by Dunn County for economic development efforts.

Additionally, UW-Stout is a partner in the Stout Technology and Business Park, which features 63 firms operating in 28 buildings on 403 acres in Menomonie. There are 1,150 employees in the park with an estimated \$49.9 million annual payroll. The total economic impact of these businesses is \$232 million annually.

The Discovery Center has the full support of UW-Stout to serve as the initial point of contact for technical assistance and applied research applications and to channel them to the appropriate internal or external resources. This integrated approach to delivering UW-Stout's combined UW-Extension, Small Business Development Center, NIST-MEP,³⁰ and technology business incubation resources is unique within the UW System and is rare in university-based economic development. Most often these resources are housed within "silos" on campuses, but UW-Stout has realized service delivery efficiencies and greatly enhanced impacts by merging these resources into a single unit that facilitates access across all colleges and throughout the region. This unique structure streamlines UW-Stout's engagement processes and ensures efficient collaboration with industry, private and public institutions, and licensing organizations.

³⁰ National Institute of Standards and Technology - Manufacturing Extension Partnership

As a result, the UW-Stout Discovery Center is able to execute a strategic plan in alignment with specific regional economic development strategies:

- The Wisconsin Economic Development Corporation (WEDC) Strategic Plan, which outlines bold and ambitious goals, including securing top 10 rankings in the Kauffman Foundation Index of Entrepreneurial Activity for starting a business (currently 28th) and expanding a business (currently 29th) by 2016. The UW-Stout Discovery Center is a recognized WEDC partner.
- Strategies resulting from the *University of Wisconsin System Growth Agenda* and UW System's *Research to Jobs* task force. The Discovery Center recently received a Growth Agenda award to link non-traditional students and industry partners with campus researchers and faculty to develop a highly-skilled workforce, to advance job creation, and to strengthen Wisconsin communities. The *Research to Jobs* task force focused on advancing research to commercialization to create jobs in companies across a broad range of industries. UW-Stout Chancellor Charles W. Sorensen was chair of the implementation task force and UW-Stout's Discovery Center was identified as a key transformational state resources.
- The *Next Generation Manufacturing Strategies* grew out of a 2009 survey that revealed significant threats to global competitiveness. Developed and executed by the Wisconsin Manufacturing Extension partnership and UW-Stout's Manufacturing Outreach Center, the strategies match the innovation, global engagement, and talent management objectives of UW-Stout and its Discovery Center.

UW-Stout and the Discovery Center have long supported industry clusters throughout the region. The Medical Device Innovations initiative, with the related applied research and technical assistance, is an example. Drawing on UW-Stout's polytechnic programs and its proximity to leading clinical organizations and medical device manufacturers, Medical Device Innovations seeks to create self-sustaining medical device research and development. The initiative includes collaborative product development between UW-Stout and Wisconsin Medical Entrepreneurship Foundation³¹ researchers and clinicians as well as professional education at multiple plastics injection molding companies that supply medical device manufacturers.

³¹ WiSys Technology Foundation, Aurora Health Care, BayCare Clinic, and Marshfield Clinic

The Discovery Center's work with private industry leverages a shared-cost model for most center activities that ensures private and public commitment to engagement, execution, and outcomes of the activities. In addition, UW-Stout and the Discovery Center have developed partnerships with the WEDC and other state and federal funding sources. This combined funding has allowed the Discovery Center to add new tools that engage clients, students, faculty, and other partners in results-focused initiatives, including:

- Student engagement in product and business development projects focused on assisting businesses in Wisconsin's distressed communities;
- Creation of a self-directed digital fabrication laboratory to advance innovative products and entrepreneurial activities;
- Technology scouting to match and deploy new and developing technologies with small- and medium-sized business; and
- Comprehensive support for Wisconsin manufacturers that are launching export initiatives.

Examples of Discovery Center product development, business incubation, and technology commercialization efforts include:

- A novel hydrogen fuel cell design and development project that attracted over \$150,000 in external development funding, established a new technology business, and resulted in an UW System Researcher of the Year award; and
- The development of a vibration therapy device that links biomedical engineering, dietetics, and physical therapy researchers to advance scholarship and attracts investment.

Examples of Discovery Center efforts to reinforce the region's industry clusters include:

- Organizing groups of researchers, companies, communities, and institutions around projects that leverage their distinctive assets to advance the region's plastic composites industry cluster; and
- Managing a collaboration of staff, students, consultants, and government agencies to assist companies in improving their performances while reducing their carbon footprint.

UW-Superior

Transportation and Logistics

During the past 12 years, the UW-Superior Transportation and Logistics (T&L) Research Center has brought in over \$8 million in federal and private research funds. The Center uses the funds to engage in applied research that 1) educates and trains the existing workforce to improve operations and opportunities for workers and 2) reduces the cost of shipping and transportation for the logging, mining, paper, trucking, rail, air, and shipping industries.

T&L research benefits Wisconsin-based companies, the Great Lakes shipping industry, and the regional economy:

- During the past 12 years, the Center has brought in over \$8 million in federal and private research funds.
- UW-Superior faculty, students, and industry partners conducted research into intermodal terminal placement as part of exploring shipping from Wisconsin to China. The research findings were shared with industry, railroads, shippers, and economic development agencies. Ultimately, the results contributed to the placement of an intermodal terminal with CN Railroad at Chippewa Falls. The intermodal terminal opens access to markets in Asia by reducing costs for Wisconsin industries and provides Wisconsin with a potential competitive advantage.
- The Great Lakes Maritime Research Institute (GLMRI) was awarded a \$750,000 Environmental Protection Agency (EPA) grant to reduce air emissions from the Edwin H. Gott, the most powerful cargo ship on the Great Lakes. Repowering the Gott reduced air emissions and benefited the environment of the entire Great Lakes basin. The EPA grant leveraged more than \$14 million in private investment and brought almost \$15 million in business to Bay Ship in Sturgeon Bay, Wisconsin.
- Liquid Natural Gas (LNG) Feasibility Research at GLMRI, funded by the U.S. Department of Transportation, looks at both the engineering and logistics factors for converting the Great Lakes ships to LNG. LNG virtually eliminates harmful emissions and reduces engine maintenance. The funding is for \$800,000 in 2012 and will continue for the next five years at up to \$1 million annually. Preliminary engineering estimates indicate that the conversion of 10 steamships to LNG would bring over \$200 million in investments back to the Great Lakes shipyards. The research also includes examining the feasibility of bringing a liquefaction plant to Superior, which would support shipping, other modes of transportation, and mining.

Technology Transfer

The UW-Superior Biofuels Project has partnered with UW-Extension Research Stations for yield studies of two native plant species. These plants have oil extracts that hold proven potential for the production of biodiesel that is suitable for extremely cold climates. Technology transfers implicit in this project include new technologies for oil extraction and collaborations to pilot microwave technologies that reduced processing time. Private partnerships involved with this enterprise include the American Science and Technology Corporation.

Additionally, Dr. Peter Cook's research into dye-sensitized solar cells offers a strong alternative to today's photovoltaics. Current silicon-based photovoltaics have a high manufacture cost which limits their ability to compete with fossil fuels. Dye-sensitized solar cells have the potential to be inexpensive alternatives. While technology transfer in this area will likely be years into the future, the initial findings are promising.

National Estuary Research Reserve (NERR)

The Lake Superior NERR, designated in October 2010, is a collaborative effort between UW-Superior, the University of Wisconsin Sea Grant Institute, the City of Superior, Douglas County, the Fond du Lac Band of Lake Superior Chippewa, the Wisconsin Coastal Management Program, the Wisconsin Department of Natural Resources, and UW-Cooperative Extension.

The Lake Superior NERR is one of 28 areas across the country protected for long-term research, water-quality monitoring, education, and coastal stewardship under the National Estuarine Reserve System. The Reserve works to improve the understanding of Lake Superior freshwater estuaries and coastal resources and to address the issues affecting them through research, education, outreach, and stewardship.

Nationally, for every operational dollar spent at the 28 NERR sites, two dollars are returned directly to the community through tourism, education and training offsets, and research. NERRS partnerships translate to jobs and economic activity:

- Estuaries are nursery grounds for two-thirds of commercial fish and shellfish. In NERRs states, the shellfish and seafood industry contributed over \$2.7 billion to the economy in 2010.
- In 2010, the coastal counties with NERRs supported more than 468,000 jobs in ocean-dependent industries.
- Reserves create more than 60 jobs for each \$1 million of federal construction money spent.
- Nationally, NERRs contribute more than \$4.9 million in education to over 83,000 children.
- NERRs offset more than \$13.4 million in training to more than 66,000 people.

Small Business Development Center

The UW-Superior Small Business Development Center (SBDC) is a founder and facilitator of the nine-member Superior PeerSpectives CEO Roundtable.

After sharing experiences and learning from other company owners in the Roundtable, the local owner of a \$25.5 million industrial lubricant firm initiated plans to expand into a fourth market. The next year he carefully monitored return on investment as well as staff productivity to increase net profits by \$1.45 million. In 2011, he negotiated a sale of the firm to a private equity group, which subsequently sold it to a national company. The local company thus became headquarters of the larger firm's Midwest division, which allowed it to add 11 employees in Superior this year.

The following table shows business growth for PeerSpectives CEO Roundtable participants:

Date CEO Began	Beginning Sales	Current Sales	Beginning Employees	Current Employees	Sales Increase	Staff Increase
1/1/2012	\$680,000	\$680,000	28	28	0%	0%
4/1/2006	\$765,000	\$1,100,000	11	12	30%	9%
4/1/2006	\$870,000	\$1,100,000	7	9	21%	29%
1/1/2012	\$1,124,000	\$1,900,000	13	22	41%	69%
4/1/2006	\$1,300,000	\$1,900,000	13	19	32%	46%
4/1/2006	\$2,100,000	\$2,500,000	35	38	16%	9%
7/1/2010	\$4,900,000	\$3,900,000	38	36	-26%	-5%
1/1/2009	\$5,120,000	\$5,200,000	32	36	2%	13%
4/1/2006	\$7,200,000	\$11,500,000	50	56	37%	12%
5/1/2007	\$7,500,000	\$13,800,000	55	80	46%	45%
4/1/2007	\$25,500,000	\$33,000,000	50	51	23%	2%
Average					20%	21%

As another example of the SBDC's work, a local woman attended First Steps to Starting Your Own Business in 2008 and the Entrepreneurial Training Program in 2009. She completed a business plan for a business near her home in Ashland. One year later, she sought help from the UW-Superior SBDC counselor to review a second business plan.

With her husband, the couple then invested \$5,000 and obtained a \$60,000 line of credit to open a retail store. The business celebrated its first anniversary in May 2012 with gross sales 20 percent over their projections and with the addition of three part-time employees.

This business owner has participated in 13 counseling sessions (37 hours) with the UW-Superior SBDC counselor in addition to 28 hours of training.

UW-Whitewater

Economic Development: State of Ingenuity Initiative

UW-Whitewater is a partner in the State of Ingenuity Initiative, which is a collaboration of organizations from southeastern Wisconsin and northern Illinois. State of Ingenuity provides a seamless network of entrepreneurial support at every stage of business development. The initiative, which is funded by a start-up grant from the Economic Development Administration, works to foster economic recovery, to develop new industry, to grow and strengthen businesses, to create jobs, and to increase private investment in the region.

UW-Whitewater student assistants will support the State of Ingenuity in the critical areas of virtual network administration, communication, and administrative support. Student assistants will allow the Office of Research and Sponsored programs to focus on supporting the university's goal of providing outreach programs through integrated institutional activities.

The State of Ingenuity Initiative provided counseling services to more than 164 businesses and entrepreneurs (see table below). This includes clients of/participants in the Whitewater Incubation Program at the Whitewater University Technology Park Innovation Center.³²

Total counseling	164 clients
Number of counseling sessions	822
Client contact hours	947 hours
Counseling prep time	1,393 hours
Total direct client assistance time	2,340 hours
Client referrals	111

Job Creation: Small Business Development Center (SBDC)

The SBDC assisted with 20 business starts during 2011, which added at least 20 jobs. Also in 2011, SBDC assistance was associated with 520 created jobs in Jefferson, Rock, Walworth, and Waukesha Counties. About 440 jobs were added at three companies, while manufacturing assistance at smaller companies resulted in an additional 50 jobs.

The UW-Whitewater SBDC is also committed to existing industry. Through the SBDC, 43 employees at a manufacturing business have been provided with intensive bench-strength building training. This is part of the strategic succession planning assistance that the director is providing to the company. An agricultural company also received intensive assistance to help them enter new markets and increase profitability in the face of rising grain prices.

In collaboration with the Department of Workforce Development, the SBDC provided in-depth entrepreneurial technical assistance training and counseling to 15 dislocated workers. Three of these participants started businesses in 2012.

Student Entrepreneurship: The Whitewater Incubation Program (WhIP)

The Whitewater Incubation Program launched in 2011 to foster business start-ups and entrepreneurship in the Whitewater community. WhIP includes a full spectrum of programs and services designed to support new business ventures linked to the University and to the Whitewater University Technology Park’s Innovation Center.

Two of WhIP’s major elements include the Innovation HUB (iHUB) and Launch Pad. The iHUB is both a collaborative space located in the Innovation Center and a series of programs designed to accelerate the successful development of entrepreneurial companies. University-affiliated entrepreneurs, called iFellows, receive support to develop and establish a start-up company or to

³² Data represent only businesses served within eligible service area; these data do not represent all clients served by State of Ingenuity partners. Data only include support provided to existing industries through faculty/staff interactions affiliated with the Office of Research and Sponsored Programs, Geographic Information Services Center, the Global Business Research Center, and the Whitewater Incubation Program. These data do not include direct services provided to existing industries associated with faculty/staff/student research, teaching, and/or service.

conduct applied research leading to the development of intellectual property that could be commercialized. The University also supports faculty and staff conducting market analyses and partnering with industry through the iFellowship Program.

The Launch Pad is UW-Whitewater's student business incubator. The program provides students from all disciplines with an immersive entrepreneurial experience. Launch Pad participants also have access to space in the iHUB, intensive coaching, and free business services.

Joe Scanlin, a student entrepreneur and the founder of Scanalytics, conducted much of his product and market research while a member of the Launch Pad. Scanalytics invented a pressure-sensitive mat that can measure consumer behavior using integrated software. The software creates a report on how long someone spends at a location and at what time of day, essentially detailing how shoppers react to products.³³

Scanlin and his business partner recently won first place - worth \$5,000 - at the 2012 BizStarts Collegiate Business Plan Competition. Scanlin made a major impact on judges by deploying his prototype in front of a vending machine and reporting on the machine's consumers on the day of the competition. "Our mentors inspired us to be creative, but at the same time gave us honest and straightforward advice," Scanlin said.

"There's no magical gap between learning at the university and working in the business world," said Launch Pad's co-director. "These students are running real companies and dealing with all the issues entrepreneurs face."

Having since graduated from UW-Whitewater and the Launch Pad program, Scanlin has secured office space in the iHUB, where he will continue to receive WhIP services, to advance his research, to seek additional investment, and to begin marketing his products.

Technology Transfer and Development: Creative Culinary Solutions

UW-Whitewater currently has 11 technologies ranging from initial disclosure to a patent issue under review at the WiSys Technology Foundation. As a specific example, John Ejnik, Assistant Professor of Chemistry at UW-Whitewater, is collaborating with Creative Culinary Solutions, a Wisconsin-based company, to develop a food processing technique to lower mercury concentrations in fish.

Currently, the fish industry has no solutions to reducing mercury concentrations in fish other than harvesting fish that are naturally low in mercury. Even though low-mercury seafood is considered a superior product, production is limited by the types and locations of fish that may be harvested.

³³ From University of Wisconsin-Whitewater University News (<http://www.uww.edu/news/archive/2012-05-scanalytics>).

One possible solution is the use of existing vacuum tumblers. Vacuum tumblers increase food storage time by killing bacteria and removing contaminants left by techniques used in large processing facilities. The successful application of vacuum tumblers to mercury would open waters and varieties of fish that are currently considered undesirable to harvesting.

Wisconsin is home to over one thousand food processing firms that could take advantage of the new process. Since most of the processing companies package frozen foods, low-mercury fish could be distributed throughout the country.

Additionally, the Wisconsin Department of Natural Resources (DNR) may also benefit from this technology. The DNR currently removes invasive carp from Wisconsin waters to prevent damage to the local ecosystem. Because of the high mercury levels, the carp have no economic value and are disposed of in landfills. If the mercury levels in the carp can be reduced, the fish could be sold for animal feed or as fertilizer.

Wisconsin is also home to 15,000 lakes and 42,000 miles of streams and rivers that are enjoyed by 1.4 million anglers.³⁴ Fishing has a \$2.75 billion economic impact in Wisconsin and supports more than 30,000 jobs. In 2006, 381,000 anglers brought revenue to Wisconsin from out of state.³⁵

Since all Wisconsin waters have fish consumption advisories because of mercury, recreational anglers can benefit from a product that reduces mercury levels in fish. Making this process available for home use may reduce concerns about mercury and support an increase in the economic impact of fishing on Wisconsin. Creative Culinary Solutions anticipates offering a consumer version of the tumbler for about \$250.

Part of the process that reduces mercury involves the development of chemicals that are commonly found in spices or marinades. The marinades developed in this research could be patented and licensed to JCB Flavors in Sullivan, another Wisconsin business that would substantially benefit from the new market.

Technology Transfer and Development: Foundry Solutions, LLC

The UW-Whitewater partnership with Foundry Solutions, LLC on ceramic shell production is another example of technology development. Foundry Solutions was founded in 2007 by Dan McGuire, Professor of Art at UW-Whitewater, and Eric Hellstrom, Professor of Mechanical Engineering at Florida State University.

Typically, ceramic shell systems require numerous steps and multiple material applications over long periods of time. This project addresses these issues through the development of two technologies - refractory foam and a modular molding system.

³⁴ From the Spring 2012 Wisconsin Fishing Report (<http://dnr.wi.gov/topic/fishing/wifishingreport.html>).

³⁵ Wisconsin Department of Natural Resources media kit (http://dnr.wi.gov/news/mediakits/mk_fish.asp)

The refractory foam is an economical solution to create a one-coat ceramic shell system. The foam is designed to increase in volume at a controlled rate of growth and is formulated to react to heat exposure without detrimental effects on existing industry practices. The refractory foam eliminates multiple material applications, uses fewer resources, offers shorter start-to-finish times, and lowers capital equipment costs. It is also water soluble, which means that it can be easily removed.

The complementary modular molding system was invented as a more cost-effective casting system that can provide the same benefits as current systems in foundries. The modular molding system reduces the amount of volatile material that must be used and reduces the number of steps needed in the process. This dramatically decreases the cost of the process.

Ferrous metal foundry products in the United States constitute an \$18.7 billion market.³⁶ Nonferrous metal foundry products manufacturing is a \$12 billion market. Since this technology is expected to be readily adopted by this substantial market, the potential opportunity is large.

New Business Creation

The Small Business Development Center (SBDC) assisted a total of 266 people with counseling during the previous 12 months. Of these clients, 113 were in business and 153 were nascent/not yet in business.

Tyler Sailsbery, founder of the off-campus student housing locator company NoMoreDorms.com, is an example of the support that clients can receive from the SBDC. Sailsbery connected with the SBDC as a student seeking advice for a class project. What began as a class assignment became a catalyst for a real business and rapidly developed into a successful enterprise.

Through hard work with its clients and partners, NoMoreDorms.com has captured 80 percent of the market share for the UW-Whitewater campus during their first sales cycle. For Sailsbery, one indicator of success is the income from the business this past year. He adds, "One of my favorite indicators of success is when I am asked where I work, and I tell them NoMoreDorms.com, people comment how great of a tool it is and how it must be exciting getting to work for a business like that. Most do not realize that it is my business and assume it's a national housing website (which hopefully it will be soon)."

Sailsbery sees the networking he has done as essential for his success as an entrepreneur. "Last year, I attended the UW-Whitewater Ideas to Profits conference. I also received feedback from SBDC representatives at the Wisconsin Entrepreneurs' Conference in Milwaukee." Sailsbery and other young entrepreneurs he has come to know through conferences and other events meet weekly to discuss opportunities to grow and improve their businesses. This network of peers helps him vet new ideas and build new revenue streams.

³⁶ From IBIS World

Sailsbery is now working with the SBDC on another business idea and continuing to grow NoMoreDorms.com into a national provider.

As another example, Chad Sullivan, a 14-year law enforcement veteran with the Janesville Police Department, became the 2011 Rock County 5.0 business plan competition winner for his new business, Street Cop Spanish Seminars. His business teaches police officers to more effectively communicate with Spanish-speaking members of the community. Chad had no previous business planning experience prior to entering the competition and received help from mentors, including an SBDC councilor.

Sullivan said the SBDC counselor he worked with “was very knowledgeable and knew what he was talking about in regards to the business plan.” The counseling he received from the SBDC was very helpful in making his plan more professional and effective, according to Sullivan. “I took all the information I received to heart and really tried to make it work for me,” Sullivan said.

Sullivan initially provided his services on a volunteer basis. Later, as he realized the level of interest in his sessions, he saw an opportunity to form a business. Just this year, Sullivan has scheduled eight classes across the country. He also added two new employees to the company, allowing him to schedule more training sessions.

As a part of the Rock County competition award, Sullivan is currently receiving market research from the Wisconsin Innovation Service Center (WISC), a specialty center of the SBDC. “The sky’s the limit now,” Sullivan said. “We’re anxiously waiting to see what [WISC] thinks of the product and what kind of competition is out there.”

The SBDC also offers a free, online class to the local community called First Step to Starting a Business. Participants are guided through the process of evaluating their business ideas and their preparedness for becoming entrepreneurs. An online discussion group allows participants to interact with instructors and others taking the class. Between April 2011 and March 2012, 42 people participated in the class.

In addition, the broader educational opportunities at UW-Whitewater provide students with the basic industry knowledge and expertise required to operate a business. For example, two successful companies were created by alumni of the Occupational and Environmental Safety and Health program.

UW-Extension

UW-Extension leads both the Small Business Development Center (SBDC) Network, and the Wisconsin Entrepreneurs' Network (WEN). The SBDCs provide statewide counseling and training to business owners and are located on 12 of the UW campuses. WEN works closely with the Wisconsin Economic Development Corporation to provide resources and expertise in support of high-potential entrepreneurs. During FY11:

- 3,343 clients were counseled by the SBDC network,
- 1,864 clients were counseled through the Business Answer-Line,
- 12,956 people participated in business and entrepreneurship training programs, and
- 11 clients received over \$3 million in federal grants to advance their business ideas.

UW-Extension and UW-Madison also support the Entrepreneurs' Resource Clinic. The Clinic is a "one-stop shop" where entrepreneurs and potential entrepreneurs can find assistance in a single space. Services include advice on legal business issues, technology licensing, business development ideas, finance, budgets, leadership mentoring, and marketing. In 2011, about 250 individuals or businesses received assistance

The following are five examples of success stories from the collaborative efforts of UW-Extension to support entrepreneurs and to foster new businesses.

AquaMost, Inc

AquaMost's patented purification technology developed by UW-Madison scientists can rapidly, economically, and effectively remove chemicals, viruses, and bacteria from water. Terence Barry sought business assistance from WEN early in the formation of the company. WEN provided funding through its Early Planning Grant and helped AquaMost secure an \$80,000 grant from the U.S. Department of Agriculture. WEN further assisted AquaMost with two Small Business Innovation Research (SBIR) grants totaling over \$1 million.

"WEN is an excellent resource for Wisconsin entrepreneurs," says Barry. "We received invaluable assistance from WEN staff writing our SBIR commercialization plans, and WEN staff gave us excellent insights on how best to craft our grant proposals to satisfy the unique requirements of different federal funding agencies."

The business employs 12 people, and it expects to double in 2012. AquaMost received \$989,206 in SBIR funding and \$3 million in venture financing in 2011.

Transthermal, LLC

Transthermal is a newly formed Wisconsin company that specializes in cooling technologies. WEN directors conducted extensive competitive and market analyses and assisted Transthermal with its venture capital presentation. Additionally, WEN facilitated contact with thermodynamics expert Dr. Timothy Shedd at the UW-Madison School of Engineering for technology testing and helped identify potential beta customers

At the end of 2011, Governor Walker certified Transthermal as a Qualified New Business Venture, which makes investors eligible for a tax credit on their investment. Transthermal expects to support 234 new jobs over the next three years.

Melthouse Bistro

In 2011, Milwaukee entrepreneurs Troy and Susan Davis opened the Melthouse Bistro. The restaurant showcases gourmet grilled cheese sandwiches made with all Wisconsin cheeses.

Before starting his business, Davis enrolled in the Entrepreneurial Training Program (ETP) at the UW-Milwaukee SBDC. The 12-week program combines facilitated instruction, small-group learning, individual coaching, and valuable resources to help entrepreneurs create the best business plan for their concept and to learn critical skills for operating a new business. Davis said the following about the program:

Without the ETP, I don't think we would be as successful as we are. I have an MBA, and I thought I had thought of everything, but when I took the ETP I discovered there were things I hadn't considered.

The business currently employs 16 people.

O'so Brewing

In four years, O'so Brewing Company in Plover has expanded its facility and more than doubled production. Marc Buttera, the company founder, has this to say about the UW-Stevens Point SBDC:

I took the business plan writing class. That business plan was crucial for us to get financing in this economy. We had some denials, but we found a small local bank that believed in us, because we were able to show on paper where we were going.

O'so Brewing Company employs eight people.

SnowShoeFood

A group of UW-Madison graduate students utilized the SBDC to take their business idea to the next level after winning the 2011 Climate Leadership Challenge, a business plan competition held annually at UW-Madison. With regular guidance from their SBDC counselor, the students formed SnowShoeFood, which offers a smartphone application that enables consumers to make more informed food purchasing decisions. One student said the following about their counselor:

He helped us work through our business plan. He read numerous drafts of the plan and helped us make decisions as we evolved the company. He had an instrumental role in helping us figure out what we wanted to do and where we could provide value to the consumer.

The business currently employs five people and expects to release additional versions of their product in the near future.

Workforce Development

The core of the UW System's mission is the preparation of a well-prepared and flexible workforce. People with a degree from a UW System institution are well equipped to contribute to a variety of business in the emerging economy. Their analytical, communication, and problem-solving skills are of value to a wide range of business, including those that have not been imagined yet.

National data show the value of a baccalaureate degree. In 2011, at a time when people without a high school degree had a 14.1 percent unemployment rate and those with only a high school degree had a jobless rate of 9.4 percent, the unemployment rate for people with a baccalaureate degree was 4.9 percent, and the rate was just over 2 percent for those with advanced degree. Even in a tough economy, those with a baccalaureate degree are much more likely to be employed.

Data also show a clear link between education attainment and median incomes across the country. In 2011, 30.4 percent of Wisconsin residents had a bachelor's degree. This lagged behind the national average, and was well behind Minnesota's 34 percent. The importance of these percentages is reflected in the 2011 per capita income figures. In Wisconsin, it was \$40,073. The national average was \$41,663, and the per capita income in Minnesota was \$44,672. Having more Wisconsin residents with college degrees will appeal to existing and potential new businesses. And, many of these talented and well-prepared individuals will develop their own businesses, further spurring Wisconsin's economy.

Among the strategies for improving student success are internships and programs to encourage students to pursue degrees in a STEM (science, technology, engineering, or math) discipline. Examples of each follow.

Internships

Internships are an excellent ways to strengthen the ties between Wisconsin businesses and students. These experiences provide students with experience working at a local business, which can lead to employment after graduation at that business. UW System institutions have worked with local businesses to provide these valuable internship opportunities.

UW-Milwaukee

In 2010-11, 749 businesses and other outside organizations hosted UW-Milwaukee cooperative education (co-op) or internship students. In a survey of recent graduates from the Lubar School of Business, 24 percent of the 147 respondents reported that their current position was a continuation of employment held while attending UW-Milwaukee. Sixty percent also indicated that they had worked in a position directly related to their major while attending UW-Milwaukee.

The following is a sampling of business internship sites:

ALDI, Inc	GMR Marketing	Quad/Graphics
Artisan Partners	Grant Thornton, LLP	RitzHolman CPAs
Baker Tilly	Harley-Davidson Motor Co.	Robert W. Baird
BDO USA	ICM Corporation	Rockwell Automation
BMO Harris Bank	Johnson Controls	S.C. Johnson
Brady Corp.	Journal Sentinel, Inc.	SBC Global
Briggs & Stratton	Kerry Americas	Schenck Business Solutions
Charter Steel	Kohl's Department Stores	Stark Investments
Chortek & Gottschalk	Kohler Co.	Strategic Wealth Management
CliftonLarsonAllen	Kolb+Co.	SVA Certified Public Accountants
Consolidated Graphics	KPMG	Target
DCI Marketing	Lowe's Department Store	The Bon-Ton
Deloitte, LLP	Manpower, Inc.	U.S. Bancorp Fund Services
Dieringer Research Group	Mark Travel	U.S. Bank
Direct Supply	Master Lock Co.	Vogel Consulting Group
Edward Jones	Medical College of Wisconsin	Wacker Corporation
EMTEQ, Inc.	Menards	Walgreens
Enterprise Rent-A-Car	MillerCoors	WE Energies
Ernst & Young	MLG Commercial	Wells Capital Management
Extendicare Health Services	Modine Manufacturing Company	Wells Fargo Financial
FIS	Northwestern Mutual	Wipfli
Fiserv	P & H Mining	Wisconsin Department of Revenue
GE Healthcare	Penske Truck Leasing	Wisconsin Legislative Audit Bureau
GE Medical	Phoenix Marketing Group	Ziegler Co.

UW-Eau Claire

The following is a select summary of recent student internships leading to full-time employment, by major:

Major	Company	City
English	JAMF Software	Eau Claire, WI
	Royal Credit Union	Eau Claire, WI
Management	Stepan Company	Chicago, IL
	Nestle USA	Eau Claire, WI
	Graco, Inc.	Minneapolis, MN
	Lockheed Martin	
	Hormel	
Psychology	Big Brothers Big Sisters of Northwestern Wisconsin	
Biology	State of Wisconsin Department of Natural Resources	
Mathematics/Actuarial Science	Milliman	Brookfield, WI
	Assurant Health	Milwaukee, WI
	Allianz	Minneapolis, MN
	Allstate	Northbrook, IL
	Humana	Green Bay, WI
Latin American Studies	Puentes/Bridges	Alma, WI
Computer Science	C. H. Robinson	Eden Prairie, MN
	JAMF Software	Eau Claire, WI
	Liberty Mutual	
Physics, Dual Degree Engineering	Trane	La Crosse, WI
Accounting	Boulay, Heutmaker, and Zibell	
	McGladrey & Pullen	
	Wipfli	
Chemistry with a Business emphasis	ChemCeed	Chippewa Falls, WI
	Hydrite	Milwaukee, WI
	Stepan Company	Chicago, IL
	Nestle USA	Eau Claire, WI
Social Work	Eau Claire County Work Force Resource	
	Eau Claire County Department of Human Services	
	Chippewa County Department of Human Services	
	Phoenix Alternatives	
	Catholic Charities	

UW-Green Bay

UW-Green Bay's Environmental Sustainability and Business Institute has developed a certificate in Environmental Sustainability and Business. A requirement includes an internship or cooperative learning experience in a business, nonprofit, or government setting. Examples of these experiences are listed below:

- Aurora BayCare - Three students working on energy, water, and waste reduction projects since 2010. This project was funded at about \$75,000 per year.
- Briess Malting - Preparation of an Environmental Management System for Green Tier certification. This was done in 2011-12 and funded at about \$7,000.
- Tosca - Life Cycle Assessment of reusable packaging containers by comparing Tosca's wood boxes to plastic boxes from their competition.
- Brown County Port and Solid Waste - One student looked at sediment management from the dredging of the port and another was involved in a landfill gas project. Two new students will be working with the zero waste committee recently established by the Brown County Executive (funded at \$4,500).
- Green Bay Packers - Three students worked on game day recycling efforts and another worked in the Pro Shop on more environmentally friendly packaging options.

In addition, at least 50 communication majors are involved in internships with local media outlets each semester.

Jacqueline Frank is one example of how internships can start a career path. While earning a bachelor's degrees in history and English from UW-Green Bay, Jacqueline conducted an internship with the Neville Public Museum. After graduating and attending graduate school at UW-Milwaukee, she returned to become the executive director of the National Railroad Museum in Green Bay.

UW-La Crosse

In 2010-11, 459 UW-La Crosse students participated in internships at over 406 partner institutions. Although UW-La Crosse does not track direct employment numbers, many students gained direct employment as the result of these internships. For example, one student interned for Baker Tilly and was hired as a staff accountant after graduation.

Numerous students complete health professions internships with Mayo Clinic, Marshfield Clinic, and Gunderson Lutheran Health System. Many of these programs are designed to seamlessly evolve interns into employees. For example, a microbiology graduate student is now employed full-time in one of the clinical laboratories at the Mayo Clinic in Rochester.

UW-Oshkosh

Students from the UW-Oshkosh College of Business participated in cooperative education or internship at nearly 240 businesses in 2010-11. Many of these interns are such valuable contributors that they evolve into highly-skilled, high-impact employees with regional companies.

For example, accounting major Jonathan Dudzinski won the 2012 Cooperative Education and Internship Association Academic Internship Student Achievement Award for his work at a New York City investment firm.³⁷ During the internship, Jonathan helped a senior analyst to condense a large amount of information and to develop a challenging and complex mathematical model. “I am proud to say that our experience with UW-Oshkosh interns has confirmed my expectations,” the company’s president said. “Not only have they stacked up well against our other interns from around the country and around the globe, in most cases they have excelled. This was particularly true with Jonathan. He hit the ground running and never stopped.”

The interns at the UW-Oshkosh Business Success Center are also proving invaluable to the NEW Manufacturing Alliance, which is a group of manufacturers that work with regional organizations to promote northeastern Wisconsin manufacturing. A 2011 BSC survey, executed by student interns, showed that two out of five manufacturing companies planned to hire more employees in 2011.³⁸ The survey’s findings are invaluable insights and validate that the region’s manufacturing strategies are aligned with the broader state economic recovery goals.

Through internships, nursing and human services majors are also helping Wisconsin serve its neediest populations in community-based agencies. For example, in collaboration with Winnebago County’s Department of Human Services, community health class students helped support 3,600 visits from uninsured patients at the Living Healthy Community Clinic in 2011. Additionally, social work student interns were instrumental in starting services at the Oshkosh-based Day by Day Warming Shelter, a free community refuge for homeless people.³⁹ The future workforce value of these practical experiences to students and to Wisconsin is priceless.

UW-Parkside

A \$50,000 gift from the Mary Frost Ashley Charitable Trust was used to expand the Advising and Career Center’s Ranger Link Program. The Program provides compensated externship and internship opportunities with campus programs, local small businesses, large companies, and non-profit organizations to first generation and underrepresented minority students. To launch this program, UW-Parkside’s Employer Relations Coordinator made 30 visits to build connections with Southeastern Wisconsin businesses and to discuss internships and employment opportunities.

As part of the Ranger Link Program, 50 UW-Parkside students gained valuable career-related experience with over 35 local employers. This program will continue in 2012-13, and \$75,000 has been provided by two area foundations to support students in gaining 21st century skills.

³⁷ “UW Oshkosh student wins national internship achievement award.” <http://www.uwosh.edu/today/16908/uw-oshkosh-student-wins-national-internship-achievement-award/>

³⁸ “UWO survey collaboration shows manufacturing growth expected in region.”

<http://www.uwosh.edu/today/8905/uwo-survey-collaboration-shows-manufacturing-growth-expected-in-region/>

³⁹ “UWO students help Oshkosh warming shelter thrive.” <http://www.uwosh.edu/today/15717/uwo-students-help-oshkosh-warming-shelter-thrive/>

RangerTrak, UW-Parkside’s online career posting service, posted over 400 internship opportunities, 266 part-time employment opportunities, and 620 full-time job opportunities during the 2011-12 academic year. Career Services planned, promoted, and hosted the annual UW-Parkside Career Fair with 45 employers from Southeastern Wisconsin. This is 10 more employers than attended in n 2011.

UW-Platteville

The Pioneer Academic Center for Community Engagement (PACCE) at UW-Platteville has connected students, faculty, staff, and community partners in meaningful scholarship opportunities since 2009. The internships and projects are with employers that do not currently have the means to pay an intern, but have the need for the student’s specialty. About 10 to 20 percent of the employers are start-up entrepreneurs.

The following table shows the number of internships and projects funded by PACCE.

Semester	Proposals and Internships Submitted	Proposals and Internships Funded	Faculty/ Staff Involved	Courses Involved	Dollars Approved	Number of Students Involved	Number of Community Partners
2011-12 ⁴⁰	77	77	59	71	\$276,500	1,090	127
Since Beginning	299	269	179	196	\$830,942	3,812	427

As part of the PACCE entrepreneurial program, Austin Glendenning completed a summer internship with Peter Flanary of Foundry Arts in Mineral Point, WI. Mr. Flanary primarily works with stone and bronze media, and his sculptures have been installed throughout the Midwest and in Ireland. “My internship has been a great learning experience,” said Glendenning. “We would typically work an eight-hour day in and around his studio doing various jobs like working on sculptures and building a crane for heavy lifting.”⁴¹

UW-River Falls

UW-River Falls has long-standing relationships with numerous regional corporations, particularly in the financial and agricultural fields. The university's College of Agriculture, Food, and Environmental Sciences places 150 interns per year with industry and agency partners. The College of Business and Economics has, on average, twenty interns in Wisconsin companies each year.

AgStar Financial Services, a cooperative providing a broad range of financial services and business tools for agricultural and rural clients in Minnesota and northwest Wisconsin, has been an outstanding partner for many years. AgStar is a major supplier of internships for UW-River Falls students with agricultural and financial interests. AgStar has employed about 15 interns from the

⁴⁰ Based on the 2011-12 academic year.

⁴¹ For more information on PACCE, please see the following brochure: www.uwplatt.edu/pacce/files/pacce_mission_brochure_2011.pdf

UW-RiverFalls campus over the past five years. Many of these internships lead to full-time employment with AgStar once students have completed their studies.

UW-River Falls also regularly has interns and employees working at BioDiagnostics, a Wisconsin-based seed testing company.

Annually, 350 to 450 students from multiple disciplines participate in internships across a wide variety of settings. An additional 200 to 300 students annually participate in student teaching.

UW-Stevens Point

- Over 90 percent of students in the College of Professional Studies are placed in local businesses, health care centers, K-12 public schools, parochial schools, and community agencies through internships, externships, practicum, and fieldwork courses each year. They provide well over 80,000 person-hours each year at these sites.
- The College of Natural Resources (CNR) strongly supports a large intern program that has been in existence since the early 1970s. CNR has placed about 120 to 148 students per year over the last decade through cooperative agreements with 145 agencies. CNR generates over \$700,000 annually for intern student salaries. Essentially every Wisconsin Department of Natural Resources office currently employs at least one UW-Stevens Point alumni who interned with the agency in the past.
- Internships in graphic design have regularly placed students around the country. Design students also intern internationally on a regular basis. Many students are offered jobs at internship host locations, contributing to the near 100 percent placement after graduation. There are currently 180 students in the graphic design major.
- Over the last decade, the number of arts management majors has at least doubled in part because of these professional placements and because of the strong association with the School of Business. Students are regularly placed in the London internship program.
- Media studies internships and externships regularly place students in many of the media markets in Wisconsin and London. These experiences lead to employment opportunities in many instances.
- Though more rare in Theatre, Dance, Studio Art, and Music, internship opportunities do exist domestically and internationally with students taking full advantage of these opportunities.
- UW-Stevens Point students do thousands of hours of tutoring and volunteering in local classrooms. They also work in many daycares and before/after school programs, including the YMCA and the Boys and Girls Club.
- Students in the Division of Interior Architecture are incorporating sustainable designs with the Sorenson Greenhouse and Community Garden project. The goal of the project is to renovate an abandoned warehouse in downtown Stevens Point.

UW-Stout

One of the ways to strengthen the ties between students and Wisconsin business is the Cooperative education (co-op) program at UW-Stout. These co-op opportunities provide students with experience working at businesses, which in many cases leads to employment with their co-op employer after graduation.

Cooperative education at UW-Stout is part of a nationwide college program that integrates career-related work experience with academic course work. The co-op program supports UW-Stout's polytechnic designation by providing students the opportunity to experience an active and applied focus on learning in their professional field. The success of the co-op program is based on a framework of collaborative partnerships between employers, students, and the university.

UW-Stout emphasizes early and ongoing experiential learning opportunities. Co-ops are one such opportunity, with 876 students participating in 2010-11. Co-op students consistently earn high salaries, with salaries above \$12 per hour for the past six years.⁴²

Eighty-four percent of UW-Stout graduates participate in some form of experiential learning before they graduate, including student teaching, field experience, cooperative education, internships, study abroad, practicum, and independent study. UW-Stout students participate in co-ops, service learning, and research with faculty at rates at or above the national and peer averages.

These experiences help UW-Stout graduates find employment as evidenced by placement rates that have consistently exceeded 97 percent for more than 10 years, far exceeding peer and national comparisons.⁴³ Furthermore, salaries exceed national and UW System comparisons. The 2010-11 median starting salary of UW-Stout graduates from undergraduate programs was \$37,000 per year.

⁴² The full 2010-11 annual cooperative education report can be found online:
<http://www.uwstout.edu/services/careerservices/upload/cooprpt.pdf>

⁴³ The full *2010-2011 Career Services Annual Employment Report* can be found online at
<http://www.uwstout.edu/services/careerservices/upload/anrpt.pdf>

Many companies who recruit Cooperative Education students from UW-Stout use this co-op experience as their talent pipeline for professional positions. Some of the companies who hired UW-Stout co-op students in 2010-11 included:

3M	Grand Hotel Marriott Resort	Nestle USA
AFLAC	Greenheck Fan Corporation	Nosco, Inc.
American Family Insurance	Ho-Chunk Gaming	Prent Corporation
American Medical Systems	Wisconsin Dells	Quaker Oats/ Pepsico
Arandell Corporation	Hormel Foods	Rockwell Automation
Belmark, Inc.	Imagine Print Solutions	Scientific Molding Corporation
Bemis Company	J.F. Ahern Co.	Scotts Company
Biltmore	J.M. Smucker Co.	Sentry Insurance
Boston Scientific	JC Penney Company	St. Jude Medical
Carlson Hotels	Kimberly Clark Corp.	Ten-E Packaging Services
Chevron USA	Kohl's Department Stores	Thomson Reuters
Color Ink	Kwik Trip, Inc.	TIC-The Industrial Company
Crenlo	Land O'Lakes	Toro Company
E.O. Johnson Company	Land's End	WalMart Stores, Inc.
Enterprise Rent-A-Car	Malt O-Meal Company	Western Summit Construction, Inc.
Ethicon Endo-Surgery	Marcus Hotels & Resorts	Xcel Energy
Footlocker / Eastbay	Medtronic	
General Mills	Miller Coors	

UW-Superior

In 2011, the Richard I. Bong Veterans Center posted an announcement for their first marketing internship. This position was tasked with planning, marketing, and executing the center's inaugural Military Vehicle Show. In reviewing the internship, the Center said:

Peter Stone turned out to be more than we had hoped for in an intern. It quickly became evident that his youthful enthusiasm was complimented with insights and ideas from his Business and Marketing courses, all of which he was ready to implement. Pete took a measured approach to the task; he spent time getting to know our organization, helped define what we hoped to accomplish with the event and then worked with sponsors, board members, staff, volunteers, vendors and vehicle owners to bring together all the threads that made up the fabric of the event. Throughout the weeks of event preparation Pete was also happy to help promote the Center in general. He spent time off-site with a classic military vehicle and dressed in an historic military uniform to promote museum visitation and to build excitement for the event. When the day of the event arrived Pete's efforts on behalf of the Center paid off handsomely as we welcomed over 600 visitors to our grounds and galleries. This one day attendance represented over 6% of the Center's paid visitation for all of 2011. Perhaps more importantly, the success of the event demonstrated to those of us who worked with Pete the value of seeing our organization through a fresh set of eyes and, left us with an appreciation for a local talent pool we had not heretofore tapped.

Jake Anderson is another example of a successful UW-Superior internship experience. The real-world scenarios in his classes at UW-Superior and experiences as a store manager at Duluth’s Miller Hill Mall helped Jake Anderson get into a ten-week internship management program at Target. “I have worked retail for about 5 years,” says Jake, “over that time I acquired many skills that help to put me into the position to succeed with my internship at Target.” Recently graduated, Jake is running ahead of the pack a position as an Executive Team Leader at Target.

UW-Whitewater

Students in every college have the opportunity to participate in internships, which can be paid or unpaid. Frequently, these internship placements result in full-time employment following graduation. UW-Whitewater students were involved in 2,764 internship experiences in 2011. The following table shows how these experiences are broken out by college:

College of Arts and Communication	362
College of Business and Economics	879
College of Education and Professional Studies	663
College of Letters and Science	335
All others	525

College of Arts and Communication

The goal of the internship program in the College of Arts and Communication is to provide students with a grounded, real-world experience in a professional environment under the supervision of an experienced professional. The internship program contributes to the professional preparation of students and provides an invaluable opportunity to further implement the skills that they acquire in the classroom.

College of Business and Economics

Business students may take an internship for credit during their junior or senior year. Some students take multiple internships, one for credit and the others for the added experience. The College of Business and Economics also has opportunities for students to work with faculty in real business projects through the Wisconsin Innovation Service Center, the Global Business Resource Center, the Fiscal and Economic Research Center, and the Volunteer Income Tax Assistance program.

College of Education and Professional Studies

All clinical and field experiences in teacher education align with the conceptual framework through the use of the ten Wisconsin Standards for Teacher Development and Licensure or specialty standards for advanced programs. Every clinical and field experience is evaluated through the use of multiple rubrics keyed to these standards to ensure quality and rigor.

College of Letters and Sciences

All majors in the College of Letters and Sciences include an internship option. These opportunities link knowledge and skills to applied experiences that lead to future employment. Internships are

provided in a range of contexts including government offices, parks and forests, highway departments, veterinary offices, and healthcare practices.

A notable example of the value of internships was the recent experience of Ron Chester.⁴⁴ Chester, a geography student from Williams Bay, spent a month in Yellowstone tracking grizzly bears with world-renowned biologist Jim Halfpenny. His work is part of an ongoing effort to identify individual bears in the Yellowstone Park area and is published in a new book titled *Grizzly Gallery: Grizzly Bears of Yellowstone's Northern Range 2012*. Chester said, "I walked out of Yellowstone with a lot of knowledge. I received valuable experience and had my work published, which will help when applying for grad schools."

⁴⁴ *Student tracks grizzly bears at Yellowstone, appears on national TV* (<http://www.uww.edu/news/archive/2012-07-grizzlies>)

STEM Disciplines

The emerging economy will require many more college graduates with a background and training in science, technology, engineering, and math, often referred to as STEM fields. UW System institutions are producing more graduates each year with majors in a STEM area and are undertaking efforts to encourage more students to study in a STEM discipline. Examples of these efforts follow.

UW-Milwaukee

In keeping with its research mission, UW-Milwaukee offers a rich array of K-12 STEM activities that are aimed at improving young people's performance in STEM classes and increasing interest in STEM careers. The following list outlines the variety and scope of the University's K-12 STEM activities

Upward Bound Math and Science

UW-Milwaukee Upward Bound Math and Science (UBMS) is a pre-college program funded through the U.S. Department of Education and sponsored by the University of Wisconsin-Milwaukee. The program helps students in grades 9 through 12 to realize that they can excel in math and science and encourages them to pursue a STEM degree. Services provided by UBMS include the following:

- Tutoring
- Academic advising
- Career exploration
- College admissions information and application assistance
- Financial aid and scholarship information and application assistance
- Academic workshops
- College campus visits
- Cultural activities
- Parent workshops

During the school year, students attend after school tutoring on the UW-Milwaukee campus at least two days a week. Students also meet with UBMS advisors to discuss their academic performance. Students participate in other academic enrichment activities, STEM workshops, and cultural activities.

During the summer, participants attend classes, tutoring sessions, STEM workshops, and educational activities, and cultural activities.

School of Education

The Department of Chemistry and Biochemistry became involved in the Better Elementary Science Teaching (BEST) Project in 2008. This is a three-year project under the School of Education, and it is funded through the Wisconsin Department of Public Instruction. BEST was designed to improve elementary education teachers' knowledge about science and to promote effective science teaching methods.

Under BEST, sixty teachers from the Milwaukee Public School District were divided into two groups, kindergarten through second grade and third through eighth grade. Final assessments revealed that the participant's knowledge of chemistry concepts in both groups significantly improved over the three years.

The Framework for Science Teaching Project, which is a continuation of BEST, began in 2012. It is funded by and involves teachers from the School District of West Allis - West Milwaukee and the Milwaukee Science Academy. The program will also run for three years and will have similar instruction scheduling.

Additionally, beginning in 2012, the Department of Curriculum and Instruction collaboratively developed and piloted Pedagogical Content Laboratory Courses. In the Chemistry course, K-12 teachers are instructed on science content and are then expected to develop lesson plans complete with instruction, activities, and assessments. The course is framed around the National Science Education Standards.

Early results indicate that teachers better understood the necessity for content knowledge when preparing to teach science in K-12. They also better understood how many pedagogical components are required to successfully teach science (e.g., identifying misconceptions, age-appropriate instruction, writing valid and reliable assessments). The funding for this project was provided by the Carnegie Teachers for a New Era project.

The Alliance for Teaching Mathematics to Special Education Learners is another forum for teachers to strengthen their knowledge of mathematics content and to enhance teaching. "Even though it's a growing area within special education, there has not been as much emphasis on teaching math as on teaching literacy," Associate Professor Winn says. "We've always had, at least on the academic side, more emphasis on literacy because so many students struggle with literacy. We just haven't had the knowledge base on how to do interventions for students struggling with math, especially older kids." To increase that knowledge base, teachers have been meeting with educators since spring 2010 and participate in coursework like algebraic reasoning, geometry, statistics, and probability.

College of Letters and Science

The NIEHS-NIH Children's Environmental Health Sciences Core Center, housed in the Department of Chemistry and Biochemistry, has received national competitive funding for K-12 STEM programming in the Milwaukee Public School System and surrounding school districts for 16 years. Currently, the Center is funded to provide high school science teachers with professional development and their students with authentic research experiences in their biology courses. Activities include intense experimentation relating biological science concepts and environmental health, communicating their results in the form of papers, and presenting posters and talks at an annual student conference. Teachers receive extensive scientific support throughout the year from this ambitious program.

In 2011-12, 23 teachers and 742 students from 21 schools participated in these activities.

In addition, the Departments of Physics, Chemistry, and Geosciences also work in collaboration with the Manfred Olsen Planetarium to improve local science instruction. With the support of a National Science Foundation grant, the Research Experience for Teachers program assists teachers in deepening their science knowledge and reconsidering how they teach the chemistry, geosciences, and physics curricula. Teachers work full-time with their faculty mentors to develop an original teaching project suitable for incorporation into classes that they regularly teach.

The UW-Milwaukee Math Circle is another program targeted at middle and high school students. Math circles are gatherings of motivated students and teachers looking for new challenges in mathematics and a deeper understanding of the subject. While problem solving is emphasized, the circles focus on the process of discovery and are designed to introduce students to deeper mathematical thinking that is absent in most curricula.

Collaborations also occur between the University and high schools in more direct ways. Physics Associate Professor Vali Raicu collaborates with Kristin Michalski, a science teacher from Mukwonago High School, to introduce students to research done in the Physics Department. Students visit Raicu's lab once a year to learn about current research topics and to conduct simple measurements.

Students also participate in occasional research projects that Michalski developed in collaboration with Raicu. During these projects, students measure the perimeter of natural and human-made objects (e.g., the contour of the football field versus that of a pond) at different length scales. The purpose is for the students to understand the concept of fractality and how that affects length measurements. This project has been well received by students and was covered by the local media.

The collaboration between Michalski and Raicu started several years ago as a grant-supported summer research project and has continued with support from Raicu's research funds. Currently, these activities are an integral part of Raicu's National Science Foundation grants as well as a Research Growth Initiative grant.

The University also hosted local high-school and middle-school participants in the 2012 North American Computational Linguistics Olympiad. Competitors have three hours to solve approximately four linguistic puzzles that challenge them to decipher texts in rare languages using logic and computational skills. There is strong participation from suburban schools, urban schools, and homeschool students. The Departments of Linguistics, Computer Science, and Mathematical Sciences participated in the event with collaboration from the Milwaukee Art Museum.

School of Continuing Education

STEM Today, Degree Tomorrow provides 12 weeks of Saturday workshops that focus on project-based learning. Students have opportunities to make presentations to the community, to collaborate with other teams, and to take a field trip to the Museum of Science and Industry in Chicago. In 2011 and 2012, a total of 79 students in the fifth through eighth grades participated. About 95 percent of the students were from racial or ethnic minority backgrounds, and 71 percent were female. After the program, 79 percent indicated an interest in going to an institution of higher education. Students were also able to list more careers opportunities in STEM fields following participation.

Water Field Adventure, offered by the office of WATER Education Outreach, is a week-long summer camp program dedicated to STEM activities with a focus on water-related curriculum. Each summer, 12 to 16 middle school students participate from all areas of the Milwaukee region.

School of Freshwater Sciences and School of Continuing Education

The Lake Sturgeon Bowl is a round-robin, double-elimination tournament for students who excel in math and science. Students receive national recognition for their skills while broadening their understanding of the oceans and Great Lakes. Each year, 125 students from 25 high schools across the state compete. Students who compete in the regional bowl are eligible to apply for scholarships from the National Ocean Scholar Program sponsored by the Consortium for Ocean Leadership.

The Bowl's Ocean Odyssey recruits under-represented Milwaukee high school students and teachers to utilize a scaled approach to prepare for the competition. Students have the opportunity to extend their knowledge of the Great Lakes and oceans and to participate in actual fieldwork on Lake Michigan.

Another collaborative competition, Building the Water Generation ROV (Remote Operated Vehicle) Competition, was developed in partnership with the Milwaukee Water Council, School of Freshwater Sciences, School of Continuing Education, and Discovery World. The competition challenges students to design and to build an ROV that can undertake a simulated mission. For example, in 2010, ROVs simulated a series of tasks based on an undersea Hawaiian volcano.

To build the ROV, high school student teams are matched with water-sector professionals who volunteer their time and technical expertise as mentors and technical assistants. The projects are organized through a 'pseudo' company structure with an investment of \$200. The competition helps students to develop technical, communication, teamwork, problem-solving, and critical thinking skills. The competition also raises awareness of freshwater career opportunities.

A team from Milwaukee has made the finals the last two years and last year was runner up in the national finals.

School of Freshwater Sciences

- With support from the National Science Foundation Division of Ocean Sciences, university students have participated in the Research Experience for Undergraduates. Over the summer, students participate in hands-on research, network with professions, and are exposed to aquatic science careers. Participants are directly involved in cutting-edge investigations of large water bodies using modern equipment and concepts. About 12 students participate in the program per year.

- The Aquatic Sciences Exploration: Onboard and Online Program provides immersion science learning to middle and high school students as well as teachers during authentic research cruises on Lake Michigan. Distance learning communication technologies, such as wireless shipboard-based interactive videoconferencing, allow participants to share their findings with others. The program provides the mechanism to test both the hands-on, hypothesis testing components (“onboard”) and the distance learning component (“online”) using evaluations as components of the program material. The program encourages the inclusion of under-represented students from the Milwaukee area.
- The goal of the five-year Great Lakes Sea Grant Network project is to implement a Great Lakes Center for Ocean Science Education Excellence (COSEE). COSEE will help teachers deliver high-quality educational programs in aquatic sciences by creating dynamic linkages between Great Lakes researchers, fourth- to tenth-grade educators, and students. The seven regional COSEEs strive to help U.S. citizens become more scientifically literate and environmentally responsible through standards-based science curricula and programs.
- In conjunction with the National Geographic Society JASON Project, faculty produced an in-class curriculum on invasive species and a web video game about ecological invasions. Both products were aimed at middle- and high-school audiences.

College of Engineering and Applied Science

The FIRST Tech Challenge, hosted by UW-Milwaukee, is an intermediate robotics competition designed for high-school students. Student teams work alongside mentors to apply real-world math and science concepts to an annual challenge in sports-type tournaments. Through their involvement with FIRST, students discover the rewards of collaboration, and they develop a deeper understanding of innovation and engineering.

In January, approximately 200 students in 24 teams competed in this year's Championship. Team registration was filled within 10 weeks of the Challenge announcement, which is a testament to the quality of the program. Teams come from Wisconsin, Illinois, Iowa, Indiana, Michigan and Minnesota. Two teams from the Wisconsin tournament win an invitation to the World Competition.

Department of Mathematical Sciences

- In 2004, the Department of Mathematical Sciences took a leadership role in a \$20 million National Science Foundation (NSF) grant for improving the mathematical preparation of pre-service elementary and middle school teachers.⁴⁵ UW-Milwaukee’s Center for Mathematics and Science Education Research administered the award and coordinated efforts between UW-Milwaukee, the Milwaukee Public Schools (MPS), and the Milwaukee Area Technical College.
- Faculty and other instructional staff have expanded their outreach to include the professional development of in-service MPS teachers with grant support from the Wisconsin Department of Public Instruction and NSF.

⁴⁵ For more information, please see the Milwaukee Mathematics Partnership website (<http://www4.uwm.edu/Org/mmp/>)

- Graduates of the Department's PhD program are important faculty members of numerous two-year and four-year colleges in the UW System. Alverno College and the Milwaukee School of Engineering also have alumni on their faculty.
- The Department offered two national American Mathematics Contests this year, which are sponsored by the Mathematical Association of America. While the exams are typically administered by the students' schools, the University supported a number of students in the Milwaukee area whose schools were not offering the exams.

Student Success In Mathematics

At UW-Milwaukee, 46.8 percent of new freshmen need help bringing their math skills up to college level.⁴⁶ To serve these students and open the door to a STEM education, UW-Milwaukee supports several dynamic programs:

- For the past three years, Panther Math Prep offers online or on-campus classroom sessions over the summer to help incoming first-year students place into a higher-level math course. This helps students avoid taking non-credit remedial math courses that may slow their time to graduation. These sessions are offered as a free service to students. Last year, 234 students registered for Panther Math Prep, and 56 percent improved their performance when retaking the math placement test.
- As part of the Access to Success Program, UW-Milwaukee has introduced the ALEKS⁴⁷ program for remedial math instruction. The ALEKS system is an automated website driven by artificial intelligence that is designed to present students with regular math practice assignments and to assess their retention of the practice material. Each student works through the course content at his or her own pace and in the order in which the student is ready to learn the concepts. In 2010, students using ALEKS were 7.5 percent more likely to enroll in the following academic year and 19.2 percent more likely to achieve satisfactory performance than those not using ALEKS.⁴⁸
- The Academic Opportunity Center recognizes that some students' educational experience may not have prepared them to succeed at UW-Milwaukee. The Summer Bridge Program offered by the Center helps students with their transition from high school by providing four weeks of intensive instruction, advising, and networking opportunities. Students, taught by experienced college instructors, complete college-level assignments and learn basic math skills necessary to succeed in college.

⁴⁶ UW System Office of Policy Analysis and Research. *The New Freshman Class: Fall 2011*. http://www.uwsa.edu/opar/orb-im/im/new_freshman/nfcf11.pdf.

⁴⁷ Assessment and Learning in Knowledge Spaces (ALEKS)

⁴⁸ Of the Fall 2010 cohort participating in a remedial math redesign course, 68.8 percent enrolled in the second fall semester and 75.0 percent achieved satisfactory performance. Of the cohort that did not participate in a remedial math redesign course, 61.3 percent enrolled in the second fall semester and 55.8 percent achieved satisfactory performance.

- The Student Support Services Program has conducted a summer bridge program for incoming freshmen every summer since 2001. This experience serves two general purposes: 1) to increase academic preparation, including Math preparation, and 2) to ease students' psychological transition by familiarizing them with the campus, available resources, staff, and instructor expectations. Last year, 107 new freshmen completed the summer bridge program. Of the 84 who had a bridge Math course, 79 retook the Math placement test at the end of bridge. Of the 79 students, 20 advanced at least one Math course.

UW-Eau Claire

Materials Science Center.

- The UW-Eau Claire Materials Science Center hosts NanoDays for kids and adults to learn about materials at the nanoscale. Visitors can tour the Center, see the instrumentation used by scientists to investigate materials, and enjoy hands-on activities.
- Blugold Beginnings Presentations educate and inspire students, especially underrepresented, low-income, or first-generation students, to believe that a post-secondary education is important, attainable, and available at UW-Eau Claire.
- Nanoscience presentations are made at local schools across the area.
- Materials science career presentations are made to over 850 students at local schools.

Department of Physics and Astronomy

- Science Theater physics demonstrations reaches over 1,500 every year. Several faculty also do presentations outside of this program to reach an additional 200 students each year.
- The Planetarium is a popular destination for many residents of the Chippewa Valley. In a typical year, over 2,000 people see a show. The majority of visitors are K-12 students or are part of youth groups.
- In collaboration with other STEM departments, faculty members provide continuing education opportunities for teachers. Faculty members are also active in the Wisconsin Association of Physics Teachers, an organization which fosters communication and collaboration between high school physics teachers and post-secondary educators.

Department of Chemistry

- The Chemistry Demo Show, which is a one-hour presentation featuring fundamental physical and chemical principles, introduces local students to science in a fun, interactive way.
- Faculty members serve as science fair judges for local middle schools.
- Professor Scott Hartsel has initiated a science-based program called SciEncounters with the Eau Claire Boys and Girls club. This program involves UW-Eau Claire students with local youth to work on science-based activities.

Department of Mathematics

- The students and faculty of the department recently hosted the 30th Annual Regional Mathematics Meet for area high school students. Entrants in individual events attempt to solve three math problems, worth from two to five points, in a period of fifteen minutes. This year, 31 teams from 16 public and private schools in the Chippewa Valley participated. Team trophies and individual scholarships were awarded to winners.
- Dr. Manda Riehl, an assistant professor, is the director of Opportunities for Outstanding Mathematics Performance for Hmong Students. The program stimulates interest in mathematics among Hmong high school students in the Eau Claire area, and it recently received funding for a third consecutive year from the Mathematical Association of America's Tensor-SUMMA: Strengthening Underrepresented Minority Mathematics Achievement grants program.
- Dr. Sherrie Serros, a professor, is involved in a number of active projects related to K-12 STEM like the UW System PK-16 Teacher Quality Initiative⁴⁹, the Coaching Mathematics Learning Community program⁵⁰, Communicating about Mathematics with Students through Podcasting, and Creating Mathematics Excellence.
- The Chippewa Valley Math Teachers' Circle is a teacher-led mathematical problem-solving and professional development experience for middle and high school teachers.⁵¹ The goal of the program is to help today's teachers and students become flexible, creative, and collaborative problem solvers. In a nationwide survey conducted in Fall 2010, Math Teachers' Circle participants reported increased enthusiasm for mathematics and greater use of interactive, student-centered problem solving in their classrooms. Many said the program has enabled them to see themselves as mathematicians. Teachers also reported that participating in a Math Teachers' Circle has increased their belief that all of their students are capable of doing mathematics.

UW-Green Bay

- UW-Green Bay offers the Eco U: Water Resources summer camp to students in tenth grade and beyond. Led by UW-Green Bay's outstanding natural resources faculty, campers gain fieldwork, classroom, and laboratory experience as they build awareness of some of the many issues confronting fresh water ecosystems. In addition to being fun, challenging, and engaging, campers have the option to attend this camp for one unit of college credit.

⁴⁹ For more information, please see <http://tqi.uwsa.edu/index.htm>

⁵⁰ For more information, please see <http://www.cesa11.k12.wi.us/prodev/CMLCGrant.cfm>

⁵¹ Please see the Math Teachers' Circle Facebook page at <http://www.facebook.com/MathTeachersCircleChippewaValley?ref=nf>

- Life's a Lab summer camp, offered in partnership with Bellin College, provides an ideal experience for high school students interested in pursuing a college degree in science or a profession that requires a science foundation. Each day, campers spend their mornings in UW-Green Bay's state-of-the-art science labs for anatomy and physiology classes. In the afternoons, the team from Bellin College coordinates on-site tours for campers to observe and to encounter an array of health science professions.
- UW-Green Bay offers an exciting computer camp for students in eighth grade and up. The camp immerses students into the world of object-oriented programming and provides an introduction to developing software in a gaming environment. Students will learn how to make objects interact with each other through events and will learn how to program some basic games.
- The federally funded Upward Bound Regional Center for Mathematics and Science (RCMS) is a federally-funded, six-week pre-college program designed to enhance and enrich high school students' understanding of science, mathematics, and the nature of scientific research. RCMS serves approximately 60 students annually. Generally, more than 90 percent of RCMS students complete high school and enroll in college, and a high percentage of participants also enroll in STEM programs of study.
- The Lower Fox River Watershed Monitoring Program is a collaborative watershed education and stream monitoring program that focuses on identifying nonpoint source pollution within the Fox River watershed. In the program, teams of high school students and teachers assess the health of aquatic ecosystems by performing a variety of monitoring activities in selected watersheds of the Lower Fox Basin. The use of standardized methods and teacher training allows the teams to collect quality assured data. Data from the student monitoring is shared at the annual Student Watershed Symposium. There are currently 12 Green Bay-area high schools involved in the monitoring efforts.⁵²
- UW-Green Bay offers a number of credit courses in Green Bay-area high schools, including Principles of Chemistry.

UW-La Crosse

Degrees in high-need and leading-edge fields are important to meet the demands for workers in fast-growing occupations, such as in science, technology, engineering, and mathematics (STEM). In 2010-11, UW-La Crosse conferred 351 STEM degrees and 248 degrees in health fields. The university anticipates continued growth in these areas.

⁵² For more information, please see <http://www.uwgb.edu/watershed/>

UW-La Crosse Physics Department is No. 3 Nationally

The UW-La Crosse Physics Department has been consistently ranked among the top ten bachelor's degree only departments according to the American Institute of Physics Statistical Research Enrollment and Degrees data. In 2008-2010, UW-La Crosse ranked 3 based on 23 graduates per year. In 2012, UW-La Crosse graduated 27 undergraduate degrees.

Improving Teacher Standards

There is a critical shortage of qualified physics and physical science teachers. Two-thirds of new physics teachers lack a physics degree, and over 90 percent of middle school physical science students are taught by teachers without a physical science major or certification.⁵³

To help combat this trend, the UW-La Crosse Physics Department received Physics Teacher Education Coalition (PhysTEC) funding to further develop its physics teacher education program and increase the number of physics majors interested in teaching high school physics. The department received \$73,330 from PhysTEC. The UW-La Crosse's College of Science and Health more than matched the grant, bringing the total to \$152,203.

UW-La Crosse was one of only seven institutions chosen from 35 national applicants as PhysTEC sites for 2012-15. "Our department has a strong record of recruiting physics majors to its very successful undergraduate program," explained the department chair. "Our faculty members are committed to education."⁵⁴

In another effort to improve education and educational standards, UW-La Crosse implemented the Secondary Teacher Education Preparation (STEP) Program in various STEM disciplines. Teacher candidates earn a bachelor's degree in an appropriate content major (e.g., biology) combined with professional education coursework and multiple field experiences. A key feature of the program is having the subject coursework provided by the specific discipline in order to provide teacher with greater depth in the field. Ultimately, STEP leads to Early Adolescence-Adolescence teaching licensure. To support the goals of the STEP program, the Science Departments hired new faculty in the areas of biology education, physics education, and chemistry education.

Community Outreach

Girls in Science is a summer workshop to encourage girls' interests in science and math with hands-on learning and activities in an environment that is empowering, enriching, and fun. Programs are offered to girls entering sixth through eighth grade. Programming includes activities like examining a mock crime scene for blood samples, finger prints, and other evidence to solve a crime.

Because of the popularity of the Girls in Science summer workshop program over the past 15 years and in response to community interest in a similar program for young boys, the Boys Science Exploration summer workshop program was developed and successfully offered during the past two years.

⁵³ From the Physics Teacher Education Coalition (<http://www.phystec.org/about/index.php>)

⁵⁴ UW-L physics dep. Is No. 3 nationally. (<http://spotlight.uwlax.edu/physics-department/>)

In addition, the Physics department conducts outreach to regional elementary schools where demonstrators show students fun physics phenomena.

The River Studies Center

The UW-La Crosse River Studies Center (RSC), created in 1972, focuses on research and informational programs pertinent to the Upper Mississippi River. During the past 30 years, the RSC has expanded its research program to rivers, streams, lakes, and wetlands across Wisconsin, the Midwest, and the nation. Faculty affiliated with the RSC are highly competitive and successful in securing financial support for sustained aquatic environmental research.

Scholarly investigations by the RSC have provided research opportunities to nearly 100 graduate students and more than 250 undergraduates. The RSC has extensive interdisciplinary partnerships with several state and federal agencies, including the U.S. Geological Survey, the Wisconsin Department of Natural Resources, the Minnesota Pollution Control Agency, the National Park Service, and the Environmental Protection Agency.

The SMATHIE Grant Program

The Sports Medical Athletic Therapist International Exchange (SMATHIE) helps students and faculty study the fields of sports science, athletic training and sports medicine in the United States and the European Union. The collaborative efforts of the international partners will develop international models of health care delivery and will enhance the field of exercise-related health care. The program is funded by Department of Education grants.

McNair Scholar Program in STEM

The McNair Scholars program provides low-income, first-generation, and underrepresented minority students with support and preparation for graduate school. The McNair Scholars program at UW-La Crosse currently serves 26 students annually, approximately 42 percent of whom are STEM majors. This proportion will increase to 50 percent of 28 students in 2012-13. At least two McNair Scholars each year complete a 10-week summer undergraduate research project through a collaborative partnership with the Upper Midwest Environmental Sciences Center.

First Year Research Exposure

The First Year Research Exposure (FYRE) program at UW-La Crosse is a new academic diversity initiative in the College of Science and Health. FYRE employs an informal learning community model in order to improve achievement and retention of ten first-year students of color in the STEM fields.

Students are provided with the introductory coursework and career exploration necessary to help them progress expediently toward graduation with a STEM degree. In particular, students participate in a comprehensive introduction to college-level math and science coursework, ongoing tutoring, academic support, and peer mentoring. This initiative is partially funded by the Wisconsin Alliance for Minority Participation.

UW-Oshkosh

In the College of Education and Human Services, the Alternative Careers in Teaching Program (act!) is a teacher licensure program designed specifically for working professionals with a bachelor's degree and at least five years of work experience who desire to teach secondary-level mathematics or science. This partnership between the UW Colleges and UW-Oshkosh is a response to the statewide demand for highly-qualified math and science teachers.

In Summer 2011, the five-year-old program admitted its 100th student. Thirty individuals have already completed the program, several of whom received offers for teaching positions before completing the program.

Since its inception in 2006, 29 students have been awarded nearly \$350,000 from one of two Robert Noyce National Science Foundation grants that total \$1.5 million dollars. The act! program's creators expect to present another \$850,000 in Noyce awards to students who are currently enrolled or who are accepted into the program in the future.

UW-Parkside

UW-Parkside hosts a series of events that foster curiosity and engagement in science and technology disciplines. These events reach current and future students in the region and are designed to encourage exploration and increase interest in careers in sciences and technology-related disciplines.

Biological Sciences and Computer Sciences Department

The Biological Sciences and Computer Sciences Departments host aspiring scientists from regional high schools for the annual DNA Days. Students engage in hands-on experiments and research on DNA and in molecular biology. Participants also have a chance to explore potential careers associated with majoring in biology and computer science.

UW-Parkside's Biological Sciences Department hosts regional middle and high schools students, teachers, and community members for Science Night presentations annually.

The Computer Science Department actively participates in the Educator Outreach Project. The goal of this project is to encourage local high schools with finance, accounting, business management, human resources, marketing, and IT/computer science courses to promote secondary and post-secondary education in these fields. Business and information technology educators from Gateway Technical College, Milwaukee Area Technical College, the College of Lake County, Westosha High School, Union Grove High School, and St. Joseph Academy visited the UW-Parkside campus to discuss articulation agreements and other potential collaborations.

College of Business, Economics, and Computing Outreach

The College of Business, Economics, and Computing (CBEC), in partnership with the Office of Admissions, hosts local educators and counselors from high schools and colleges in Milwaukee, Racine, Kenosha, and Lake Counties to share information about majors and careers in business, economics, and computer science. Outreach has also served as a vehicle to foster partnerships, to

build community engagement, and to educate secondary school students about their opportunities in business and related technical fields.

Students, faculty, and staff in STEM disciplines also participate in presentations to high school business classes. The UW-Parkside representatives discuss business career possibilities and the benefits of attending UW-Parkside to pursue a degree in business. These events also include an admissions presentation to provide students with individualized attention regarding their career and educational goals.

MATHCOUNTS

MATHCOUNTS is a national contest designed to enhance students' skills and promote mathematics excellence. Mathletes from the Prairie School of Racine and Kenosha's Mahone, Lance, and Washington middle schools participate in the annual competition. MATHCOUNTS is sponsored by UW-Parkside Enrollment Management, the Computer Science Department, the Wisconsin Society of Professional Engineers-Southeast Chapter, Kenosha Unified School District, Raytheon, the National Defense Education Program, Northrop Grumman Foundation, National Society of Professional Engineers, CNA Foundation, ThinkFun, Texas Instruments, and 3M Foundation.

UW-Platteville

- About 40 high school students attend the summer Pre-Veterinary Camp hosted by UW-Platteville. Students can practice skills like suturing, injections, dissection, and large-animal physicals. Participants also have the opportunity to observe animal behavior and surgery.
- Each year, more than 500 students tour the cadaver lab. Through a combination of enthusiasm, humor, and real-life application, professors explain the basic anatomy and physiology of the human body to each high school class, emphasizing respect for the cadavers themselves. This positive learning experience allows students a unique opportunity to view a cadaver close up and to gain some understanding of how the many systems of the body interact. "It's definitely interesting," exclaimed one of the students. "The cadavers were totally different than I expected ... it's really neat."⁵⁵

⁵⁵“UWP offers cadaver tours to high school students.” (<http://www.uwplatt.edu/news/2007/05/uwp-offers-cadaver-tours-to-high-school.html>)

- The Society of Plastics Engineers-Milwaukee and the Center for Plastics Processing Technology at the UW-Platteville offer a helping hand to middle and high school science and technology programs in the region. Dr. Majid Tabrizi, professor of plastics technology, played a major role in creating the program. “We have a multi-million dollar investment in our center. This is perhaps the most efficient way for the state to offer science and engineering to a middle and high school curricular program without any additional cost. Our goal is to open our laboratory to high these students to prepare a workforce for the ever-growing plastics industry in the region,” he said. “We’re also trying to expose students to higher education and teach them about the field of manufacturing at a young age so they can plan their future more wisely.”⁵⁶ Under the supervision of UW-Platteville students and faculty, pre-college students can operate equipment like injection molders, compression molders, transfer molders, and sheet-fed thermoformers.
- High school students participating in the Explore Engineering Summer Program receive hands-on experience from university professors in multiple engineering disciplines, math, and chemistry. Students who successfully complete the summer course and decide to enroll at UW-Platteville will be given college credit for the program.
- This year, UW-Platteville offered a week-long forensic science summer camp. High school students processed and evaluated crime scenes and analyzed the forensic evidence. Students explored the theory behind DNA analysis, chromatography, spectroscopy, and microscopy.⁵⁷
- As a result of a Chancellor's Opportunity Fund award, students from Messmer High School in Milwaukee have the opportunity to tour and explore the educational opportunities offered by the biology department at UW-Platteville. About 25 students at Messmer High School participate in the biology workshop.
- Pioneering Your Future, which is held in conjunction with the Girl Scouts Science and Technology Day, helps girls learn about career opportunities in STEM fields. Topics include areas like material science, robotics, and agriculture engineering.
- UW-Platteville also works to support Boy Scout troops in their STEM interests. For example, the Society of Physics Students helped Boy Scouts earn their Nuclear Science merit badge.
- UW-Platteville’s Pioneer Farm, a research and demonstration facility, offers tours to grade school students. One teacher said, “Many of the places we visited in person, the fourth graders had learned about during the year. We love visiting Pioneer Farm, as it is a unique hands-on experience for the children. We think it is important that they see and understand the importance of what goes on at the farm. We feel it is especially important for them to see the big picture of farming.”⁵⁸

⁵⁶ Milwaukee SPE Newsletter. http://www.milwaukee-spe.org/newsletters/newsletter_2011_09.htm

⁵⁷ For more information, please see http://www.uwplatt.edu/cont_ed/ForensicScienceCamp/

⁵⁸ “Milwaukee Students Experience Pioneer Farm.” (http://www.uwplatt.edu/pioneerfarm/news/2003_06_18.html)

- One of UW-Platteville's agricultural-based Greek organizations, the Sigma Alpha (SA) sorority, is dedicated to scholarship, leadership, and service. During the spring semester, SA's biggest activity is Ag in the Classroom. "We go to area elementary schools and meet with fourth-grade students and teach them basic facts about agriculture," said Kimberly Forrester, SA chapter president. "We want people to understand that everything is somehow tied to agriculture and to take the time to think about where their food comes from."⁵⁹
- About 2,200 students compete annually in the Future Farmers of America Agronomic Skills Contest. High school students participate in events ranging from agricultural mechanics to poultry judging to agronomy. One student said, "I not only learned more about animals, but I also got to see what college was all about."⁶⁰
- The UW-Platteville Block and Bridle Club hosts the annual Livestock Judging Contest. The contest is designed to be challenging for experienced judges, yet a good introduction for beginning judges. Up to ten students can be on each school team, and coaches can bring several teams.
- About 200 students compete annually in the Land Judging Contest. The contest is sponsored by the UW-Platteville Agronomy Club to encourage high school students to participate in land judging.
- Agri-Ambassadors is a student organization that represents UW-Platteville and the School of Agriculture. Agri-Ambassadors are chosen on the basis of excellence in academics, leadership, and student activities as well as a desire to promote the School of Agriculture.⁶¹ Ambassadors visit high schools in Wisconsin, Illinois, and Iowa to reach out to students.

UW-River Falls

Science Olympiad

In January 2012, UW-River Falls hosted about 600 students from 13 Minnesota and 10 Wisconsin high schools for the UW-River Falls "Border Battle" Science Olympiad Open Invitational Tournament. The event, organized by physics Professor Earl Blodgett, featured high school teams competing in 23 National Science Olympiad events as well as 6 trial events.

UW-River Falls was chosen as an ideal location for the event due to its close proximity to both western Wisconsin high schools and various Twin Cities schools. The event also highlighted UW-River Falls' strength in science programs, including the physics program. The Physics program ranked fourth in number of graduates compared to all comprehensive institutions across the nation in 2010.

⁵⁹ "Greek organizations at UWP serve campus and community." <http://www.uwplatt.edu/news/2010/02/greek-organizations-at-uwp-serve-campus.html>

⁶⁰ "High school students participate in FFA activity for skills." *The Exponent*.

<http://www.uwpexponent.org/2009/04/02/high-school-students-participate-in-ffa-activity-for-skills/>

⁶¹ For more information, please see <http://www.uwplatt.edu/soa/agclub/agambass.html>

Vincent High School Program

A collaborative Agricultural and Environmental Studies program between Vincent High School in Milwaukee and the UW-River Falls College of Agriculture, Food, and Environmental Science (CAFES) was initiated in 2001. Principal funding for the program comes from the Milwaukee Area Workforce Investment Board.

CAFES faculty and admissions staff visit Vincent High School for classroom outreach to students during the academic year. Additionally, a group of Vincent High School students and teachers engage in a weeklong program on campus involving classroom instruction and field studies each summer. The third program component involves providing supervised summer work activities at Vincent High School where selected students apply science-based skills in summer employment.

A key factor in the program's initial and continuing success is the involvement of teachers and administrators at Vincent High School.

UW-Stevens Point

Wisconsin Center for Environmental Education

The Wisconsin Center for Environmental Education (WCEE) at UW-Stevens Point actively engages Wisconsin teachers and industry to provide students with access to STEM opportunities. WCEE was created by the legislature in 1992 to "promote, develop, and evaluate environmental education in the K-12 schools of Wisconsin." WCEE has a number of partnerships that allow it to offer award winning STEM programs. Three specific programs - KEEP, LEAF, and ESN - are discussed below.

The K-12 Energy Education Program (KEEP) is a partnership program with the state's energy community. The five largest utilities in Wisconsin have supported this program for the last 15 years. KEEP has developed award-winning energy curricula and has trained thousands of teachers in its use. KEEP is honored by the fact that the U.S. Department of Energy recommends the KEEP curriculum framework as a national model.

The Wisconsin K-12 Forestry Education Program (LEAF) is a partnership program with the forestry community of Wisconsin. Both public and private forestry funds have supported the development and offerings of the LEAF program for twelve years. The LEAF program is a national model for K-12 forestry/science education and has provided training to thousands of Wisconsin's teachers.

The WCEE Environmental Science Network (ESN) provides a statewide network of environmental science teachers with resources, information, and networks to improve their STEM-related curricular offerings.

As a result of programs like KEEP, LEAF, and the ESN, many quality private-public partnerships have been formed and tens of thousands of Wisconsin students have had value added to their STEM opportunities.

STEM Career Day

In addition to the work done by WCEE, Continuing Education annually offers a STEM Career Day to students in ninth through twelfth grades. Students choose from a selection of workshops in STEM topics offering a variety of different hands-on and discussion activities. Each workshop is presented by a STEM career professional from either on or off campus. The conference includes exhibit exploration activities, a morning keynote, three selected workshops across campus, and lunch. A conference on careers in science for middle schools boys is planned.

Women and Science Day

Continuing Education also coordinates the UW-Stevens Point Women and Science Day. Tailored to seventh- and eighth- grade young women, this conference offers participants a chance to explore UW-Stevens Point for the day and attend three, one-hour workshops presented by professionals in a wide variety of science-related careers. The conference provides young women with early exposure to science careers and highlights that female professionals hold these careers.

The School of Education

The School of Education also encourages students to think about higher education. The Gifted/Talented program provides enrichment programs for thousands of area elementary-age students through two programs. First, Youth in College offers summer enrichment experiences on a wide range of topics and is open to high academic ability students in kindergarten through eighth grade. The second program, College Days for Kids, encourages high-ability sixth graders to set appropriate educational goals.

UW-Stout

UW-Stout offers a multitude of STEM programs to get K-12 students interested in STEM careers and interested in going to college. Examples of ongoing, long-standing programs include:

- Science, Technology, and Engineering Preview at UW-Stout for Girls (STEPS) is a program originating at UW-Stout and currently in its 16th year. Middle school girls participate in workshops that give them hands-on experience with high-tech equipment and processes. Outstanding professors from the engineering, technology, and sciences programs teach the workshops. Campers also enjoy activities such as bowling, swimming, a pizza party, and karaoke. Surveys of the STEPS alumni from 1997, 1998, and 1999, all of whom could have graduated from college by now, indicate that STEPS was a tremendous success. The results showed that a girl who attended STEPS at UW-Stout was 2.9 times more likely to enroll in a college engineering or math program and 2.3 times more likely to enroll in natural science programs. The campers choosing STEM majors indicated that STEPS had a major influence on their choice.
- UW-Stout hosts the Skills USA regional competition at which high school competitors demonstrate skills needed by 21st century employers. Approximately 300-350 students participating annually.
- UW-Stout sponsors the STEM Career Days event with approximately 300-350 high school students participating annually.

- The State Science Olympiad brings 700 middle and high school students to campus annually.
- UW-Stout hosts the regional Rube Goldberg competition at which high school participants demonstrate engineering, teamwork, and problem-solving skills.

UW-Stout also has many grant programs to encourage involvement in STEM programs:

- The National Science Foundation Science, Technology, Engineering, and Mathematics Talent Expansion Program (STEP) forms a sustained partnership among high schools, UW-Manitowoc, and UW-Stout. STEP is a pipeline of seamless educational opportunities based in real laboratory research for 90 students over five years. STEP supports collaborative research, mentorship, and instructional programs.
- Through the U.S. Department of Education, Mathematics, and Science Partnership Grant, the Wisconsin Department of Public Instruction funded a consortium project serving nine school districts and 60 K-12 teachers to improve student achievement in mathematics and science. The project improves teachers' content knowledge and pedagogy in STEM areas using evidence based practices, including contextual teaching and learning strategies, differentiated instruction, balanced assessment, and technology integration.
- In collaboration with Menomonie High School teachers, UW-Stout mathematics faculty members were funded through the UW System Growth Agenda program to align the math curriculum between Menomonie High School and UW-Stout, to identify and eliminate gaps in student competencies, and to enhance content knowledge and teaching skills.
- "Polytechnic Mission, Applied Science Vision," a National Science Foundation S-STEM project, provided \$200,000 in scholarships to financially disadvantaged and under-represented UW-Stout STEM students.

UW-Superior

- The Rail and Intermodal Transportation Program helps youth, grades 9 through 11, explore careers in Transportation and Logistics and Engineering. Participants ride trains, enjoy technical tours of transportation facilities, and experience life on a college campus with others who have similar interests. This program is offered through a longstanding partnership between the UW-Superior Transportation and Logistics program and the Rail Transportation program at Michigan Technological University.

- The Lake Superior Rivers2Lake Program connects teachers and students to the ecology and history of the St. Louis River and the Great Lakes. Rivers2Lake brings engaging interdisciplinary experiential learning experiences to 15 teachers in 6 schools. The program also assists teachers with integrating Rivers2Lake topics into their curriculum. These teachers will, in turn, reach 300 students in their classrooms during the 2012-13 school year. Rivers2Lakes was awarded competitive funding from the National Oceanic and Atmospheric Administration’s B-WET, an environmental education program that promotes meaningful watershed educational experiences.
- For more than four decades, high school students from northwestern Wisconsin and northeastern Minnesota have gathered at UW-Superior to match wits in the Math Meet. Teams of eight students from each high school compete as a group and as individuals to solve an array of problems in geometry, calculus, algebra, analytic geometry, trigonometry, elementary functions, probability, and statistics. Events are timed, and problems call for multiple choice or short answer responses. In April 2012, more than 100 high school students participated.
- K-12 students and their parents from throughout northwestern Wisconsin and Minnesota participate in the annual Science Night. Some of the exotic displays featured snakes, roaches, live trout, shark dissection, and entomology.⁶² In 2012, over 400 students interacted in a hands-on environment with college students and faculty to learn more about science and career opportunities.
- The Wisconsin Space Grant Consortium (WSGC) is a joint effort between NASA and organizations across the state.⁶³ WSGC is dedicated to helping provide students, researchers, educators, businesses, not-for-profit organizations, and other stake-holders with the tools, connections, and resources they need to make the Wisconsin aerospace community grow and thrive. WSGC awards Aerospace Outreach and Special Initiatives across Wisconsin for projects that imbue the youngest Wisconsinites “with an excitement for math, science, and technology through projects involving aerospace.” UW-Superior is a participant in the Consortium and hosted the annual conference in 2007.

⁶² For more information, please see <http://www.uwstinger.com/?p=8832>

⁶³ For more information, please see <http://www.uwgb.edu/wsgc/>

UW-Whitewater

Education Outreach Grant Program

UW-Whitewater Education Outreach Grants provide funding for initiatives that improve PK-12 education in Southeastern Wisconsin. Education Outreach projects develop partnerships and collaborations with area schools or foster mutually beneficial relationships between UW-Whitewater and the Cooperative Educational Service Agency 2. Projects focusing on the following areas are given special consideration:

- Implementation of Common Core State Standards, particularly in math and reading;
- Curriculum redesign and assessment initiatives that promote the development of 21st Century Skills; and
- Development of innovative partnerships or programs in the areas of globalization, use of technology, and meeting the needs of diverse student populations.

Education Outreach award recipients in 2011-12 that focus on STEM initiatives included the following:

- Reaching Interests Beyond Boundaries Inquiry Trips connect UW-Whitewater volunteers and Whitewater Unified School District students and staff. Participants work to identify local frog species by call and report their findings. This program provides students with experience in asking and answering scientific questions, augments science literacy, facilitates conservation, and teaches students about amphibians.
- Computational and quantitative biology outreach to southeastern Wisconsin.
- And building leadership capacity for Common Core State Standards with a focus on Mathematics implementation among a cadre of area educator.

Wisconsin Department of Public Instruction Math and Science Partnerships

Virginia Pease, Assistant Professor of Curriculum and Instruction, has partnered with the Johnson Creek School District and the Waukesha STEM Academy to increase teaching capacity. The program takes advantage of best practices in mathematics professional development in an effort to increase local teachers' content knowledge, problem-solving skills, and conceptual understanding of mathematics. This project will provide professional development experiences for approximately 44 teachers in partnered schools.

College of Letters and Sciences Science Outreach Coordinator

The College of Letters and Sciences recently hired a Science Outreach Coordinator to increase science-related outreach in K-12 schools across the region. This position will:

- Develop relationships with regional K-12 schools;
- Develop and implement summer camp opportunities in the natural sciences;
- Develop and implement science teacher continuing education and professional development opportunities;
- Assist K-12 teachers with curriculum development;
- Offer pre-college exploration of science as a career;
- Increase public exposure to and understanding of contemporary issues in science;
- Encourage, increase, and facilitate public access to science faculty expertise;
- Improve regional K-12 Wisconsin Knowledge Concepts Exam state testing results in the science sub-category;
- Develop science education kits;
- Develop internship opportunities for UW-Whitewater students in STEM fields.

Modularization of Developmental Mathematics Courses

Dr. Geetha Samaranayake, Associate Professor of Mathematical and Computer Sciences, has worked with collaborators across the University of Wisconsin System to assist students in remedial mathematics courses. The goal of this project is to increase both the student completion rate in developmental math courses and the transition rate into credit-bearing mathematics courses.

Wisconsin Alliance for Minority Participation (WiscAMP) Programs

UW-Whitewater has been awarded a number of small grants designed to increase minority participation in the sciences. The current project, WiscAMP Scholars Program for Research Experiences and Public Outreach in the Sciences, has two goals: 1) Provide underrepresented minority (URM) students part-time, paid research assistantships in their STEM majors, and 2) employ URM undergraduate students to present chemical demonstrations to students at the elementary and secondary levels. Past projects have ranged from testing water quality at Whitewater Creek to breeding fish.

Research assistantships may enhance retention and graduation rates by building student relationships with mentors and by helping students see how skills learned in the classroom are applied to real research problems.

Ronald E. McNair Post-Baccalaureate Achievement Program

The McNair Scholars Program prepares first-generation and multicultural students for doctoral study and careers as college faculty. Many of the participants included in the McNair Program are seeking advanced degrees in STEM disciplines. The program is funded by the U.S. Department of Education.

The program matches each student with a faculty mentor in their major and enhances students' quantitative computer, test-taking, research methods, and critical thinking skills. Additionally,

students have access to resources for undergraduate research projects and opportunities to present research findings at regional and national conferences.

Department of Mathematics and Computer Science

The Academic Transformation Project in the Department of Mathematics and Computer Science has re-focused how basic algebra, a foundation math course, is delivered. Results from the pilot sections show that a higher percentage of students are successful using this approach. Consequently, the re-focused approach will be implemented more broadly.

The department has also developed a Computer Science major. The new major complements a robust technology presence on campus, which already includes programs in Information Technology and in Media Arts and Game Development. The major is geared toward students who want to pursue careers in software engineering, commercial software production, network design, systems programming, database design, Web development, or computer design. According to the Bureau of Labor Statistics, computer and mathematics occupations are expected to grow by 22 percent over the next decade.⁶⁴

In addition, the department also hosts the Purple Comet! Math Meet, which is an international mathematics competition for middle and high school students. The contest is entirely administered over the Internet. Teams of one to six students compete by submitting solutions to a list of mathematics problems. There is a ten-day window during which teams may compete by choosing a start time most convenient for them. The problems range in difficulty from fairly easy to extremely challenging. In 2012, over 10,000 students competed on over 2,200 teams from 39 countries.

Geographic Information Systems Center

UW-Whitewater has recently established a Geographic Information Systems Center. The Center merges demographic data with maps in order to provide businesses and organizations with new ways to reach customers and strengthen their operations.⁶⁵ "Think of it as integrating Microsoft Excel and Adobe Photoshop," said project manager Alvin Rentsch. "We have all this data out there. If we can depict that as a meaningful image, the possibilities for business growth are endless."

To further promote partnerships with the schools and area employers, a science outreach coordinator has also been hired recently. She will provide central leadership for outreach activities currently underway. Those activities include Upham Hall Nights, during which area science teachers come to campus for meetings with the science faculty; demonstrations by Chemistry and Physics faculty in area schools; school presentations by trained science students; science fair judging at area high schools; and the development of new internships placements.

⁶⁴ Bureau of Labor Statistics. Employment Outlook:2010-2020. *Overview of projections to 2020*. <http://www.bls.gov/opub/mlr/2012/01/>

⁶⁵ "Mapping opportunity: GIS Center opens at UW-Whitewater." <http://www.uww.edu/news/archive/2011-05-gis>

Nanoscience Symposium

Faculty in the Departments of Biological Sciences, Physics, and Chemistry collaborate to organizing the annual Nanoscience Symposium. Nanoscience is a rapidly developing field that promises to offer countless technology advancements and has been termed the next industrial revolution. The symposium increases nanoscience awareness on campus and in the surrounding community. It also encourages undergraduate research and student involvement. The symposium draws an enthusiastic audience of students and includes presentations by faculty and by employers.

Undergraduate Research

UW-Whitewater has a national reputation in undergraduate research because of its commitment to providing first-rate opportunities and because of the exceptional students engaged in research.⁶⁶ All of the science programs at UW-Whitewater are actively engaged in undergraduate research, and faculty have also opened their labs to interested middle school students. Undergraduate researchers present their work at the National Council for Undergraduate Research and discipline-specific conferences.

UW-Whitewater has made major investments in science equipment including tools for imaging, measuring, and manipulating matter at the nanoscale.⁶⁷ This equipment is integrated into classes, undergraduate research, and presentations to younger students in an effort to engage students in applied learning and to prepare them to enter the work force.

Alexander Steeno is one example of the many students doing meaningful undergraduate research. Alexander's work with faculty mentors focuses on understanding the complex role of certain metals in cancer metastasis. His research could open new doors for cancer therapies and provide cancer patients with a better window of opportunity for treatment.⁶⁸

UW Colleges

Collaborative Engineering Program

Since 2001, UW Colleges and UW-Platteville have offered a collaborative degree program in engineering. This program allows students at UW-Fox Valley and UW-Rock County to complete a bachelor's degree in either mechanical or electrical engineering. Since the collaboration began in 2001, UW Colleges enrollments in freshman- and sophomore-level engineering courses have increased 400 percent.

⁶⁶ For more information, please see the UW-Whitewater Undergraduate Research Program website (<http://www.uww.edu/urp>)

⁶⁷ Specifically, UW-Whitewater has invested in an atomic force microscope. UW-Whitewater is one of few college campuses in the nation to own the machinery. Please see the media release for more information (<http://www.uww.edu/news/archive/2011-10-nanoscience>)

⁶⁸ For more examples of award-winning student work at UW-Whitewater, please see the following website: <http://www.uww.edu/urp/student-awards>

Portals of Discovery

Portals of Discovery, a partnership between UW-Manitowoc and UW-Stout, addresses the issues of engagement and retention in STEM fields through collaborative research. Students move through a pipeline of STEM education beginning in high school, continuing through a two-year institution, and achieving degree completion at the baccalaureate institution. The complete integration of research, coursework, and mentorship across institutions ensures that STEM students have a persistent support network throughout their undergraduate career.

The project includes summer research workshops and research-based curriculum development at the high school level. At the two-year campus, students access financial support, peer tutoring, faculty and peer mentoring circles, curriculum development, and participation in undergraduate research. At the four-year institution, students participate in a 10-week research immersion program for transferring students, continue to engage in faculty mentoring, participate in undergraduate research, and have opportunities to serve as peer mentors.

Since the start of the program in 2009-10, enrollments in STEM disciplines have increased 26 percent at UW-Manitowoc, and over 250 students have participated in research projects. Portals for Discovery is now being developed for expansion across the UW System.

UW-Extension

4-H Gateway Academies are week long summer experiences that involve middle school aged youth in STEM learning activities. The program has been carried out in cooperation with certified Project Lead the Way instructors from throughout Wisconsin and the Society of Manufacturing Engineers. The program emphasizes rigorous, informal learning, focused on experimentation and discovery. In 2011, 523 students participated in 33 locations around Wisconsin. More than 1,300 youth have participated over the four years of the program.

Another UW-Extension program, 4-H Tech Wizards, engages youth from economically depressed areas in robotics and STEM related activities while providing a strong mentoring environment. Youth ages 8 through 17 are matched with adult mentors who are trained in positive youth development and evidence-based standards. The 1-to-4 adult-mentor groups meet weekly afterschool to build LEGO Robots that perform tasks and race to complete robotic challenges. The program is funded through the Office of Juvenile Justice and Delinquency Prevention.

In 2011, the first year of the program, there was a 90 percent mentor retention rate and 75 percent youth retention. Assessment tools show that the program not only helped youth develop self-efficacy and STEM skills, but allowed the adult mentors to improve their STEM, communication, and leadership skills. In Wisconsin, the program serves approximately 100 youth and 19 adult mentors in Kenosha, Racine, Crawford, and Milwaukee Counties.



2013-15 6 iennial Capital Budget

The University of
Wisconsin System
August 2012

2013-15 UW System Biennial
Capital Budget Request

BOARD OF REGENTS

Resolution:

That, upon the recommendation of the President of the University of Wisconsin System, the 2013-15 Capital Budget request be submitted to the Department of Administration and the State Building Commission. The 2013-15 Capital Budget request includes the following:

1. Enumeration of four projects at a cost of \$187 million 2013-15 General Fund Supported Borrowing (GFSB) and \$36 million Gift/Grant Funds. Two of these projects include \$94 million GFSB funding for the 2015-17 biennium and one project includes \$18 million GFSB funding for the 2017-19 biennium.

Note: 2013-15 General Fund Supported Borrowing also includes \$30 million GFSB that was advance enumerated in the 2009-11 Capital Budget and \$68 million GFSB that was advance enumerated in the 2011-13 Capital Budget. Those funds will become available on July 1, 2013.

2. Enumeration of four projects at a cost of \$48.2 million GFSB and \$14.4 million non-GFSB sources (\$12.7 million Program Revenue Supported Borrowing (PRSB), \$1.6 million PR-Cash, and \$.1 million Gift/Grant Funds); and \$67.1 million GFSB for Maintenance and Repair All Agency and Small projects.
3. Enumeration of fifteen projects funded by non-GFSB sources (\$245.7 million PRSB, \$45.3 million Program Revenue-Cash, and \$28.6 million Gift/Grant Funds).
4. Advance Enumeration of one project at a cost of \$75 million GFSB for the 2015-17 biennium with GFSB funding to become available on July 1, 2015.
5. Authorization for the UW System President or designee to adjust individual project budgets as necessary in the development of the final 2013-15 Capital Budget recommendation with the Wisconsin Department of Administration.

2013-15 Biennial Capital Budget

BACKGROUND

The Wisconsin Statutes prescribe that each state agency shall submit a capital budget request each biennium. The UW System process for developing the Capital Budget recommendation is based on planning models common throughout higher education. Each biennium, UW institutions and UW System Administration engage in long-range planning involving the following steps.

Issue identification:

- Building conditions
- Program concerns
- Space matters (adequacy and utilization)

Evaluation:

- Identifying alternatives to problems
- Prioritizing space and programmatic needs

Plan Development:

- Institutions develop long-range space and program plans submitted to UWSA
- UWSA evaluates and prioritizes institutional plans based on a Regent-approved evaluation tool
- UWSA develops a system-wide long range plan based on biennial budgets
- The Board of Regents makes a biennial budget request based on plan recommendations

State Planning and Funding:

- The Department of Administration's Division of Facilities Development receives budget requests from all state agencies and makes a single recommendation to the State of Wisconsin Building Commission
- The State Building Commission makes a recommendation to the full legislature through the biennial budget process

The budget development process includes personnel from every UW institution including chancellors, chief business officers, and campus planners. The process is guided by both budget development guidelines issued by the Department of Administration and project ranking criteria approved by the Board of Regents. A preview of the 2013-15 Capital Budget was presented and discussed at the June 2012 meeting of the Board of Regents.

REQUESTED ACTION

Approval of the UW System Administration recommendations for the 2013-15 Capital Budget consisting of 22 Major Projects and other maintenance, repair, and renovation projects totaling approximately \$672 million (2013-15), \$94 million (2015-17), \$18 million (2017-19) all funds, and Advanced Enumeration for one project totaling \$75 million (2015-17) all funds.

DISCUSSION

The following documents constitute the 2013-15 Capital Budget request. The biennial budget request and six-year plan accomplish several goals based upon anticipated General Fund Supported Borrowing (GFSB) from the state. The recommendation:

- Prioritizes institutional requests for funding with limited GFSB for 2013-15 and provides a planning framework for 2015-17 and 2017-19. Together these projects constitute the UW System Six-Year Plan.
- Evaluates institutional requests for Major Projects funded only with university-generated Program Revenue Supported Borrowing (PRSB) and/or Gift Funds and requests 15 Major Projects.
- Seeks to establish manageable expectations of when projects will be recommended for state funding.

The following are considerations related to the context of the six-year plan:

1. The state's annual general fund bonding capacity is governed by the practice (not statute) of limiting annual GFSB debt service to 4% of general purpose revenue.
2. The proposed UW System capital budget is a modest increase over last biennium based on five percent growth in state general fund borrowing.
3. The 2013-15 Capital Budget recommends GFSB for seven Major Projects totaling \$235.2 million, and an additional \$97.9 million for three projects already enumerated.
4. The capital budget request includes \$67.1 million GFSB for the UW System share of the state's All Agency Fund for maintenance, repair, and renovation. Using the industry benchmark of \$3/GSF, it would require \$230 million per biennium to maintain our existing facilities, excluding any progress on backlog maintenance.
5. All enumerated capital projects will be designed to maximize sustainability and energy efficiency according to state standards and LEED® (or equivalent) qualifications where practical and affordable.
6. The Department of Administration Division of Facilities Development and UW System are working together to improve the process of enumerating building projects. Currently, major projects are defined as costing more than \$760,000 and include construction of new space or major space renovation. Projects are also enumerated in categories of funding such as those projects for maintenance and repair. An alternative approach would be to continue to enumerate projects that construct new space and create a base level of funding for work in existing facilities.

**Comparison of General Fund Supported Borrowing
for All State Projects:
2009-11, 2011-13, and projected for 2013-15**

Approximate figures in millions	2009-11	2011-13	2013-15
UW General Fund Supported Borrowing for Major Projects	\$153 New \$69 Existing	\$55 New \$222 Existing	\$187 New \$98 Existing
All Other State GFSB Major Projects	\$85	\$53	?
Statewide GFSB for All Agency (including UW Facility Renewal)	\$205 (Includes UW \$109)	\$180 (Includes UW \$115)	? UW \$115
Total New GFSB for the Biennium	\$512	\$509	\$525

University of Wisconsin System 2013-15 Capital Budget
All Funds Request
(in millions)

	GFSB	PR & PRSB	Gift Grants	Total
Advance Enumerations from previous biennia	\$97.9	\$0	\$0	\$97.9
New Enumeration Requests Using General Fund Supported Borrowing (GFSB)	\$187.0	\$0.0	\$36.0	\$223.0
Renovation and Repair Existing Facilities (Includes Maintenance/Repair All Agency and Small Projects)	\$115.3	\$13.8	\$0.1	\$129.2
PRSB and Gift Funded Projects (without GFSB)	\$0	\$291.0	\$28.6	\$319.6

2015-17 Advance Enumeration	\$75	\$0	\$0	\$75
Delayed Project Funding – GFSB 2015-17	\$94.0			\$94.0
Delayed Project Funding – GFSB 2017-19	\$18.0	\$0	\$0	\$18.0

**THE UNIVERSITY OF WISCONSIN SYSTEM ADMINISTRATION
MAJOR CAPITAL PROJECTS EVALUATION CRITERIA**

These ranking criteria apply only to Major Project requests with General Program Revenue (GPR) funding, either General Fund Supported Borrowing (GFSB) and/or Building Trust Funds (BTF). The categories and criteria were established by determining distinguishing factors of project requests. Since the Major Project requests are jointly developed by the institution and UW System Administration, all requests will support the institution's core and select missions and academic goals.

Some criteria are entirely objective, either the project request meets the criteria definition or it doesn't. Points for objective criteria will be based and awarded on group consensus, to ensure the most knowledgeable interpretation and determination is used. Other criteria are subjective, where the criteria definition can be partially met or the degree to which the criteria definition is met is open to interpretation. Points for subjective criteria will be based and awarded on an individual basis and will take into consideration the most knowledgeable interpretations and descriptions provided. Only those projects ranked each biennium will be used to gauge the range of possible points given for the subjective criteria, there are no absolute standards for maximum points awarded. Subjective points will be an assigned consensus value by the group of evaluators.

Note: Projects with 50% or more of Gifts/Grants funding included will receive special consideration.

SCORING	PREREQUISITES
Yes or No	<p>EVIDENCE OF PLANNING: The institution has demonstrated and documented previous indication(s) and intent(s) for the majority of project scope through one or more of the following items: Campus Master Plan, Campus Physical Development Plan, Facility Condition Assessment, Feasibility Study, Origin-Destination Chart, Project Sequence Chart, Pre-Design, Space Use Study.</p> <p>INSTITUTIONAL READINESS: The institution has demonstrated and documented its ability to execute and manage the proposed project in or by the proposed biennium through the following items: (a) Origin-Destination Chart completed for all facilities impacted by the proposed project, (b) Qualified institutional project team members identified and assigned, and (c) Surge Space identified and reallocated or reserved as necessary.</p> <p>INFRASTRUCTURE IMPACT: The institution has identified and requested, if necessary, the required additional site infrastructure/utility funding commitments and/or the additional site infrastructure/utility funding commitments have been included in the Agency development plan in the biennium prior to, and/or in the same biennium as the project.</p> <p>OPERATIONAL SUPPORT: The institution has identified and documented appropriate operational funding resources and staffing to operate and maintain the resulting capital asset(s).</p>
Yes or No	
Yes or No	
Yes or No	

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SCORING	INSTITUTIONAL PRIORITY
0 or 10 pts	#1 RANK FOR CURRENT BIENNIUM: The institution ranked the project as their highest priority for current biennium.
0 or 5 pts	#1 RANK FOR PAST BIENNIUM: The institution ranked the project as their highest priority for 1 past biennium.
0 or 3 pts	#1 RANK FOR TWO (2) PAST BIENNIUM: The institution ranked the project as their highest priority for 2 past biennia.
0 or 2 pts	PROJECT SEQUENCE: Project must be completed prior to other projects identified in development plan.

SCORING	PHYSICAL DEVELOPMENT CONSIDERATIONS
<p>0 - 5 pts</p> <p>0 - 10 pts</p> <p>0 - 15 pts</p> <p>0 - 10 pts</p>	<p>CODES, STANDARDS, HEALTH & SAFETY: Project resolves demonstrated and documented building codes and standards compliance issues and/or health, safety, and environmental issues which would not be resolved through standard design practice and DSF design standards. The project scope must include extraordinary or non-routine conditions and examples to be resolved. A project scope only resolving standard conditions that would typically be addressed through best business and design practices does not qualify.</p> <p>DEMOLITION: Project eliminates demonstrated and documented capital maintenance or avoids anticipated future capital maintenance through demolition of space which is deteriorated, obsolete, and/or has no viable reuse.</p> <p>FACILITY RENEWAL: Project renews demonstrated and documented capital maintenance and/or anticipated future capital maintenance through renovation. Project scopes including only remodeled/renovated space receive full credit. Project scopes including new ancillary spaces and/or non-assignable spaces (elevators, mechanical rooms, restrooms, etc.) are not penalized. Project scopes including remodeled/renovated space + new assignable space receive partial credit. Partial credit scoring will be based on cost (\$) ratio of remodeled/renovated space to new space included in the project.</p> <p>FACILITY REUSE: Existing space is adequate and appropriate for renovation; no new assignable space required. Project scopes including only remodeled/renovated space receive full credit. Project scopes including new ancillary spaces and/or non-assignable spaces (elevators, mechanical rooms, restrooms, etc.) are not penalized. Project scopes including remodeled/renovated space + new assignable space receive partial credit. Partial credit scoring will be based on space (GSF) ratio of remodeled/renovated space to new space included in the project.</p>
SCORING	PROGRAM CONSIDERATIONS
<p>0 - 15 pts</p> <p>0 - 5 pts</p> <p>0 - 15 pts</p> <p>0 - 5 pts</p>	<p>FUNCTIONALITY: Project provides new and/or improved functionality through configuration, relocation, or technology. The project scope includes one or more of the following items for new and/or improved functionality: (a) area(s) and/or technology specifically designed and/or implemented and/or (b) remodeling/renovation/relocation</p> <p>OPERATIONAL IMPACT: Project improves operational efficiencies through consolidation, reorganization, and/or relocation and supports sustainability. The project scope includes one or more of the following items to improve operational efficiency: (a) area(s) and/or technology specifically designed and/or implemented, and/or (b) remodeling/renovation/relocation with (1) demonstrated operational budget reductions and/or projections as a result of completing this project and/or (2) demonstrated resource reallocation to accommodate any new net square footage constructed.</p> <p>SPACE NEED: Project targets and resolves demonstrated space shortages. The project scope includes one or more of the following items to meet demonstrated space shortages: (a) area(s) and/or technology specifically designed and/or implemented and/or (b) remodeling/renovation/relocation; and the space need must be documented in development plan and back-up planning materials.</p> <p>SPACE UTILIZATION: Project demonstrates improved space utilization and/or makes use of underutilized space. The project scope includes one or more of the following items to improve space utilization: (a) area(s) specifically designed to replace underutilized assigned/surplus space with assigned space and/or (b) remodeling/renovation/relocation.</p>

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2013-15 Biennial Capital Budget
Major Projects
(In Millions)

2013-15 Capital Budget Major Projects						
GFSB Funded Projects		Total	GFSB	PRSB	PR-Cash	G/G
Existing Advance Enumerations						
MIL	Master Plan Initiative - Kenwood IRC (\$75M)		\$30,000,000			
MSN	School of Nursing (\$52.2)		\$17,413,500			
RVF	Falcon Center (aka Health & Human Perf.) (\$63.5)		\$50,500,000			
Total Existing Advance Enumerations			\$97,913,500			
New Enumeration Requests						
STP	Chemistry-Biology Building	\$75,000,000	\$75,000,000			
LAC	Science Labs Building	\$82,000,000	\$82,000,000			
MSN	Chemistry Addn/Renov (Total \$103,500,000 see 15-17 & 17-19)	\$10,500,000	\$10,500,000			
MSN	CALS Agriculture Initiative I (+ \$19,500,000 15-17 GFSB)	\$55,460,000	\$19,500,000			\$35,960,000
	Babcock Hall Dairy Plant Addition (\$31,920,000)					
	Meat Science & Muscle Biology Lab (\$42,877,000)					
Total New Enumeration Requests		\$222,960,000	\$187,000,000	\$0	\$0	\$35,960,000
Renovation and Repair Existing Facilities						
SYS	Classroom IT	\$10,000,000	\$10,000,000			
SYS	Utilities	\$19,615,000	\$9,722,500	\$9,754,500	\$32,000	\$106,000
	EAU Garfield Ave (\$12,424,000)					
	LAC West Chiller Plant (\$7,191,000)					
SYS	Maintenance/Repair All Agency & Small Projects	\$67,100,000	\$67,100,000			
SYS	Facility Renewal					
	PLT - Boebel Hall Renovation - Phase II	\$17,369,000	\$17,369,000			
	RVF - Rodli Hall Renovation	\$15,100,000	\$11,100,000	\$2,417,000	\$1,583,000	
Total Renov/Repair Facilities		\$129,184,000	\$115,291,500	\$12,171,500	\$1,615,000	\$106,000

2013-15 GFSB Projects - Future Biennia Funding		Total	GFSB	PRSB	PR	G/G
	2015-17					
MSN	Chemistry Add/Renov - Phase II	\$75,000,000	\$75,000,000			
MSN	CALS Agriculture Initiative II	\$19,500,000	\$19,500,000			
	2017-19					
MSN	Chemistry Addition & Renovation	\$18,000,000	\$18,000,000			
	Total Future GFSB		\$112,500,000			

Advance Enumeration - 2015-17 GFSB		Total	GFSB	PRSB	PR	G/G
MIL	Innovation Park IRC	\$75,000,000	\$75,000,000			

2013-15 PRSB and Gift Funded Projects		Total	GFSB	PRSB	PR-Cash	G/G
EAU	Residence Hall - Phase I	\$33,000,000		\$33,000,000		
LAC	Gymnastics Practice Facility & Storage Buildings	\$4,511,000			\$4,511,000	
LAC	Student Union	\$53,300,000		\$50,966,000	\$2,334,000	
MSN	Memorial Union Renovation - Phase II	\$42,085,000		\$9,000,000	\$7,585,000	\$25,500,000
MSN	Sellery and Witte Halls Renovation	\$47,000,000		\$24,000,000	\$23,000,000	
MSN	University Houses Renovation	\$15,000,000		\$8,000,000	\$7,000,000	
OSH	Conference Center	\$4,000,000			\$900,000	\$3,100,000
OSH	Fletcher Hall Renovation	\$17,627,000		\$17,627,000		
OSH	Reeve Union Entrance and Expansion	\$7,629,000		\$7,629,000		
PLT	Residence Hall and Dining Facility	\$29,287,000		\$29,287,000		
STP	N DeBot Res Hall Remodeling - Phase 2	\$13,477,000		\$13,477,000		
STO	McCalmont Residence Hall Renovation	\$7,893,000		\$7,893,000		
STO	North Residence Hall Renovation	\$13,250,000		\$13,250,000		
WTW	Indoor Tennis Building	\$3,500,000		\$3,500,000		
WTW	Residence Hall	\$28,000,000		\$28,000,000		
	Total PR and Gift Funded Projects	\$319,559,000		\$245,629,000	\$45,330,000	\$28,600,000

Office of
Capital Planning & Budget

GENERAL FUND SUPPORTED BORROWING SIX-YEAR PLANNING PROJECTION

2013 - 2019



2013-15 Biennium				2015-17 Biennium				2017-19 Biennium			
Existing Advance Enumerations		GFSB	Overall Project	Advance Enumeration Requests		GFSB	Overall Project	Advance Enumerations Requests		GFSB	Overall Project
MIL	Kenwood IRC	\$30.0	\$80.0	MIL	Innovation Park IRC	\$75.0	\$75.0	MSN	Chemistry Building Phase 3	\$18.0	\$103.5
MSN	School of Nursing	17.4	52.9	MSN	Chemistry Building Phase 2	75.0	103.5				
RVF	Falcon Center	50.5	63.5	MSN	CALS Agriculture Facilities 2	19.5	74.9				
Subtotal		\$97.9				\$169.5					
New Enumeration Requests				New Enumeration Requests				New Enumeration Requests			
STP	Chemistry - Biology Building	\$75.0	\$75.0	EAU	Confluence Project	\$25.0	\$50.0			TBD	TBD
LAC	Science Labs Building	82.0	82.0								
MSN	Chemistry Building Phase 1	10.5	103.5								
MSN	CALS Agriculture Facilities 1 (Babcock and Meat Science)	19.4	74.9								
Subtotal		\$186.9									
Renovation & Repair Existing Facilities				Renovation & Repair Existing Facilities				Renovation & Repair Existing Facilities			
SYS	Classrooms and IT Projects	\$10.0	\$10.0	SYS	Classrooms and IT Projects			SYS	Classrooms and IT Projects		
SYS	Large Scale Utility Projects	9.6	20.4	SYS	Large Scale Utility Projects			SYS	Large Scale Utility Projects		
SYS	Maintenance & Repair All Agency & Small Projects	67.1		SYS	Maintenance & Repair (AA)			SYS	Maintenance & Repair (AA)		
PLT	Boebel Hall Renovation	17.4	17.4	GBY	Learning Commons			ALL	Facility Renewal Projects		
RVF	Rodli Hall Renovation	11.1	15.1	MIL	MWQ Redevelopment						
Subtotal		\$115.2		PKS	Learning Commons						
				STP	Learning Resource Center						
				SUP	Old Main Renovation						
				WTW	Winther or Roseman Remodel						
Subtotal				Subtotal		\$225.5		Subtotal			
Biennial Total		\$400.0		Biennial Total		\$420.0		Biennial Total		\$440.0	

2013-15 Biennial Capital Budget Major Project Summaries

Existing Advance Enumerations

**UW-Milwaukee: Kenwood IRC
\$30,000,000 GFSB (2013-15)**

This project is part of the UW-Milwaukee Master Plan Initiative. It will construct an approximately six-story 74,400 ASF/143,700 GSF facility that includes research labs for physics and public health, core facilities, instructional space, offices, and shell space for future labs. The project will connect to the adjacent Lapham Hall animal facilities and will renovate approximately 1,700 GSF in that building. The project will also construct an approximately 6,800 ASF/9,300 GSF greenhouse on the roof of Building C of the Northwest Quadrant complex.

**UW-Madison: School of Nursing
\$17,413,500 GFSB (2013-15)**

This project will construct a new building of approximately 105,065 ASF/166,350 GSF consisting of faculty, instructional, and administrative offices; flexible research team space; support space; classrooms; seminar rooms; a lecture hall; clinical simulation laboratories; undergraduate and graduate student space; and conference/meeting space. The building will be five stories with each of the upper floors consisting of approximately 30,000 GSF. A mechanical penthouse and a small basement provide space for service related equipment and utility functions.

**UW-River Falls: Falcon Center for Health, Education, and Wellness
(formerly known as Health and Human Performance Building)
\$50,491,000 GFSB (2013-15)**

This project will construct an addition of approximately 111,164 ASF/162,300 GSF to the existing Hunt Arena/Knowles Physical Education and Recreation Complex as well as remodel approximately 14,700 GSF to meet space needs for the Health and Human Performance academic program as well as campus athletics and student recreation programs. The new addition will include classrooms, a human performance laboratory, a large gymnasium, dance studio, auxiliary gym, offices, locker rooms, training rooms, and other support spaces. Currently, the Health and Human Performance academic program is housed in the existing 67,150 GSF Karges Physical Education Center and the existing 20,484 GSF Emogene Nelson Building, both of which will be demolished upon completion of this project. The project will also create a new consolidated boiler plant for both the existing and new spaces of the integrated facility and an adjacent 720-stall parking lot.

2013-15 New Enumeration Requests

UW-Stevens Point: Chemistry-Biology Building
\$75,000,000 GFSB

This project will construct a new approximately 105,010 ASF/169,165 GSF Chemistry-Biology Facility on a current surface parking lot located on the eastern edge of campus adjacent to the central campus core. It will construct twelve 55-seat general access classrooms and two 100-seat lecture halls to address the campus general access classroom demand shortage. The construction of the new facility will address space needs deficits in Chemistry and Biology that can no longer be met in the existing Science Building due to functional and infrastructure limitations.

UW-La Crosse: Science Labs Building
\$82,000,000 GFSB

This project will construct a new approximately 107,880 ASF/179,800 GSF science laboratory facility on a current surface parking lot directly north of the existing campus science building, Cowley Hall. The construction of the new facility will address an overall 95,227 ASF space needs deficit in the physical and life sciences and will accommodate laboratory space needs that can no longer be met in existing Cowley Hall due to functional and infrastructure limitations.

UW-Madison: Chemistry Addition/Renovation
\$10,500,000 GFSB 2013-15
75,000,000 GFSB 2015-17
18,000,000 GFSB 2017-19
\$103,500,000 Total

This project will demolish approximately 39,800 GSF of the Daniels Chemistry building, construct a seven-story, approximately 63,400 ASF/170,000 GSF addition, and remodel approximately 30,500 ASF/55,000 GSF of the existing Daniels Chemistry building, and renovate the mechanical systems in the Daniels and Matthews Chemistry buildings. The new and remodeled space will house instruction labs for general, organic, and analytical chemistry, support spaces, offices, undergraduate support space, classrooms and lecture halls, and shell space.

UW-Madison: CALS Agriculture Initiative
\$19,418,000 GFSB 2013-15
\$19,418,000 GFSB 2015-17

Babcock Hall Dairy Plant Addition
\$15,959,000 GFSB
15,961,000 Gifts/Grants
\$31,920,000 Total

This project will demolish approximately 5,000 GSF of space in Babcock Hall, and the 3,200 GSF Science House at 1645 Linden Drive; construct an approximately 19,800 ASF/32,500 GSF addition to Babcock Hall; and renovate/remodel approximately 29,700 GSF of space, including construction of an intermediate floor in an existing two-story space. The project will include flexible research space on the lower two floors for the Center for Dairy Research (CDR) and a training area on the third floor.

Meat Science and Muscle Biology Laboratory
\$22,877,000 GFSB
20,000,000 Gifts/Grants
\$42,877,000 Total

This project will demolish the 17,750 GSF Seeds Building, the 11,270 GSF building at 1910 Linden Drive, and a 3,175 GSF wing of the Poultry Building, to clear the site located on Observatory Drive for the Meat Science and Muscle Biology Laboratory. A 28,915 ASF /51,600 GSF new building will then be constructed. After completion of the new facility, the existing 25,747 ASF/30,190 GSF Meat Science and Muscle Biology Laboratory building will be demolished and a parking lot will be constructed on the site. The new building will contain research laboratories (including a Biosafety Level 2 suite), classrooms, teaching laboratories and specialized animal processing spaces, including an abattoir, carcass chilling and cooling facilities, and a meat processing area.

Renovation and Repair Existing Facilities

UW System: Classroom Renovation/Instructional Technology Improvements
\$10,000,000 GFSB

This proposal continues a major University of Wisconsin System initiative which was started in 1995-97 to upgrade the physical condition and instructional capabilities of facilities to address the multi-faceted educational needs of the 21st century. UW System facilities contain approximately 1,670 general assignment classrooms, encompassing over 1.4 million square feet of space, excluding the teaching facilities of UW Colleges. The vast majority of these essential instructional spaces have not been updated since construction. A 2006 survey of all general assignment classrooms indicated that thirty-six percent require some degree of remodeling and thirty-four percent do not contain the desired

level of technology. The overall magnitude of classroom deficiencies is estimated at approximately \$25 million. The continuation of this program at the requested level will have widespread positive impact in providing quality learning and teaching environments.

UW System: Utility Improvements

UW-Eau Claire Garfield Ave. Corridor Improvements
\$6,127,000 GFSB
6,159,000 PRSB
32,000 Program Revenue-Cash
106,000 Gift/Grants
\$12,424,000 Total

This project will reconstruct Garfield Avenue from the terminus of the city of Eau Claire right-of-way near the Newman Center to the base of the bluff at the Putnam Parking Lot. Work includes the replacement of roadway surface, curb and gutter, sidewalk, lighting and subsurface utilities. The roadway alignment will be adjusted to allow extension of the pedestrian bridge approach for pedestrian safety and handicapped accessibility. The Garfield Avenue corridor will be improved with new bike parking, plazas, signage, irrigation, and landscaping. Project work also includes renovation of the Roosevelt Avenue cul-de-sac, construction of a campus gateway entrance, replacement of utilities in the roadway corridor and construction of accessible parking to replace parking that will be lost when Garfield Avenue is improved.

UW-La Crosse West Campus Chilled Water Plant
\$3,595,500 GFSB
3,595,500 PRSB
\$7,191,000 Total

This project will construct a west campus chilled water plant to augment the capacity of the existing campus chilled water system. The plant is anticipated to be located on university property southwest of Coate Hall. Based on preliminary load data, the project will install two 800 ton electrical variable speed centrifugal chillers in a new approximate 3,500 GSF facility. The facility will be designed for a total capacity of 2,400 tons. Chilled water distribution piping will be extended from the plant to existing chilled water mains located along the north side of Badger Street just south of Whitney Center. Distribution lateral piping will be installed from exiting campus chilled water distribution mains to three residence halls located on the eastern portion of campus and five residence halls located on the western portion of campus. A study is currently underway which will help determine the final plant location, optimal chiller and ancillary system sizes and optimal electrical power source.

**UW System: Maintenance and Repair All Agency and Small Projects
\$67,100,000 GFSB**

All Agency projects are funded from special bonding appropriations authorized by the Legislature. The capital budget authorizes funding for specific categories of maintenance projects rather than for specific projects. Typical all agency projects would include building envelopes (walls, roofs, windows, etc.), mechanical, electrical, plumbing systems, and interior finishes. Some projects are more comprehensive and could include functional improvements, fire code compliance, ADA compliance, and other maintenance deficiencies.

**UW System: Facility Renewal
UW-Platteville: Boebel Hall Renovation – Phase II
\$17,369,000 GFSB**

This project will renovate a portion (32,580 ASF/46,315 GSF) of Boebel Hall science building (47,451 ASF/67,274 GSF) for instructional laboratories, undergraduate research space for the Department of Biology and the Department of Social Sciences Geography and Geology Program. The project will also add a total of 2,920 GSF of infill space on the south side of the first floor and 580 SF on the northeast corner of the second floor. It will also include the renovation of general-assignment classroom space. This project will complete the second and final phase of the Boebel Hall renovation. The renovated facility will support all the space needs for the department of Biology and the department of Social Sciences, Geography and Geology.

**UW-River Falls: Rodli Hall Renovation
\$11,100,000 GFSB
2,417,000 PRSB
1,583,000 PR Cash
\$15,100,000 Total**

This project will renovate an existing 63,473 GSF building to support a new student services center. The scope includes removing and replacing all building infrastructure systems, windows, roof, and utility services, and constructing newly configured interior partitioning to support programmatic needs. The building will be brought into current code compliance including accessibility. Remaining asbestos-containing materials will be abated. An existing exterior area created by a second floor overhang will be enclosed to capture approximately 2,300 ASF/3,500 GSF of additional interior program space.

Advance Enumeration Request

**UW-Milwaukee: Innovation Park Interdisciplinary Research Complex
\$75,000,000 GFSB 2015-17**

This project will purchase an 84,000 ASF/150,000 GSF research building from the UW Milwaukee Real Estate Foundation, who will have the building constructed by a developer to the university's requirements. The project will be constructed in Innovation Park, located in Wauwatosa. The building will include research labs for biomechanics, ergonomics, imaging, industrial innovation, and rehabilitation.

2013-15 New Enumeration Requests Program Revenue and Gift/Grant Funded Projects

**UW-Eau Claire: Residence Hall
\$33,000,000 PRSB**

This project will construct a four-story, 350-bed, semi-suite style residence hall of approximately 121,000 ASF/151,000 GSF, with provisions to add a wing as a second phase if the site permits. There will be an approximately 75% to 25% mix of four-person single room suites and four-person double room suites, with each suite sharing a bathroom. Depending on a feasibility analysis, the project may include underground parking beneath the building. A facilities condition assessment will be done for Horan Hall to determine whether it should be demolished to provide a larger site for a future phase.

**UW-La Crosse: Gymnastics Practice Facility and Storage Building
\$4,511,000 Cash**

This project constructs two separate but similar structures on the same general site on the UW-L north campus. The first building is the UW-L Womens Gymnastics Practice Facility which constructs a 12,000 ASF/ 15,000 GSF structure to accommodate all practice activities of the UW-L Women's Gymnastics Team. It will be a pre-engineered structure constructed on a slab on grade. The second building constructs a new 10,000 ASF/ 12,000 GSF storage and materials handling building. The facility will be a pre-engineered metal building constructed on a concrete slab on grade. It will create both heated and non-heated secure general storage space, along with space for campus mail and materials delivery, processing, and distribution. It will be located on UW-L's north campus, adjacent to the Maintenance and Stores and Landscape Services buildings.

UW-La Crosse: Student Union
\$50,966,000 PRSB
2,334,000 Cash
\$53,300,000 Total

This project constructs 102,000 ASF/162,000 GSF of new space. The building will be designed to provide student gathering and social areas, offices and workspaces for student organizations, offices for Student Centers administration, food service management offices, general use meeting rooms, student lounge/study/gathering/casual recreation areas, performance venues, food service kitchens and dining areas, various retail spaces, a campus bookstore, and a textbook rental area. The new facility will be located in the north central portion of campus on a site recommended by the 2005 UW-La Crosse Master Plan.

UW-Madison: Memorial Union Renovation – Phase II
\$25,500,000 Gifts
9,000,000 PRSB
7,585,000 Cash
\$42,085,000 Total

This project constructs 4,337 ASF/7,600 GSF of new space and renovates 72,400 ASF/135,000 GSF of existing space in the central and east wings of the Memorial Union, located at 800 Langdon Street on the UW-Madison campus. The project includes major renovations of existing office areas, food service venues, and the catering/production support facilities in those parts of the building as well as the existing commons, lobby, and hotel guestrooms. Exterior improvements will include renovations to the terrace to improve accessibility, construction of an underground loading dock, and the reconstruction of Lot 1 into Alumni Plaza (a separate enumerated project). A majority of the work addresses the building infrastructure, including replacement of the deteriorated roof, window, and curtain wall; repair of exterior stone, terra cotta, and glass block; tuck pointing; replacement of external architectural lighting systems; and repair of Building MEP systems. Life safety and security systems will be upgraded, and improvements will be made to meet current ADA requirements. The new space consists of small additions for mechanical, electrical, and maintenance functions.

UW-Madison: Sellery and Witte Halls Renovation
\$24,000,000 PRSB
23,000,000 PR Cash
\$47,000,000 Total

This project completely renovates Sellery (151,795 ASF/230,408 GSF) and Witte (147,794 ASF/230,799 GSF) residence halls. Central building cores, first floor, and basement areas will be renovated and expanded to accommodate new elevators, improved common spaces (floor lounge, study space, and kitchenette), and bathrooms. Interior stairwells will receive selective upgrades, including painting, flooring, and lighting. Resident rooms will be painted, doors/locks replaced, and resident floor hallways will be upgraded with updated finishes and lighting. HVAC systems will be

replaced/upgraded adding air conditioning and individual heat controls in rooms. Roofing and exterior windows will be replaced and the existing exterior pre-cast panel joints will be resealed. Additional work in Sellery Hall includes construction of a new main entrance and lobby on the East Campus Mall. The existing entrance on Johnson Street, adjacent lobby area, and the Residence Life Office area will be renovated and all exterior areas around the hall will be improved, including screening of the dock area. Additional work in Witte Hall includes remodeling of the existing entry lobby area and improvements to exterior areas around the building that include creating an at-grade dock area for trash/recycling removal and deliveries.

UW-Madison: University Houses Renovation
\$ 8,000,000 PRSB
7,000,000 PR Cash
\$15,000,000 Total

This project will complete selective renovations in all 144 units of the existing University Houses Apartment Complex (138,509 ASF/173,497 GSF) to address maintenance items, mechanical system upgrades, code compliance, and functional/programmatic improvements. Hot water heating boilers, pumps, domestic water heaters, and water softeners serving the complex will be replaced. Inside the units, hot water loop convector piping and covers, plumbing fixtures, domestic water piping, kitchen cabinetry/countertops, and flooring will be replaced along with electrical upgrades and painting. Kitchen and bathroom exhaust will be added to all units. Some units will be reconfigured to include their own laundry closets and common laundry areas will be consolidated and relocated to the ground level. Upgrades to the exterior will include brick masonry repair and storm door replacement.

UW-Oshkosh: Conference Center
\$3,100,000 Gifts and Grants
900,000 Cash
\$4,000,000 Total

This project will construct an approximately 38,000 GSF new conference and welcome center for the UW-Oshkosh campus. The development and construction will be undertaken by UW-Oshkosh Foundation. It is anticipated that this development will be gifted to the UW System Board of Regents upon completion. A majority of the center will include meeting rooms and banquet facilities. Several outreach functions including the UW Oshkosh Foundation, Alumni Affairs, a satellite facility for the Parking Office, and a satellite facility for the Admissions Office, will be relocated to this new building.

UW-Oshkosh: Fletcher Hall Renovation
\$17,627,000 PRSB

This project remodels and renovates 65,518 ASF/98,700 GSF of existing space in Fletcher Hall, which is located on the east edge of the campus near the student union. An addition is anticipated to be added on the Elmwood Avenue side of the facility to create an enhanced entry, expanded circulation and social space. The project will completely replace plumbing, HVAC, electrical, and telecommunications infrastructure. The existing steam radiant heating system will be replaced with a four-pipe system that provides for a hot water system with air conditioning. Individual room thermostatic control will be allowed within a pre-set range. An automatic fire sprinkler system and elevator will be installed. Hazardous materials will be abated and finishes will be updated. Exterior work will include masonry repair and tuck pointing, and replacement of exterior doors and windows.

UW-Oshkosh: Reeve Union Entrance and Expansion
\$7,629,000 PRSB

This project constructs 3,742 ASF/7,214 GSF of new space and renovates 13,204 ASF/20,858 GSF of existing space in the basement, on the first and second floors of the west end of Reeve Memorial Union, located at 748 Algoma Boulevard on the UW-Oshkosh campus. A majority of the work will address the accessibility of the building, its visual appearance, and space needs for student organizations. Windows will be replaced in the older sections of the building in order to improve energy efficiency and aesthetics. Internal circulation issues will be addressed by remodeling in conjunction with the addition. The project also aims to address universal accessibility needs in terms of access to both restrooms and functional spaces.

UW-Platteville: Residence Hall and Dining Facility
\$29,287,000 PRSB

This project will purchase a Residence Hall and Dining Facility of approximately 172,166 GSF for 430 students on the UW-Platteville campus. The building will be constructed by the UW-Platteville Real Estate Foundation (REF) through a request for proposal (RFP) process working with C.D. Smith. The style of the residence living units will be two double occupancy rooms with a common shared bathroom.

UW-Stevens Point: North DeBot Residence Hall Remodeling – Phase II
\$13,477,000 PRSB

This project will renovate Watson Hall and Thomson Hall, which are located in the north DeBot quadrangle. The halls comprise a total of 107,834 GSF and 540 beds (270 each) plus hall director apartments, and will receive targeted room renovations that will include resident room windows. The front desk lobby area will be reconfigured and updates will be made to the lounge area. The project will include ADA modifications such as a five-stop elevator, revised exterior ramps, modified private

baths to accommodate wheelchair restricted residents/guests, and eleven fully accessible resident rooms. Two lower-level restrooms will be converted to provide full accessibility. Fire sprinklers will be installed in the entire building and updates performed on the fire alarm system. The existing steam radiant heating system will be replaced with a four-pipe system that provides for a hot water system with air conditioning. Individual room thermostatic control will be allowed within a pre-set range. Augmentative domestic solar hot-water collection panels will be installed on each building.

UW-Stout: McCalmont Hall Renovation
\$7,893,000 PRSB

This project will completely renovate the existing 21,156 ASF/40,762 GSF McCalmont Residence Hall and will construct an addition of approximately 4,300 ASF/6,200 GSF to accommodate enlarged toilet rooms, lounge/kitchen areas, and a hall director's apartment. The renovated building will have 184 beds in double rooms. In addition to expanding and replacing existing toilet rooms, the project will completely replace plumbing, HVAC, electrical, and telecommunications infrastructure. An automatic fire sprinkler system will be installed, the existing elevator will be updated, and a new emergency generator will be added. Hazardous materials will be abated and finishes will be updated. Utilities serving the building will be reworked to provide separate feeds to this building, and a new water service will be installed. Exterior work will include masonry repair and tuck pointing, and replacement of exterior doors.

UW-Stout: North Hall Renovation
\$13,250,000 PRSB

This project will completely renovate the existing 43,856 ASF/76,136 GSF North Residence Hall, and will construct an addition of approximately 8,000 ASF/12,300 GSF to accommodate enlarged toilet rooms, and new stairs. The renovated building will have approximately 370 beds in double rooms. The existing toilet areas will be remodeled into expanded commons areas, and expanded toilet areas constructed in additions. The project will completely replace plumbing, HVAC, electrical, and telecommunications infrastructure and an automatic fire sprinkler system will be installed. Hazardous materials will be abated and finishes will be updated. Exterior work will include masonry repair and tuck pointing, and replacement of exterior doors and windows.

UW-Whitewater Indoor Tennis Building
\$3,500,000 PRSB

This project will construct a pre-engineered structural building of approximately 50,000 GSF with overhead clearance of 35 feet at the net and 20 feet at the base line on the UW-Whitewater campus. The building meets the minimum requirements for NCAA intercollegiate tennis tournament play for four courts. The main entry will contain a two-story vestibule on the north side of the building that is sized to accommodate future stairs to the mezzanine level. A secondary ground-level entry will be located on the south side of the building to provide convenient access from the Kachel Fieldhouse and the Williams Center. Public toilet facilities, custodial space, and spectator seating will also be

provided at the ground level. This new building will initially be a stand-alone facility with the potential for a future addition of a pedestrian bridge connection at an upper level to the north end of Kachel Fieldhouse.

UW-Whitewater: Residence Hall
\$28,000,000 PRSB

This project will construct a four-story, 400-bed, semi-suite-style residence hall of approximately 81,000/118,000 ASF/GSF. It will provide living units with double occupancy bedrooms and shared bathrooms. The building will provide common spaces on each floor for lounges and study rooms, individual rooms for resident assistants, and telecom/data rooms. Other spaces that may be located on the first or lower levels include a residence life advisor apartment and office, a laundry room, a front desk and mail room, a building-wide kitchen, a multipurpose/TV room, collaborative learning rooms, a Learning Involvement Team/Hall Council room and various storage areas as space permits. Currently, the campus has identified four potential sites on campus, most of which are on the north campus near Esker Hall. The final selection will be confirmed as part of the upcoming campus master plan.

APPENDIX

2013-15 Biennial Capital Budget Major Project Request Documents

New Enumeration Requests	
STP	Chemistry-Biology Building
LAC	Science Labs Building
MSN	Chemistry Addition/Renovation
MSN	CALS Agriculture Initiative Babcock Hall Dairy Plant Addition Meat Science and Muscle Biology Laboratory
Renovation and Repair Existing Facilities	
SYS	Classroom/IT Improvements
SYS	Utility Improvements (EAU Garfield Ave and LAC West Chiller Plant)
SYS	Facility Renewal (PLT Boebel Hall Renovation - Phase II and RVF Rodli Hall Renovation)
Advance Enumeration Request	
MIL	Innovation Park
Program Revenue/Gift Funded Projects	
EAU	Residence Hall
LAC	Gymnastics Practice Facility & Storage Building
LAC	Student Union
MSN	Memorial Union Renovation - Phase II
MSN	Sellery and Witte Halls Renovation
MSN	University Houses Renovation
OSH	Conference Center
OSH	Fletcher Hall Renovation
OSH	Reeve Union Entrance and Expansion
PLT	Residence Hall and Dining Facility
STP	North Debot Residence Hall Remodeling Phase II
STO	McCalmont Residence Hall Renovation
STO	North Residence Hall Renovation
WTW	Indoor Tennis Building
WTW	Residence Hall

2013-15 GFSB New Enumeration Requests

Major Project Request

2013-15 Biennium

Agency

University of Wisconsin

Institution

Stevens Point

Project Title

Chemistry - Biology Building

Project Description and Scope

This project will construct a new 105,010 ASF/169,165 GSF Chemistry-Biology Facility on a current surface parking lot located on the eastern edge of campus adjacent to the central campus core. The construction of the new facility will:

- (a) Address space needs deficits in Biology, Chemistry, and campus general assignment classrooms.
- (b) Accommodate space needs that can no longer be met in the existing Science Building due to functional and infrastructure limitations.

	Existing Space- Total (ASF)	Space Needs- Deficit (ASF)	Space Needs- Total (ASF)	Proposed New Space- Chemistry-Biology Facility
Biology	36,457	19,150	55,607	44,929 *
Chemistry	22,792	12,083	34,875	30,244 **

* Some Biology space needs will continue to be met in the existing Science Building and Trainer Natural Resources Building to avoid duplication of specialized resources and maintain important existing academic and research collaborations.

** Proposed Chemistry space less than total needs due to aggressive use of shared spaces in the final building program.

General Assignment Classroom Size	Campus Total Deficit	Proposed New Space- Chemistry-Biology Facility	Remaining Deficit- Future Project
55 Seats	12	7	5
90-110 Seats	2	2	0

The total space breakdown for the facility is as follows:

Space Type	Proposed- Chemistry-Biology Facility
Classrooms/Collaboration	19,393
Teaching Labs	37,994
Teaching Labs Support	10,761
Research Labs	19,150
Offices	7,267
Shared Administrative	3,216
Shared Building Support	1,637
Central Stock Room	5,592
TOTAL	105,010 ASF

In addition to space deficits, deficiencies in the existing Science Building impact the function, safety, and cost-effectiveness for continued use to support infrastructure-intensive teaching and research laboratories or contemporary classrooms. These include low floor-to-floor heights, thermal energy compliance at the building envelope, worn interior finishes and inefficient partition layouts, outdated teaching technology and structural column spacing that will not support proper classroom proportions, obsolete mechanical, electrical, and plumbing systems that are not code compliant or are beyond useful life/service expectancies.

Despite these deficiencies, the existing Science Building is able to support less intensive space uses. Following completion of this project and full vacation of Chemistry and portions of Biology, future renovation will allow for backfill that addresses space needs deficits in Health Sciences, Physics/Astronomy, Paper Science, Wisconsin Institute for Sustainable Technology (WIST), Geography/Geology, Anthropology, and Psychology, as well as advancing the new vision for the university and the northern region of the state-the Partnership for Thriving Communities.

Major Project Request

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Vacating a portion of Biology from the existing Trainer Natural Resources Building will allow for future backfill renovation to address much-needed expansion of the College of Natural Resources in the areas of education, basic faculty and student research and grant supported research.

Background

In coordination with the Division of Facilities Development, UW System, and campus, a Campus Utilization Study (DFD Project #09A1R) was completed in July 2010. This comprehensive space assessment included multiple buildings and academic colleges across campus. With a clear understanding of the importance of establishing a responsible and defensible case for need, the study included rigorous space needs analysis, classroom utilization and analysis, facility condition reports, preliminary space programming for new space, and backfill plans for existing buildings. The study recommended a phased approach to the construction of new campus space and backfill renovations, with the first phase consisting of a new facility to address space needs in Biology, Chemistry, and general assignment classrooms.

Next, in coordination with the Division of Facilities Development, UW System, and campus, an extensive pre-design study for this project (DFD Project #11G3A) was completed in summer 2012. Based on the needs and recommendations established in 2010 Campus Utilization Study, the pre-design documents the detailed building space program as well as identification of key design issues and refined project design concepts, budget, and schedule.

The existing Science Building was built in three separate phases: 1963 (100,000 GSF); 1972 (85,000 GSF); and 1988, (14,500 GSF). A number of modest capital renewals were performed through the years, but the style and configuration of the 1963 and 1972 construction make bringing the facility to current instructional and operational standards a severe challenge for dedicated teaching labs and research space. The Trainer Natural Resources (TNR) Building was constructed in 1973 (111,687 GSF) with an addition of 59,470 GSF completed in 1996. The College of Natural Resources (CNR) jointly occupies the TNR Building with Biology. The CNR has significant need itself for expanded research space to house a highly successful international grant and outreach programs.

This project and the space issues that it addresses are documented as the highest priority in the campus development plan forwarded as part of the 2013-15 Capital Budget process. It is also consistent with the recommendations of the 2007 Campus Master Plan.

The 2007 Campus Master Plan also anticipated and recommended strategies to accommodate the loss of the surface parking lot that will be displaced by this project. Consistent with those recommendations, the campus has added capacity at a number of other existing surface lots and is considering the need and feasibility of a future new parking structure.

The construction of this project will not trigger the need to increase capacity at the central heating plant or chilled water plant that will serve this building.

Analysis of Need

The 2010 Campus Utilization Study documented significant quantitative and qualitative space deficiencies across the UW-Stevens Point campus. In just the College of Letters and Science (of which Biology and Chemistry are members), there is a space deficit of over 75,000 ASF. The study identified the major triggers of the space deficiencies to be aging infrastructure, the campus growth agenda, establishment of the Wisconsin Institute for Sustainable Technology (WIST), expanded degree offerings, and a need to accelerate the time to degree.

Approximately half of the space on the UW-Stevens Point campus was constructed between 1952 and 1973 and now requires significant infrastructure improvements to provide viable learning and teaching environments. The campus growth agenda goal is to add 1,000 full time equivalent students over the next ten years. WIST is focused on providing state-wide research, development, consultancy and technology transfer capability for the paper, packaging, forestry, agriculture, food processing and biofuels industries to become and remain twenty-first century global leaders. The unique strengths in the sciences at UW-Stevens Point and their ability to sustain those strengths in the future are pivotal to the success of WIST. Provision of laboratory-based research, development and analysis is driving WIST's growth as it responds to unmet needs in those industries referenced above throughout the state and beyond.

Major Project Request 2013-15 Biennium

Along with its own staff, WIST is using the wider expertise, laboratory, equipment and infrastructure resident in the Science Building to meet these demands. Private sector investment secured by WIST for provision of services is being re-invested into the program and facilities, but those funds can only go so far. Limitations in infrastructure and equipment are already hampering WIST's ability to deliver in certain areas. Furthermore, desk and laboratory spaces provided in the basement and second floor of the Science Building and the third floor of the Trainer Natural Resources Building to enable WIST to operate are already at capacity. As such, opportunities to grow WIST further as intended are becoming stymied by space and capability constraints.

Compared to the 66.7% average six-year graduation rate in UW System, UW-Stevens Point is at 58.9%. The campus goal is to increase the graduation rate to 80% and reduce the time to degree. To reach that goal, a critical component will be to address space deficiencies that limit student access to required laboratory and other science classes, often requiring them to enroll in courses out of chronology in their programs of study and need longer periods at the university to complete required coursework for graduation.

As detailed in the 2010 Campus Utilization Study, there is a lack of space for delivery of teaching lab instruction. University of Wisconsin System utilization goals for teaching laboratories are a minimum of 24 weekly room hours. In Fall 2008, campus teaching labs averaged 19.2 hours per week. However, 58% of labs are scheduled an average of 25 hours or more with usage at peak times going as high as 46 hours. Based on credit hour projections that include enrollment growth, the future number of students that will be in each course was determined. With the current utilization rates in teaching labs, this growth cannot be accommodated. This shortfall is further compounded by the current lack of and need for appropriate teaching lab support space such as specialized material and equipment storage areas, prep spaces, etc.

University of Wisconsin System and modern teaching lab guidelines further recommend 45-55 as the appropriate range of ASF/Student Station. Right-sizing the new teaching labs into the recommended ASF/Student Station range optimizes the total space required, while still maintaining proper circulation, sight lines, student/faculty interaction, and safety.

The net result of addressing the demand and right-sizing the space is a need to increase the total number of teaching labs to accommodate Biology and Chemistry from 19 to 24. This is reflected in the 2012 pre-design program statement as well as the increase in the spaces required to properly support the teaching labs.

UW-Stevens Point and UW System are committed to faculty and undergraduate student research as a critical component of the science learning experience and student preparation for advanced academic pursuits and successful participation in the workforce of today's technology and knowledge based global economy. Approximately 30% of chemistry majors complete graduate and professional programs after leaving UW-Stevens Point. In the ten-year period, 1997-2006, UW Stevens Point had more graduates complete research doctorate degrees in STEM (Science Technology, Engineering and Mathematics) than any other UW campus except UW-Madison.

In order to assess the need for research space, the 2010 Campus Utilization Study benchmarked the existing research space at UW-Stevens Point to 26 public institutions of similar size. The comparison indicated that research laboratory space is below the benchmark of Mean NASF/Student in this category. The deficit is further amplified when taking WIST into consideration. To accommodate this space need in the program statement, modular-bay research space was provided for each faculty member and is assumed it will be shared with students. The arrangement of research lab space is unique to each discipline. They vary in size due to the types of equipment and specimens being examined, some are wet labs while others are "dry lab" computation or team rooms, and some research lab spaces can be shared. The arrangement of research lab space into modular bays will create future flexibility to respond to these ever-changing dynamics.

Consistent with UW System guidelines, the 2010 Campus Utilization Study performed a classroom weekly/daily utilization study and demand analysis for all classrooms on campus. Enrollment and scheduling reports along with type of seating, tech level, and station count were assessed. Enrollment growth projections were also taken into consideration. The demand analysis was used to determine the need and number for classrooms of various room capacities. The outcome of the quantitative analysis is a deficit of 14 total classrooms, 12 with a capacity of 55 seats and two with a capacity of 90-110 seats. As recommended, this project will construct 7 of the needed 55 seat classrooms and both needed in the 90-110 seat range. The remaining need for 5 classrooms with a 55 seat capacity will be addressed in a future project.

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Not only is the existing Science Building unable to meet the quantifiable space needs described above, functional and infrastructure conditions limit its ability to qualitatively accommodate needed laboratory and classroom spaces. Essentially, the mechanical, electrical, and plumbing systems are original to the time each phase was constructed. The building contains multiple air handling and stand-alone cooling systems. The air handling units are at the end of their useful life and, in most areas, the corridors are used as a return air plenum which is a violation of current code. The laboratory hood exhaust system installed in 1993 is at capacity and does not have any heat recovery. The vast majority of controls are pneumatic rather than digital. Existing distribution of the emergency electrical system does not comply with the current National Electric Code (NEC) and the emergency generator is at full load capacity and does not provide protection to critical research equipment.

The 10'-8" foot floor to floor height in the basement and 13'-4" floor to floor height on upper floors does not provide enough space for efficient routing of the mechanical, electrical, and plumbing systems for laboratories or classrooms. Contemporary academic and laboratory facilities have floor to floor heights of 15 feet or more. Renovating the Science Building for more infrastructure intensive laboratory and classroom needs will compromise ceiling heights, inhibit future flexibility, create the need for excessive fittings that will result in higher pressure drops and fan energy consumption, force service access of piping and terminal units to be located directly over laboratory spaces, and cause extreme use of additional vertical shafts. The added vertical shafts will be expensive to cut into the existing structural system and will take away from usable square footage, lowering ASF/GSF efficiency to an unacceptable level.

The interior partitions need to be reconfigured to accommodate functional, efficient, accessible, and safe laboratory spaces. Since they are painted masonry walls, reconfiguration is difficult and expensive. The structural system column spacing is 18 feet or less. This spacing will not support properly proportioned classrooms of the size that are needed.

All exterior windows are original and many are single-glazed in frames with no thermal break. Exterior wall construction has little or no insulation. Window replacement and added insulation at the exterior walls is required to bring the building into thermal energy compliance.

Alternatives

The space deficits documented in the 2010 Campus Utilization Study require the creation of new campus space. The study explored many different combinations of occupants in the new space and the resulting backfill opportunities. Combinations studied to move into new space included:

- Chemistry, Physics, and Biology
- Chemistry and Physics
- Chemistry and Biology
- Chemistry, Biology, Communications Arts, and Business and Economics
- College of Natural Resources, Biology, and Math

Ultimately, the study recommended a four phase scenario to address all of the needs in a manner that balances programmatic priorities, funding realities, existing space use, existing building conditions, and phasing requirements:

- Phase 1: Construct a new science facility to meet the needs of Chemistry, portions of Biology, and portions of the general assignment classroom needs.
- Phase 2: Backfill into the existing Science Building to meet needs in Health Sciences, Physics/Astronomy, Paper Science, WIST, Geography/Geology, Anthropology, Psychology, as well as advancing the new vision of the university and northern region of the state-the Partnership for Thriving Communities. Also, backfill into the Trainer Natural Resources Building to meet research needs of the College of Natural Resources.
- Phase 3: Construct a new academic building to meet the remaining general assignment classroom, Communications Arts, Business and Economics, and Math needs.
- Phase 4: Backfill into the Communication Arts Complex to meet the needs of Student Services, renovate historic Nelson Hall to meet the needs of the Alumni Center and Foundation, demolish the Park Student Services Building.

This project implements Phase I of the recommended scenario while also creating the opportunity for the backfill proposed in Phase II.

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Project Budget

Construction Cost:		\$	59,700,000
A/E Design Fees:	6.00%	\$	3,600,000
Other Fees:	2.00%	\$	1,200,000
DFD Management Fees:	4.00%	\$	2,600,000
Contingency:	7.00%	\$	4,800,000
Movable/Special Eqpt:		\$	3,100,000
		\$	<u>75,000,000</u>

Funding Source

	<u>Total</u>
General Fund Supported Borrowing	\$ 75,000,000
Program Revenue Supported Borrowing	\$ 0
Building Trust Funds	\$ 0
Gifts and Grants	\$ 0
Program Revenue Cash	\$ 0
	<u>\$ 75,000,000</u>

Impact on Operating Budget

	<u>FTE</u>		<u>Cost</u>
Custodial Staff:	4.00	\$	212,000
Maintenance Staff:	1.00	\$	74,500
Utilities:		\$	578,800
		\$	<u>865,300</u>

Project Schedule

A/E Selection:	10/2013
Design Report Approval:	04/2014
Bid Date:	01/2015
Start Construction:	03/2015
Substantial Completion-Occupancy:	05/2017
Final Completion:	10/2017

Project Delivery

Due to the complexity of constructing a new science laboratory facility and the project site location in central campus where the operation of adjacent buildings, utilities, and circulation must remain safe and functional, a single prime delivery method will be requested. Accordingly, a waiver of §16.855 Wis. Stat. under §13.48(19) Wis. Stat. will be sought to allow for single-prime bidding.

Previous Action

None.

Major Project Request

2013-15 Biennium

Agency

University of Wisconsin

Institution

La Crosse

Project Title

Science Labs Building

Project Description and Scope

This project will construct a new 107,880 ASF/179,800 GSF science laboratory facility on a current surface parking lot directly north of the existing campus science building, Cowley Hall. The construction of the new facility will:

- 1) Address an overall 95,227 ASF space needs deficit in the physical and life sciences.
- 2) Accommodate laboratory space needs that can no longer be met in existing Cowley Hall due to functional and infrastructure limitations.

Sciences Space Needs- Total	Sciences Existing Space- Total (Cowley Hall)	Sciences Space Needs- Deficit	Proposed New Science Laboratory Facility
200,945 ASF	105,718 ASF	95,227 ASF	107,880 ASF

Based on documented analysis of all campus programmatic space needs for the physical and life sciences, the new facility will support teaching and faculty/student research laboratory needs in the departments of Biology, Chemistry, Geography/Earth Science, Microbiology, Physics, Radiation Center, and River Studies Center as follows:

Space Type	Proposed New Science Laboratory Facility
Classrooms	0
Teaching Laboratory Space	61,760
Open Laboratory Space	5,920
Research Laboratory Space	38,400
Office/Office Support Space	120
Other Departmental Space	1,680
TOTAL	107,880 ASF

Following completion of this project, existing Cowley Hall will continue to accommodate the balance of campus space needs in the physical and life sciences that are not relocated to the new laboratory facility. The remaining balance of needs will be classrooms, laboratories with less intense infrastructure requirements, office/office support, and other departmental space.

Although outside the scope of this request, the pre-design study includes an analysis of future options for appropriately meeting these remaining space needs. Future options that retain all or a portion of Cowley Hall will be challenged by existing conditions and deficiencies that will impact function, quality, and cost-effectiveness. These include low floor-to-floor heights, structural load code compliance for laboratory spaces, water infiltration and thermal energy performance compliance at the building envelope, worn interior finishes and inefficient partition layouts, accessibility code compliance at restrooms and stairways, and obsolete mechanical, electrical, and plumbing systems that are not code compliant or are beyond useful life/service expectancies.

Background

In coordination with the Division of Facility Development, UW System, and the university, an extensive pre-design study (DFD Project #09J2H) was completed in August 2011. With a clear understanding of the importance to establish a responsible and defensible case for need, the study included rigorous analysis of program space requirements using recommendations from the Campus-wide Classroom Mix Study, laboratory demand and utilization modeling, peer benchmarking, existing enrollment data and forecasting, existing faculty/staff level data and forecasting, existing research funding level data and forecasting, and strong emphasis on maximizing the use of shared spaces. In addition to defining programmatic space needs, the pre-planning study analyzed multiple project alternatives and phasing scenarios. The pre-planning documents can be viewed at <http://www.uwlax.edu/sciencefacility/>.

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Cowley Hall was originally built in 1963 with additions to the northwest and east in 1968 at a time when there were far fewer science programs and their demands on the facility were much less intense. The building has never had a major renovation and is no longer able to accommodate most of the infrastructure requirements or quantity and quality of space needs to deliver science instruction and research on campus. Space deficiencies have limited student access to required laboratory and other science classes, often requiring students to enroll in courses out of their program's chronology and necessitating a longer timeframe at the university to complete the coursework required for their graduation.

The College of Science and Health provides the curricula for all of the physical and life sciences at the university including an institutional focus in allied health that is endorsed by the UW System. In order to meet current demands in both science and allied health, existing programs have been enhanced and expanded. In addition, related programs will continue to be developed that address critical state and national shortages in the science and allied health professions. Allied health programs train professionals in disease prevention and treatment, research, development of care procedures, and methods to promote health and well-being. UW-La Crosse offers programs in Physical Therapy, Occupational Therapy, Nuclear Medicine Technology, Medical Technology, Radiation Therapy, Physician Assistant, Social Work, and Community and School Health Education.

Through course offerings, the College of Science and Health serves approximately 44% (by headcount) of UW-La Crosse students and accounts for approximately 42% of total student credit hour production at the university. As of the fall of 2009, approximately 24% of the university's instructional FTEs were housed in Cowley Hall, and this instructional staff generated 26.5% of the university's credit hours, up from 22.2% in 2000. Growth in student credit hours generated by these programs is expected to continue into the future.

Research and other scholarly activities also play an important role in the delivery of the academic programs in the physical and life sciences. In 2009-10 there were 192 undergraduate and 41 graduate students mentored by faculty on research projects. In addition, faculty and staff generated 81 research publications, 181 conference paper presentations, and submitted 52 grant proposals, with a current funded value of \$2,876,900. Cowley Hall was not originally designed to support research needs, resulting in the use of former instructional lab prep areas, utility closets, storage and circulation areas, and even restroom spaces for these functions.

The significant lack of quantity and quality of space for instruction in the physical and life sciences has been documented as a high priority space issue in the campus physical development plans for the last eight biennia, with a specific major project to address this critical space deficiency included in those plans for the last five biennia. With the recent completion of Centennial Hall, which is the new academic building, and Reuter and Eagle halls for residential space, the need to provide appropriate space for the physical and life sciences became the top campus physical development priority. It is also consistent with the recommendations of the 2005 Campus Master Plan.

This project, along with a new student center to be constructed next biennium and the plan to renovate and air condition eight 1960s vintage residence halls during the next ten years, will increase the demand for chilled water. As a result, construction of a satellite campus chilled water plant that will add capacity to the system is also planned for the 13-15 biennium.

A new campus parking structure, currently under construction, will replace the need for the 180-stall surface lot currently on the project site.

Analysis of Need

As detailed in the pre-design study, there is a lack of space for delivery of teaching lab instruction. University of Wisconsin System goals for teaching laboratories are 24 weekly room hours at 80% student station occupancy rate, resulting in a weekly seat hour goal of 19.2 hours per seat. In Fall 2009, the 28 teaching labs in the science programs averaged 22 hours per week at 86% student station occupancy. Half of all labs are scheduled 24 hours or more with one Biology lab reaching 44 hours of scheduled use. About 60% of the labs have student station occupancies of 80% or higher. In Chemistry and Microbiology, three labs exceed 100% occupancy rates in that there are more students enrolled in the courses than there are student stations. Since the teaching labs also experience a significant amount of unscheduled use, the actual utilization is often in excess of 60 hours per week. This includes lab sections scheduled in the evenings in an effort to accommodate student demand for the courses necessary for them to satisfy the requirements in their fields of study.

Major Project Request 2013-15 Biennium

Based on fall student credit hour projections, the pre-design program statement assumes undergraduate credit hour growth in the sciences to be 3% by 2015 and an overall growth of 5% by 2020. This growth percentage was used to project the number of students for each course. With the current utilization rates stated above for teaching labs in Cowley Hall, this growth cannot be accommodated. In order to use teaching labs more efficiently and minimize the overall need for new teaching lab space, the program statement also assumes 35% of the teaching labs will increase the number of student stations. The net result of the increase in student stations (most commonly from 20 to 24 seats per lab), combined with the projected increased course enrollments is that for many courses, the number of sections to be taught does not increase as the projected capacity of the teaching lab will accommodate the increased enrollments. In a few cases, it reduces the number of sections needed. Taking all of this into account with the desired outcome of at least 19.2 weekly hours per seat, the final analysis indicates a total need for 40 teaching labs, compared to the 29 teaching labs currently contained in Cowley Hall. Also, this shortfall of 11 teaching labs does not address the lack of and need for appropriate teaching lab support space such as specialized material and equipment storage areas, prep spaces, etc. In Cowley Hall, space shortages have forced some existing teaching lab support spaces to be converted into make-shift offices or research spaces.

Due to the on-going commitment by UW-La Crosse and UW System to grant-funded faculty and undergraduate student research as a critical component of the science learning experience and student preparation for successful participation in the workforce of today's technology and knowledge based global economy, there is a strong need for additional research space. In order to assess these needs, the latest National Science Foundation campus research expenditures were compared to all twenty-two of UW-La Crosse peer institutions as determined by the Integrated Postsecondary Education Data System (IPEDS) created by the National Center for Education Statistics. The result of the comparison is that UW-Lacrosse has 54% more sponsored research activity than the average of its peers. To accommodate this space need in the program statement, modular-bay research space was provided for each faculty member and is assumed it will be shared with students. The arrangement of research lab space is unique to each discipline. They vary in size due to the types of equipment and specimens being examined, some are wet labs while others are "dry lab" computation or team rooms, and some research lab spaces can be shared. The arrangement of research lab space into modular bays will create future flexibility to respond to these ever-changing dynamics.

Not only is Cowley Hall unable to accommodate the quantifiable space needs of the physical and life sciences, its infrastructure is obsolete and beyond expected useful and service life. This is especially the case for the large majority of laboratory space needs. Essentially, the mechanical, electrical, and plumbing systems are the same as originally constructed over forty-five years ago. The building contains multiple air handling and stand-alone cooling systems. "Once-through" city water is used to support the unique laboratory equipment cooling demands rather than appropriate recirculation systems. All of the systems and equipment suffer from various age-related deficiencies and are frequently down for unscheduled repairs. While originally code compliant, most of the systems do not meet current codes or standards for ventilation and filtration of air in a laboratory environment. The laboratory hood exhaust system is well beyond capacity. In order to provide appropriate volume, a new set of fans would need to be placed on the roof. However, there is physically not enough space available to place these fans on the existing roof.

The existing building is not ADA compliant or able to meet today's NFPA standards. Any significant renovations performed in the building will trigger the requirement to meet the new International Building Code for Existing Buildings (EIBC). Cowley Hall does not contain a fire suppression system. As there are flammable and hazardous materials both stored and used in the building, current building and NFPA codes would require a fire suppression system in a new facility with this level of hazard. The building contains asbestos that will eventually need to be abated due to continued deterioration or as part of planned renovation.

The galvanized water supply piping in the building is failing, causing an increased frequency of emergency water shut downs. These unscheduled water outages are very disruptive to the many heavily utilized wet teaching and research laboratories. In addition, the laboratory glass acid waste piping is over 50% filled with sediment and needs to be replaced. The chilled water piping system has more frequent leaks, with recent incidents causing significant damage to computing and other lab equipment. The water de-ionization system is not able to provide the appropriate volume or quality of water needed to supply the laboratories.

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The floor, wall and ceiling finishes are mostly original construction and need to be replaced. Floor tiles in most of the building contain asbestos, and in many areas are curling and breaking. The interior partitions need to be reconfigured to accommodate functional, efficient, accessible, and safe laboratory spaces. The 12 foot floor to floor height in Cowley Hall does not provide enough space for efficient routing of the mechanical, electrical, and plumbing systems for laboratories. Contemporary laboratory facilities have floor to floor heights of at least 15 feet. Renovating Cowley Hall for more infrastructure intensive laboratory needs will compromise ceiling heights, inhibit future flexibility, create the need for excessive fittings that will result in higher pressure drops and fan energy consumption, force service access of piping and terminal units to be located directly over laboratory spaces, and cause extreme use of additional vertical shafts. The added vertical shafts will be expensive to cut into the existing structural system and will take away from usable square footage, lowering ASF/GSF efficiency to an unacceptable level. Lastly, the original structural system does not meet current code load or fireproofing requirements for laboratory spaces. This will require significant upgrades to correct.

The exterior windows and curtain wall systems of Cowley Hall are original and in an advanced state of disrepair. The seals and locks have deteriorated to the extent that they allow significant air (energy loss) and water penetration into the building, along with ice build-up on the interior of the windows during the winter months. The slate panel sections are stained and their connections to the building are deteriorating. The lack of thermal break at these connections allows cold air and moisture to penetrate the building. Also, there are locations of significant movement of the masonry wall sections, especially at the corners of the building. The pre-design study recommends multiple alternatives for complete replacement of the existing building envelope to address these issues.

Alternatives

As concluded by the pre-design program analysis and summarized in this request document, existing Cowley Hall is clearly not large enough to accommodate the quantitative space needs of the campus physical and life sciences. Also, it is unable to qualitatively support many of the intensive infrastructure requirements of the teaching and research laboratory components of these programs. There are not any other existing facilities on campus that could, even with renovation, support these quantitative or qualitative needs. That combined with the importance of adjacency of science facilities for efficient and collaborative operations, the construction of new space on the available site north of Cowley Hall is the consistent best alternative recommendation in the pre-design study and Campus Master Plan.

The pre-design study also analyzed alternatives for future projects to accommodate the remaining space needs in the sciences that are not addressed in this project. The alternatives explored the long-term future of Cowley Hall and its ability to functionally and cost-effectively support these remaining needs. Options included complete replacement of Cowley Hall or a combination of partial replacement and renovation. It concluded that complete replacement was the best scenario.

However, an alternative that would create an entirely new science facility that supported all of the space needs in a single biennium is not realistic. It is too expensive and could not be executed in a single biennium due to the required construction phasing and associated temporary relocations of occupants. The project proposed in this request meets the minimum critical space needs in the campus physical and life sciences in a manner that is credible and responsible in the context of the overall capital budget.

Project Budget

Construction Cost:		\$	63,956,000
A/E Design Fees:	7.00%	\$	4,656,000
Other Fees:	0.00%	\$	1,110,000
DFD Management Fees:	4.00%	\$	2,763,000
Contingency:	8.00%	\$	5,117,000
Movable/Special Equip:		\$	4,398,000
		\$	<u>82,000,000</u>

Funding Source

	<u>Total</u>
General Fund Supported Borrowing	\$ 82,000,000
Program Revenue Supported Borrowing	\$ 0
Building Trust Funds	\$ 0
Gifts and Grants	\$ 0
Program Revenue Cash	\$ 0
	<u>\$ 82,000,000</u>

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Impact on Operating Budget

	<u>FTE</u>		<u>Cost</u>
Custodial Staff:	2.00	\$	55,000
Maintenance Staff:	1.00	\$	45,000
Utilities:		\$	360,000
		\$	<u>460,000</u>

Project Schedule

A/E Selection:	10/2013
Design Report Approval:	04/2014
Bid Date:	01/2015
Start Construction:	03/2015
Substantial Completion-Occupancy:	05/2017
Final Completion:	10/2017

Project Delivery

Due to the complexity of constructing a new science laboratory facility and the project site location in central campus where the operation of adjacent buildings, utilities, and circulation must remain safe and functional, a single prime delivery method will be requested. Accordingly, a waiver of §16.855 Wis. Stat. under §13.48(19) Wis. Stat. will be sought to allow for single-prime bidding.

Previous Action

None.

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Agency

University of Wisconsin

Institution

Madison

Project Title

Chemistry Addition/Renovation

Project Description and Scope

This project will construct instructional laboratories and lecture rooms for the Department of Chemistry. The project will include

- 1) Demolition of 18,300 ASF/39,800 GSF of the northernmost portion of the existing Daniels chemistry building and demolition of a 3,500 GSF house on an adjacent parcel.
- 2) Construction of a 63,400 ASF/170,000 GSF building addition housing new instructional laboratories, and support spaces, offices, undergraduate support spaces, classrooms, lecture halls, and two floors of shell space.
- 3) Renovation and back-filling of 30,500 ASF/55,000 GSF of space in the existing chemistry complex for instructional laboratories for general chemistry.
- 4) This project will also renovate mechanical systems (HVAC) of the Mathews and Daniels chemistry buildings, including replacement of the air-handling units in the Daniels building and replacement of the entire heat recovery and laboratory fume hood exhaust fan system for both Mathews and Daniels buildings.

The space would be provided as follows:

Lab Type	Current Qty.	Size (ASF/student)	Proposed Qty.	Size (ASF/Student)	Delta
General Chemistry	4.5	1,900 ea (47)	7	2,400 ea (60)	7,300
Analytical Chemistry	2.5	2,100 ea (59)	2.5	2,400 ea (60)	700
Organic/Inorganic Chemistry	3	2,100 ea (57)	5	2,880 ea (80)	8,200
Total Labs	10.5	21,000 total	14.5	37,200 total	16,200
Teaching Lab Support	NA	7,500 total	NA	20,300 total	12,800
Offices *	NA	8,700 total	NA	6,200 total	(2,500)
Undergraduate Support	NA	13,800 total	NA	15,400 total	1,600
Classrooms *	12	6,500 total	2	1,200 total	(5,300)
Lecture Halls	3	7,700 total	3	13,800 total	6,100
Shell Space (future labs)				31,400 est.	
TOTAL		71,000		125,500	

*Current quantity includes classrooms and offices in areas that would be remodeled in the future. Proposed quantity includes only classrooms and offices in this project.

Background

The UW-Madison chemistry complex is comprised of the Mathews and Daniels buildings completed in the late 1960s and the Shain Research Tower completed in 2000. The complex (224,180 ASF / 409,079 GSF) houses all administrative, instructional, and research functions of the Department of Chemistry, as well as the Chemistry Library and Chemistry Learning Center.

While the completion of the Shain Research Tower addressed its immediate research needs of chemistry, instructional needs have remained unmet. There has been an insufficient number of labs for 15 years. Attempting to address this problem, the department has investigated a series of solutions to address facility needs off-site and has implemented changes to instruction to reduce demand for instructional space. The recent acquisition of a parcel of land immediately to the west of the existing Daniels building has provided a site that, with demolition of a portion of the Daniels building, has enough capacity for an addition that will improve the quality and quantity of chemistry instructional space including lecture halls and instructional labs.

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Architectural and engineering consultants were hired in the fall of 2010 to examine the existing building conditions and define a scope and budget, as well as phasing options, for a new addition and renovation of existing space. The pre-design was completed in the fall of 2011 and is the basis for this request. The pre-design study projected the entire needs of the chemistry complex – both programmatic and infrastructure – beyond the base project requested here. Three other major components remain to be completed in biennia to come, including (in today's dollars) (1) fit-out of two shell floors at \$6.6M each floor, (2) completion of instructional space renovations at \$12.7M (including \$7.8M of further infrastructure improvements directly related to this renovation work), and (3) building-wide infrastructure improvements at \$16.6M. This final category represents a long list of infrastructure deficiencies and maintenance problems in the Mathews and Daniels buildings that could be accomplished either item-by-item, or coupled with renovation projects.

Analysis of Need

The existing instructional spaces have problems in both quantity and quality of space. There currently are not enough labs to meet demand, lecture halls are undersized, and there is a shortage of student support space. Instructional labs do not meet current safety standards and are not configured to allow for best practices in instruction. Lecture halls are poorly configured for modern instruction. Building mechanical systems are in poor condition and no longer work properly.

Undergraduate enrollments in chemistry courses have increased approximately 50% in the last 20 years, by virtue of chemistry's central role in the life sciences and biotechnology. Continued growth is anticipated from emerging scientific areas such as climate change/global warming, energy, environmental sciences, and nanotechnology. Fifty-five percent of entering freshmen take a chemistry course during their undergraduate career. Forty percent of entering freshmen take a chemistry course during their first semester on campus. Because virtually all students majoring in science, engineering, and allied health fields require chemistry courses as prerequisites to courses in their major, the ability to accommodate large general chemistry (freshman) and organic chemistry (sophomore) enrollments is a crucial factor in influencing the time-to-degree for a substantial fraction of all undergraduate majors on campus.

Chemistry 103 and Chemistry 104 are the highest-enrollment courses on campus during the fall and spring semesters, respectively. Based on 39 hours per week of available scheduling, seven labs are required to meet demand; however, only five labs are available. This has led to revising the normal scheduling of one lab session per week to one lab session every other week, with computer experiments being used to fill in the non-lab weeks. This inability to hold weekly labs for general chemistry represents a serious degradation of instruction. For many non-science majors, since this course may be the only laboratory course these students will ever take, it is important that this course provide a high-quality laboratory experience. While computer labs can be advantageous in some aspects of learning, they cannot replace the hands-on lab skills that are important to teaching chemistry. Therefore, restoring weekly laboratory sessions to general chemistry is an important goal of the department.

Chemistry 343 (organic chemistry lecture) and 344 (organic chemistry lab) have been documented as courses whose limited throughput is an impediment to timely graduation of undergraduates across campus. While the Madison Initiative for Undergraduates has provided funding for additional chemistry faculty and staff that will alleviate pressure in lecture courses, it is the physical infrastructure of the building that currently limits throughput in the laboratory courses. Based on 39 hours per week of available scheduling, five labs are required to meet demand; however, only three labs are available. The lack of laboratory space for organic chemistry students has resulted in an even more serious enrollment problem, resulting in a backlog that has grown steadily over the past decade. This increasing backlog has resulted in seniors and juniors becoming the primary clientele of what is normally a sophomore lab course. Most students are forced to delay taking the lab course by one or more semesters after completing the lecture sequence, which significantly undermines the effectiveness of the curriculum. The continued enrollment pressure necessitated an undesirable curriculum change in 2009, in which the laboratory period for students in Chemistry 344 (organic chemistry laboratory) was decreased from eight hours/week to six hours/week.

In addition to the issue of inadequate laboratory space, there is a deficit of preparation labs, stock rooms, instrumentation rooms, and other spaces necessary to support the instructional labs. The existing facilities lack appropriate areas for reading, writing, and discussion in immediate proximity to the laboratories. Public corridors have become classrooms by default, as students are forced to use the hallways outside the labs to do their calculations, record information, and discuss experimental data and results with other students. The lack of separate instrument rooms means that instruments and

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computers must be located directly in the laboratory; this situation results in premature instrument failure and poorer data from instruments that have been exposed to corrosive fumes.

The quality of facilities has been a problem for 25 years. Chemical safety and hygiene standards have changed dramatically in the 40 years since the current undergraduate chemistry laboratories were built. No major renovations have taken place since that time and the existing facilities are woefully inadequate by today's standards. Deficiencies in laboratory ventilation are pervasive throughout the instructional laboratories, but problems are especially acute in the organic chemistry labs. Best practice is to perform organic chemistry experimentation in an exhausted workspace. However, existing labs have dramatically insufficient fume hood space for routine student use, compromising the safety of students. Unlike the current labs, modern chemistry laboratories provide nearby writing, instrumentation, computing, and discussion areas that are physically separated from chemical hazards found in laboratories. Additionally, most of the existing instructional laboratories have lab benches in a configuration that creates dead-end aisles. In some instances, the aisle has a small emergency escape panel (2' by 2') at the floor level. Neither dead-end aisles nor escape panels are permitted by modern lab design practice. Finally, the labs are not configured to facilitate group work or accommodate electronic instruction, and offer less space per student than comparable modern laboratories.

The existing lecture rooms have not been refurbished since construction. These lecture rooms suffer from poor sight lines, extremely tight spacing between rows, and inadequate space to accommodate modern electronic instruction. The low square footage per student makes the rooms uncomfortably crowded compared with modern lecture spaces.

The existing Mathews and Daniels buildings suffer from a multiplicity of mechanical problems. Although renovations accomplished through the WISTAR program (2000-2003) and an energy conservation project (2009-2010) have afforded minor programmatic space improvements in the Mathews and Daniels buildings, continuing use of the space is put in jeopardy by the dilapidated condition of the mechanical systems. The HVAC equipment has reached the end of its useful life, is failure-prone, has very poor energy efficiency, and cannot be properly serviced. Failure of one or more major components would have a catastrophic impact on both teaching and research in the chemistry department. Currently fume hood exhaust fans are located on the second floor roof of the Daniels building, a poor location in light of the recent construction of a 14-story residential tower directly across Mills Street.

The heat recovery system serving nearly all of Mathews and Daniels buildings is non-functional and non-serviceable. The plugged and leaking coils have been shut off and large sections of coils have been removed just to provide adequate airflow to the exhaust stream. Since chemistry labs require substantial exhaust, the lack of heat recovery means that large amounts of energy are being consumed to heat and cool air that is then exhausted.

Despite the recognition of this critical situation by the Division of Facilities Development and UW-Physical Plant, it has been impossible to devise a plan to implement a comprehensive renovation without shutting down the buildings for a period of at least one year. Constructing new space as a first step provides the ability to shut down and renovate portions of the existing building for mechanical system renovation.

In order to provide a sufficiently sized site for an optimal addition, it will be necessary to demolish a portion of the Daniels Building. That two-story part of the building contains the poor quality lecture halls and student support spaces that would be replaced in the new building. Removing this part of the building allows for the construction of a floor plate large enough to accommodate laboratories and support spaces, for a logical tie-in of the new space to the existing building, and for extension of new mechanical systems from the addition to the existing Daniels building.

Constructing an addition with two floors of shell space allows for the most intense use of a very limited site, and meets the most critical need for laboratories for general, organic, and analytical chemistry, while reserving space that can be fitted out in the future for physical chemistry and other future instructional or research needs.

Remodeling existing space for general chemistry allows for reuse of a building that would be unsuitable for functions such as organic chemistry that require substantial mechanical infrastructure but are adequate for less demanding uses. Functionally, this remodeled space will tie in well with existing adjacent uses, both now and in the future when that space is remodeled.

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Alternatives

Inclusion of organic chemistry instructional laboratories in various major construction projects (BioStar IV, WID, Biochemistry Phase III, Integrative Biology Building) has been considered during the past several years. These options were not pursued because each would split organic chemistry labs from other chemistry support facilities and the rest of the instructional chemistry enterprise, and fail to address the critical problems associated with general chemistry laboratories and chemistry lecture rooms.

The relocation of instructional labs to other locations was also considered. An option to relocate chemistry instructional labs to Chamberlin Hall was rendered infeasible with the decision to fully utilize that building for the Physics Department. An option to relocate chemistry instructional labs to the site of the Brogden Psychology building – either in an extensively renovated building or a new building – was rendered infeasible because there is no space to which the Psychology Department could relocate. An option to construct a chemistry instructional facility at the southwest corner of Mills and Johnson Streets was not feasible because the existing uses of that site are intended to remain for the foreseeable future. Finally, the redevelopment of portions of the Medical Sciences Center was investigated as part of the current pre-design study, but was shown to be unsuitable for accommodating instructional labs of appropriate configurations. This lack of any other suitable site in proximity to the chemistry complex limits expansion to the existing chemistry site.

Renovation of the main chemistry lecture rooms was considered in 2005. It was determined that the tiered concrete floor imposed serious constraints on the designs of these rooms. Replacement of seating would do nothing to address the other limitations related to crowding, poor sightlines, poor layout of chalkboards and projection screens, and the need for other upgrades. It was determined that high quality lecture rooms, of comparable seating capacity, simply cannot be accommodated within the footprint of existing physical space, and reducing room capacities was not a viable option given the need for rooms of these capacities.

A project to rebuild the HVAC system of the Mathews and Daniels buildings was considered by the Division of Facilities Development and UW-Physical Plant in 2006. The plan would have required the complete shutdown of both buildings for a period of at least one year. The project could not be implemented because of the untenable logistical implications.

<u>Project Budget</u>	<u>Funding Source</u>	<u>Total</u>
Construction Cost:		
A/E Design Fees:		\$ 10,500,000
Other Fees:		\$ 75,000,000
DFD Management Fees: 4.0%		\$ 18,000,000
Contingency: 5.3%		
Movable/Special Equip:		
\$ 86,242,000		\$ 103,500,000
\$ 6,278,000		
\$ 630,000		
\$ 3,632,000		
\$ 4,550,000		
\$ 2,168,000		
\$ 103,500,000		\$ 103,500,000

Impact on Operating Budget

	<u>FTE</u>	<u>Cost</u>
Custodial Staff/Supplies:	4	\$ 264,000
Maintenance Staff/Supplies:	1	\$ 880,000
Utilities:		\$ <u>684,000</u>
		\$ <u>1,828,000</u>

Note: Although the formula above indicates that four additional custodial and one maintenance staff person would be needed for this project, no new staff will be hired.

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Project Schedule

Program Approval:	January 2012
A/E Selection:	October 2013
Design Report Approval:	July 2014
Bid Date:	June 2015
Start Demolition:	May 2015
Start Construction:	September 2015
Substantial Completion, New Tower:	July 2017
Substantial Completion, Remodeling:	July 2018
Final Completion:	September 2019

Project Delivery

The combination of a tight site with limited staging, coupled with the continuation of teaching and research activities while the project is under construction, will require an unusual amount of coordination and project control. Construction-manager-at-risk is a delivery method that would offer a single point of responsibility and better coordination than the traditional state project delivery method. Consequently, a waiver of §16.855 Wis. stat. under §13.48(19) Wis. stat. will be sought to allow for construction-manager-at-risk project delivery.

Previous Action

None.

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Agency

University of Wisconsin

Institution

Madison

Project Title

Babcock Hall Dairy Plant Addition

Project Description and Scope

This project will construct a three-story addition to and will remodel portions of Babcock Hall to house the Center for Dairy Research (CDR). The project will have the following components:

- 1) Demolition of 5,000 GSF of space that includes the existing milk intake area, the existing drying tower, a mechanical space at the northwest corner of Babcock Hall, a stair tower will be demolished, and the existing 3,200 GSF Science House at 1645 Linden Drive.
- 2) A 19,800 ASF/32,497 GSF addition that includes space for the CDR, an atrium space a new milk intake facility with three storage silos, and a new mechanical penthouse for the Dairy Plant.
- 3) Renovation of 29,689 GSF of space on the basement, first and second levels of the existing dairy plant will be renovated and creation of additional space within Babcock Hall by constructing an intermediate floor in a section of an existing two-story space.

The CDR addition will include two floors of flexible research space, designed to allow for easy change-out of equipment as research needs change. The third floor level will contain a dedicated meeting room for 60 people and two training areas. Movable walls between the two training areas will allow several different configurations of the floor. An atrium between the existing building and the addition will contain restrooms, electrical and telecom rooms, an elevator, and will provide accessible entry from both the north and south. The CDR offices will remain on the second floor of the existing building. Six parking stalls will remain on the south side of the addition.

Background

The UW's commitment to agriculture and food science has played a critical role in the development of Wisconsin as America's Dairyland. It began in the late 1800s, when Wisconsin was evolving from the leading wheat producing state to an emerging dairy state. The university hired Stephen Babcock, who was teaching at Cornell at a time when New York was the leading dairy state, as Professor of Agricultural Chemistry. Babcock is often referred to as the Edison of the dairy industry, his most famous invention occurring in 1888 when he developed the Babcock milk fat test, which enabled a dairy processor to not only compensate farmers fairly, but to produce a consistent product that consumers could depend on. Soon after, the UW established the first dairy school in the U.S. that consisted of a resident 2-week training course in dairy manufacturing.

The dairy program was originally housed in Hiram Smith Hall. In 1948, the 80,833 ASF/136,071 GSF Babcock Hall was constructed to replace the outmoded Hiram Smith Hall as the home of the dairy department. It contained additional instructional space and an entire working dairy plant. Today, Babcock Hall houses the Food Science Department, the Dairy Plant, Dairy Store, and the Center for Dairy Research (CDR). The Food Science Department is home to more than 115 undergraduate and 40 graduate students, of which about 30 work on dairy related research project. The Center for Dairy Research, located within the Dairy Plant, was established 25 years ago, and is the largest dairy foods research center in the U.S. In 2010 alone, the CDR provided research, technical support and outreach to almost 200 Wisconsin dairy companies, dairy buyers/end users, suppliers, regulatory agencies and national/international dairy organizations. Together the Food Science Department and the Center for Dairy Research offer more than 22 short courses and 17 custom industry trainings per year. Since 1989, nearly 10,000 participants have taken either a short course or custom training program.

In 2010, the Department of Food Science and Center for Dairy Research agreed to jointly fund a planning study to look at options for renovating the Dairy Plant. Different options were explored for updating the existing infrastructure and adding the additional space needs to meet the instructional, research and outreach mission of both programs. This proposal is the result of that study.

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Analysis of Need

The Babcock Dairy Plant makes dairy products for consumer sale on campus and thus is subject to the regulations and inspection by the FDA as well as the Wisconsin Department of Agriculture, Trade, and Consumer Protection. The current plant, designed as state of the art when built in the 1940s, has never been renovated, and no longer meets current health code standards and regulations for dairy plant construction and operation. This non-compliance puts the plant in danger of being closed by regulators in the near future if deficiencies are not corrected.

There are a number of condition issues in this over sixty-year old facility. The dairy plant cooling system is plumbed into the concrete floor and is therefore unserviceable. The 1940s era piping for potable and chilled water lines is aged and corroded beyond repair, with leaks causing unsafe bacterial loads to develop. The ventilation system, originally designed when fresh air intake through screened windows was permissible, is no longer allowed by regulatory agencies. With closed windows and no air circulation the work environment is extremely hot and humid in the summertime, with routinely recorded heat indexes of greater than 100°F. Inadequate ventilation results in an unhealthy work and teaching environment, and the potential for growth of pathogenic bacteria, as well as spoilage and contamination between research projects and products being produced for human consumption. The Dairy Plant has an aging, corroding electrical system in a wet environment with numerous shorts and wire exposures.

There are also functional problems that compromise health and safety. Currently the raw milk storage tanks and processing equipment are on the open floor; modern standards of dairy plant design require them to be physically separated to minimize the risk of pathogenic bacteria from the raw milk cross-contaminating finished dairy products and causing consumer illness and potential product recalls. There currently is no ability to separate research projects from the consumer product manufacturing area that also poses the potential risk for cross contamination. Plant security is also an issue with too many poorly secured access points. The work area for accommodating short course participants is unsafe due to crowded conditions as well as exposure to steam lines, corroded electrical outlets, chemicals, etc.

The existing space is too small to adequately serve contemporary needs. The Wisconsin cheese industry is expanding, especially in the area of specialty and artisan cheeses, and cultured products such as yogurt, Greek yogurt, Quark, Kefir, and Fromage Blanc is one of the fastest growing dairy categories. However, currently the CDR cheese and dairy proteins pilot areas are full beyond capacity, with no ability for further growth. Thus there is no space available for a specialty cheese ripening area or a cultured products area. The new facility would provide separate temperature and humidity-controlled spaces for cheese ripening, as well as sufficient space for production and research of cultured dairy products.

CDR programming, which requires clients to come to campus to access the small-scale manufacturing equipment, continues to grow at industry request. Although nearly 1400 people per year attend various educational offerings, many times potential students are turned away or are placed on long waiting lists for short courses due to space limitations. An expanded facility would allow the CDR to increase the number of training courses/activities offered, as well as increase class size.

Alternatives

Renovating only the infrastructure of the existing plant (ventilation, electrical, plumbing, etc) does not address the lack of space to meet industry needs or resolve functional deficiencies that create the potential for contamination between research projects and product produced for consumption.

An even larger addition to the west end of building was also considered but proved too costly. Additionally, the study considered creating a mezzanine across the entire existing dairy plant processing floor while also upgrading infrastructure. This also proved costly and would result in potential disruption for the dairy plant and CDR operations of more than one year.

The current proposal of a smaller addition and infrastructure upgrades stays within a budget that the dairy industry can support, allows for continuation of operations, updates infrastructure, and creates significant new processing and teaching square footage designed to be flexible to cope with future needs.

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Project Budget

Construction Cost:		\$	20,977,000
A/E Design Fees:	8.00%	\$	1,729,000
Other Fees:	0.00%	\$	210,000
DFD Management Fees:	4.00%	\$	898,000
Contingency:	7.00%	\$	1,468,000
Movable/Special Equip:		\$	6,638,000
		\$	<u>31,920,000</u>

Funding Source

		\$	15,959,000
General Fund Supported Borrowing		\$	15,961,000
Gifts and Grants		\$	
		\$	<u>31,920,000</u>

Fee Impact:

There is no fee impact associated with this project.

Impact on Operating Budget:

No new custodial or maintenance staff will be hired as the result of this project. It is anticipated that there will be increases to utilities costs because of the increased space

Project Schedule

Program Approval:	07/2013
A/E Selection:	09/2013
Design Report Approval:	06/2014
Bid Date:	07/2015
Start Construction:	09/2015
Substantial Completion:	02/2018
Final Completion:	04/2018

The project schedule includes 15 months to build the addition, 3 months for CDR to move in to addition and for the Dairy Plant to move out, and 12 months to complete the Dairy Plant remodeling.

Project Delivery

Because of food grade requirements associated with this project, as well as a constricted site, and phasing of the new construction and renovation, the campus requests single-prime bidding as a delivery method. Accordingly, a waiver of §16.855 Wis. Stat. under §13.48(19) Wis. Stat. will be sought to allow for single-prime bidding.

Previous Action

None.

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Agency

University of Wisconsin

Institution

Madison

Project Title

Meat Science & Muscle Biology Laboratory

Project Description and Scope

This project will construct a new Meat Science and Muscle Biology building on Observatory Drive to replace existing inadequate facilities. The project will have the following components:

- 1) Construction of a 28,915 ASF /51,600 GSF new building
- 2) Demolition of the 17,750 GSF Seeds Building, the 11,270 GSF building at 1910 Linden Drive, and a 3,175 GSF wing of the Poultry Building, to clear the site located on Observatory Drive for the Meat Science and Muscle Biology Laboratory. After completion of the new facility the existing 30,190 GSF building will be demolished and a parking lot constructed on the site.

The new building will contain research laboratories (including a Biosafety Level 2 suite), classrooms, teaching laboratories and specialized animal processing spaces, including an abattoir, carcass chilling and cooling facilities, and a meat processing area.

Background

The existing 25,747 ASF/30,190 GSF Meat Science and Muscle Biology Laboratory was constructed in the 1930's for faculty of the Animal Husbandry Department, with additions in 1959 and 1969. In the 1940s, a Meat Science program was created at the UW-Madison and subsequent faculty recruitment and research resulted in the emergence of a preeminent program in Meat Science. The mission of the program includes (1) training the next generation of meat industry leaders with cutting edge insightfulness and technologies, (2) supporting innovative research interests through interdisciplinary collaborative efforts, and (3) providing outreach education to foster the production of wholesome meat products for the consuming public and the economic development of the meat industry.

Since its construction, the building has had little in the way of capital improvements. Work has been done to keep the laboratory operational. In 2008, the refrigeration systems, cold storage rooms, and ventilation systems of the meat production instructional laboratories were replaced in order to meet current state codes and standards. This project was intended as a short-term fix (seven years +/-), rather than a long-term solution. Prior to this project state inspectors had condemned one of the coolers and a freezer.

In 2002, a planning effort was undertaken for a new Meat Science and Muscle Biology building, but was never implemented. That design forms the basis for this request.

Analysis of Need

Users of the current building attempt to function with pre-1950 abattoir, fabrication, meat processing, kitchen and sensory evaluation areas. These facilities no longer meet federal or Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) meat handling and processing standards, but to date, state inspectors have allowed continued use of the facility, in consideration of the importance of the program. Problems include product flow and people movement deficiencies such as cooked meat products moving back through raw meat and meat product areas and people having to walk from livestock chutes through clean meat fabrication areas in order to access the harvest demonstration laboratory. Other deficiencies include the lack of refrigeration in the fabrication and processed meat manufacturing areas and the inability to properly clean and sanitize the demonstration facilities, such as raw and cooked products being moved from the fabrication laboratory to the meat-processing laboratory in a dumb waiter that cannot be cleaned or sanitized. The project will build a facility in which proper air circulation and humidity controls are in place to prevent condensation from accumulating, a condition that has been shown to be a source of product contamination with environmental pathogens.

The project will prevent work place injuries by having a facility design and equipment that limit the need for excessive physical capabilities, such as strength or height, of the staff or students. Such improvements will preclude the need to lower

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and raise 200-lb carcass portions by hand, move carcass viscera (200 lbs) in barrels with a hand truck, and lift meat into head-high hoppers. The project will enable the humane movement of animals without risk to staff and students who now need to trail the animal from within the chute. Cold rooms will provide the required air exchanges for human occupancy.

The new building will provide research capabilities that do not now exist. A Biosafety Level-2 suite will allow opportunities to partner with state and national meat companies to test methods for elimination of pathogens under full commercial conditions. Companies continually struggle against pathogen introduction into their commercial processes. Therefore, they will never study a pathogen in their plant. This facility will allow their microbiologists to bring a troublesome pathogen into an isolated laboratory where killing methods can be tested. Also, equipment companies can intentionally inoculate equipment with a pathogen and validate that certain sanitation methods are effective. In addition to the isolatable lab, there will be laboratories, known as pilot labs, where conventional meat processing will occur. These labs will allow meat product designers to develop new processes and products using state of the art equipment in small, cost-effective batches.

Training capabilities will be enhanced by the new building. The demonstration lab will feature a lecture hall with a refrigerated demonstration zone located behind a large glass wall. The professor will be able to interact with students and students will be able to enter the refrigerated zone. Companies will be able to study the component steps ranging from sausage batter preparation through smoking to final product appearance. DATCP has expressed an interest in using this facility to train their inspectors. Current training methods require that inspectors travel to numerous locations to observe and receive hand-on training in the full range of livestock and poultry harvest and processing. This facility would provide a single site at which the full range of training could occur. Since food safety regulations are continually updated, the proximity of this facility to DATCP facilitates a high-quality training program for inspectors.

Alternatives

The alternative of remaining in the existing building was considered. Major renovations would be required that would not adequately resolve functional problems and would be very difficult to implement. The building was constructed in several parts over many years and tying all of the building systems together to make them code compliant would be cost prohibitive if not impossible.

Project Budget

Construction Cost:		\$	28,958,000
A/E Design Fees:	8%	\$	2,409,000
Other Fees:		\$	605,000
DFD Management Fees:		\$	1,251,000
Contingency:	8%	\$	2,317,000
Movable/Special Equip:		\$	7,337,000
		\$	<u>42,877,000</u>

Funding Source

	<u>Total</u>
General Fund Supported Borrowing	\$ 22,877,000
Gifts and Grants	\$ 20,000,000
	<u>\$ 42,877,000</u>

Fee Impact

There is no fee impact associated with this project.

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Impact on Operating Budget

	<u>FTE</u>		<u>Cost</u>
Custodial Staff:	3	\$	107,000
Maintenance Staff:	1	\$	312,000
Utilities:		\$	157,000
		\$	<u>576,000</u>

Note – Although the formula above indicates that three additional custodial and one maintenance staff person would be needed for this project, no new staff will be hired.

Project Schedule

Program Approval:	07/2013
A/E Selection:	09/2013
Design Report Approval:	06/2014
Bid Date:	07/2015
Start Demolition:	08/2015
Start Construction:	09/2015
Substantial Completion:	01/2017
Final Completion:	05/2017

Project Delivery

Due to the complexity and unique nature of the facility, a single prime delivery method will be requested. Accordingly, a waiver of §16.855 Wis. Stat. under §13.48(19) Wis. Stat. will be sought to allow for single-prime bidding.

Previous Action

The Meat/Muscle Science Laboratory project was enumerated at \$20,000,000 General Fund Supported Borrowing as part of the 2001-03 Capital Budget. The project was subsequently cancelled by the university, and the funds reallocated to other projects.

2013-15 Renovation and Repair
Existing Facilities

Major Project Request

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Agency

University of Wisconsin System

Project Title

Classroom Renovation/Instructional Technology Improvements

Project Description and Scope

This project continues the University of Wisconsin System's major initiative started in 1995-97 to upgrade the physical condition and instructional capabilities of facilities to address the multi-faceted educational needs of the 21st century. The primary focus of this program is to provide comprehensive classroom renovations to create an instructional environment that will strengthen the faculty's ability to communicate efficiently and effectively with undergraduate students.

Classroom remodeling is limited to the 13 degree-granting institutions and UW-Extension; remodeling needs vary depending on programmatic requirements, size, configuration, physical and mechanical condition, and equipment needs of each room. UW Colleges facilities are constructed and maintained by their local units of government. Educational programs, equipment, and services are provided by the UW System. As building spaces are remodeled or constructed at the UW Colleges, appropriate equipment is typically provided separately in the capital budget through All Agency funding.

Typical classroom renovations funded under this program include:

- Providing an appropriate HVAC system;
- Improving acoustical performance;
- Improving lighting systems;
- Providing audio/visual/video and multimedia systems;
- Installing a faculty-controlled integrated control system for multimedia presentations;
- Reconfiguring walls and replacing seating as necessary;
- Updating floor, wall and ceiling room finishes; and
- Complying with ADA and building code requirements.

Typical equipment for mediated classroom and/or distance learning capabilities could include:

- Video systems (codec, camera control system);
- Video projection system;
- Multi-media equipment (DVD, DVR) with faculty controlled access;
- Local video peripherals (such as a video imager);
- Computer and multi-media software;
- Central remote control system; and
- Audio/visual pool (slide projectors, overhead projectors).

Similar to classroom renovation/IT improvement projects being implemented during 2011-13, it is anticipated that several proposals for 2013-15 will create active learning environments. These technology-enhanced instructional spaces enable students to work both individually and in groups, fully engaging in a variety of learning strategies in one setting. Active learning leads to improved understanding and retention of information as well as development of problem solving and critical thinking skills. The benefits of active learning environments are leading to a greater demand for these instructional spaces.

Background

This request is the tenth of a multi-biennia effort to complete in-building wiring at several institutions; improve classrooms, both in terms of physical condition and technology; and expand distance learning capabilities throughout the UW System. For the most part, in-building wiring has been completed at the institutions with updated wiring needs being accomplished as part of other funded projects on a building-by-building basis. Program funding to date is captured in the following table:

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Authorized by State Building Commission

Biennium	Recommended by Board of Regents	GFSB enumerated	GFSB for Classrooms	GFSB for In Building Data Wiring	Other Funds	Approx. # of Classrooms Updated
1995-97	\$25,000,000	\$8,500,000	\$3,875,000	\$4,625,000	\$687,475	72
1997-99	\$10,000,000	\$6,000,000	\$6,000,000	\$973,064		108
1999-01	\$15,000,000	\$13,300,000	\$11,800,000	\$1,500,000	\$560,370	110
2001-03	\$15,000,000	\$10,000,000	\$9,800,000	\$200,000	\$382,000	80
2003-05	\$15,000,000	\$5,000,000	\$3,711,000	\$1,000,000	\$114,945	60
2005-07	\$15,000,000	*\$7,000,000	\$1,500,000	\$1,000,000	\$63,667	31
2007-09	\$ 6,500,000	\$3,500,000	\$3,500,000		\$317,120	75
2009-11	\$10,000,000	\$5,000,000	\$5,000,000		\$292,800	31
2011-13	\$10,000,000	\$ 5,000,000	**\$5,000,000		\$585,250	36

*Reduced by \$4.5 million by the Board of Regents as part of the \$10 million legislature-mandated reduction of 2005-07 capital projects.

**An additional \$5 million of GFSB-All Agency Remodeling Funds was authorized to provide a GFSB total of \$10 million for this Classroom/IT program.

In order to achieve the maximum benefit possible under this program, the Building Commission authorized flexibilities in the past several biennia. These flexibilities enable the Division of Facilities Development to transfer balances, adjust individual project budgets and add or substitute other high-priority Classroom/IT projects within authorized funding, and expand the program using other funding sources on an as-needed basis. Due to the costly nature of comprehensive renovations and technology and the high demand for funding under this program, both the Board of Regents and State Building Commission authorized \$5 million of General Fund Supported Borrowing (GFSB)-All Agency Remodeling funds to be added to the \$5 million of 2011-13 GFSB specifically enumerated for classroom renovations, for a GFSB total of \$10 million. Given the demonstrated on-going need, it is hoped that enumeration of this proposal will remain whole at the requested \$10 million.

Overall, the UW System, excluding UW Colleges, has over 1,600 general assignment classrooms of varying sizes, encompassing over 1.4 million SF of space. The majority of these essential instructional spaces have not been updated since construction. These classrooms serve the instructional needs of virtually every school and college in the UW System, especially undergraduate programs.

Analysis of Need

Technological advances over the past decade or so have dramatically altered traditional models of teaching and learning. Inspired by an infinite number of instructional opportunities, student and faculty expectations have risen immeasurably due to the role that technology has played in enhancing instruction and increasing access to it. More and more, faculty are being trained or entering the workplace needing to utilize tools, such as a video/data projector with DVD/DVR, cable TV, computer and other inputs; these tools are used to individualize instruction, vastly expanding the "walls" of the classroom, enhancing visual demonstrations, stimulating interaction, and sharpening conceptual skills. Satellite dishes and computer networks bring resources to students from around the world.

In the past, traditional classroom resources consisted of standard blackboards, overheads, and slide and movie projectors. Now electronic media are playing an increasingly vital role in the modern university curriculum. However, limited resources have resulted in a substantial unmet demand for instruction utilizing electronic media. Current and emerging instructional resources also include highly technical audio, video, and computer units that make possible graphic presentations that cannot be offered any other way.

The *Wisconsin Idea* charges the University of Wisconsin System with providing quality educational opportunities to citizens in all parts of the state. Providing access to a vast array of courses and programs is being achieved not only through classroom instruction at the 13 four-year and 13 two-year institutions, but also through UW-Extension outreach activities to other sites around the State of Wisconsin. Distance education allows all UW System institutions to provide access to place-bound students through transmitting lectures using various technologies from printed materials, video tapes, radio, and television, to live interactive broadcasts over fiber optic cable. In addition, distance education provides students at UW institutions with access to a greater array of courses by sending courses from one institution to another.

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"Charting a New Course for the UW System" is the product of a year-long study by the Board of Regents in collaboration with others to address Wisconsin's future. A recommendation in this 2004 report encourages continued use of distance education to serve more students and expand learning opportunities to efficiently earn college credits and degrees. Distance learning continues to evolve with web-based learning becoming an increasingly reliable and economical means of providing instruction outside traditional classroom settings and campus boundaries. Distance learning endeavors will help achieve a common goal of the UW System and the Governor in increasing the number of Wisconsin citizens who hold baccalaureate degrees as a means to spur advances in the state's economy.

A 2006 survey of all general assignment classrooms indicates that thirty-six percent require some degree of remodeling and thirty-four percent do not contain the desired level of technology. At that time, the overall magnitude of classroom deficiencies was estimated at \$35 million. Preliminary cost estimates for instructional spaces that the institutions plan to implement during 2011-13 total \$10,585,250. These projects are being funded using \$5,000,000 of enumerated state funding for classroom renovations, \$5,000,000 of General Fund Supported Borrowing - All Agency Remodeling Funds, and \$585,250 of Institutional Funding to provide remodeling and/or technology enhancements in 36 instructional spaces totaling nearly 46,000 assignable square feet at Institutions across the UW System.

Classroom Technology Level Definitions

Level 0	Does not meet the minimal technology standards defined as Level 1
Level 1	Basic classroom containing chalkboard or marker board; projection screen; overhead projector; lighting fixtures switched in groups; darkening shades; voice and data connections; podium, cart or lectern. These rooms are "portable ready," implying that any combination of portable equipment could be brought into the room.
Level 2	Classroom with all the features of Level 1 plus traditional instructional technologies, such as a DVR, TV, sound system, DVD player, audio cassette, CD player, etc. Room lighting system shall be appropriate for note-taking during video presentations.
Level 3	Classroom with all the features of Level 2 plus video/data projector and a teaching station with nearby access to controls for all A/V equipment, room lighting and room sound system. Wired network connectivity at each fixed seat or fixed table type student station may be included in this category.
Level 3 +	Classroom with all the features of Level 3 plus a teaching station with an electronic touch screen for control of all A/V and room functions.
Distance Learning Level	Classroom equipped with a two-way video system to support distance education.
Active Learning	Classroom furnished and equipped with multiple computerized learning pods and a portable computerized teaching station that enables the instructor to electronically connect to any/all of the connected learning pods.

Based upon the foregoing definitions, survey responses and funded classroom renovation/instructional technology projects, the data has been tabulated regarding Systemwide levels of technology in the classrooms (including the UW Colleges), as shown below. The desired levels of technology surveyed in 1996, 2000, and 2006 are also provided to illustrate the significant shift in recent years from a Level 2 to a more sophisticated Level 3/3+. This trend reflects the escalating capabilities of faculty who are increasingly relying on technology to deliver their instructional programs. Although the table shows some migration toward the desired levels of technology, there remains an acute need for funding to provide resources to meet contemporary instructional technology requirements.

Technology Levels	1995, 2000, and 2006 Survey Data					
	Prior to 1995	2000 Level	Current (2006)	Desired in 1996	Desired in 2000	Desired in 2006
Levels 0-1	81%	57%	30%	21%	25%	16%
Level 2	12%	14%	13%	47%	8%	11%
Level 3	6%	18%	37%	25%	46%	44%
Level 3+	*	8%	18%	*	16%	27%
Distance Learning	1%	3%	2%	7%	5%	2%

* Level 3+ was developed in 2000.

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The overall magnitude of classroom deficiencies still exceeds \$25 million. It should be recognized that this figure represents a moving target based on several factors. Non-renovated classrooms will continue to age, the service life of technology ranges between six and ten years, and advancements in teaching and learning methodologies will continue to necessitate remodeling and/or technology revisions. Based upon the significant unmet need, the classroom modernization program will take several more years to implement, so it is important that the program continue to be given a high priority. Continuation of this program will assist each institution to respond to their highest priority needs in providing suitable learning environments. Funding is vital to realize progress in addressing significant classroom renovation/instructional technology needs and to provide the capability to undertake costly high-priority improvements in large lecture halls.

In addition to necessary technological advances, classrooms are in need of fundamental facility improvements including: replacement of lighting to facilitate multiple lighting levels; repair or replacement of seating to improve sight lines and seating arrangements; ADA and building code work, including accessibility requirements for five percent of classroom capacity; improvement of heating and ventilation to maintain student alertness and extend longevity of equipment used in the classrooms; installation of acoustical materials on the ceilings and walls, as needed, carpeting for aisles and stage areas; and patching, painting, and flooring replacement, where necessary.

Alternatives

An alternative would be to renovate and update technology in classrooms only as part of major remodeling projects. For decades, this was the sole way to obtain funding for major classroom renovations and, as a result, needed classroom updates were ignored and accumulated to a point where a dedicated classroom renovation program had to be developed to provide appropriate learning and teaching environments more expeditiously. Present classroom deficiencies severely inhibit campus instructional efforts. Under this option, only a handful of major renovation projects would be funded each biennium, which would leave the vast majority of classroom needs unaddressed for undetermined, unacceptably-long periods of time. In addition, stand-alone classroom improvement projects could not be undertaken using such a narrow funding approach. It should be noted that classrooms are not eligible for funding under this Systemwide Classroom Renovation/IT Improvements program if major building renovation projects are anticipated in the very near future.

Project Budget

Construction Cost:	\$ 10,000,000
	\$ 10,000,000

Funding Source

General Fund Supported Borrowing	\$ 10,000,000
	\$ 10,000,000

Fee Impact

N/A

Previous Action

Since 1995, approximately \$68,300,000 of General Fund Supported Borrowing has been received through the Classroom Renovation/Instructional Technology program (including \$4.3 million of 1999-01 GFSB WisBuild - All Agency Facilities Repair funds and \$5 million of 2011-13 General Fund Supported Borrowing – All Agency Remodeling funds) to improve instructional spaces throughout the UW System.

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Agency Institution
University of Wisconsin System

Project Title Utility Improvements:
UW-Eau Claire Garfield Avenue Corridor Improvements
UW-La Crosse West Campus Chilled Water Plant

Project Description and Scope

Garfield Avenue Corridor Improvements: This project will reconstruct Garfield Avenue from the terminus of the city of Eau Claire right-of-way near the Newman Center to the base of the bluff at the Putnam Parking Lot. Work includes replacement of approximately 70,000 square feet of roadway surface, curb and gutter, sidewalk, lighting and subsurface utilities. The roadway alignment will be adjusted to allow extension of the pedestrian bridge approach for pedestrian safety and handicapped accessibility. The Garfield Avenue corridor will be improved with new bike parking, plazas, signage, irrigation, and landscaping. Approximately 1600 linear feet of domestic water line will be upgraded to provide adequate fire flow and approximately 1300 linear feet of sanitary sewer line will be replaced. Storm water drainage in the vicinity of the roadway will be modified to drain the new roadway and surrounding site. Approximately 1200 linear feet of new natural gas line will be installed under the new roadbed from the city right-of-way terminus to the base of the bluff near Putnam Hall. Approximately 1500 linear feet of steam and steam condensate line will be replaced in concrete box conduit in current locations. Project work also includes renovation of the Roosevelt Avenue cul-de-sac, construction of a campus gateway entrance, replacement of utilities in the roadway corridor and construction of accessible parking to replace parking that will be lost when Garfield Avenue is improved. Abandoned utilities located along the roadway corridors will be removed.

West Campus Chilled Water Plant: This project will construct a west campus chilled water plant to augment the capacity of the existing campus chilled water system. The plant is anticipated to be located on university property southwest of Coate Hall. Based on preliminary load data, the project will install two 800 ton electrical variable speed centrifugal chillers in a new approximate 3,500 GSF facility. The facility will be designed for a total capacity of 2,400 tons. Ancillary equipment will include variable speed chilled water distribution pumps, variable speed cooling tower with visual screening and support structure. Chilled water distribution piping will be extended from the plant to existing chilled water mains located along the north side of Badger Street just south of Whitney Center. Distribution lateral piping will be installed from exiting campus chilled water distribution mains to three residence halls located on the eastern portion of campus and five residence halls located on the western portion of campus. The existing chilled water plant will undergo equipment control modifications to allow dispatching of chilled water production equipment at both plants to make optimal use of equipment to minimize operational costs. A study is currently underway which will help determine the final plant location, optimal chiller and ancillary system sizes and optimal electrical power source. The study will include a total life cycle cost study to determine if the plant will be served from the campus 15/5 kV electrical substation or the local electrical utility distribution system in the vicinity of the plant.

Background

Garfield Avenue Corridor Improvements: Garfield Avenue and associated subsurface utilities were originally constructed in the early 1950s. Since that time the road and utilities have been reconstructed in pieces as buildings were constructed along the corridor. Therefore, the pavement and utilities vary in age and construction materials. Sewer systems include vitrified clay, concrete, steel, iron, and PVC. Water mains are mostly cast iron and several have broken and been repaired. Steam conduits were installed along the road corridor in the mid 1960's. Pavement surfaces are varied with curbs and road surfaces of concrete and bituminous materials. Traffic has been restricted on Garfield Ave since the early 1970's and the road is current closed to public traffic.

West Campus Chilled Water Plant: The existing chilled water plant and campus chilled water distribution system were built in 1997 to provide chilled water to six campus buildings and allow the removal of unitary building chilled water production equipment that had exceeded its useful life. The plant and distribution system were designed for three 1200 ton chillers or a maximum capacity of 3,600 tons. One 1200 ton chiller was installed in the original building project. In 1999, a second chiller was installed to provide additional capacity for existing buildings with unitary chilled water equipment needing

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replacement plus capacity to serve a new Health Science Center. In 2005, a chiller plant addition was constructed and a third 1200 ton chiller was installed to provide chilled water for a new classroom building and two new residence halls.

Analysis of Need

Garfield Avenue Corridor Improvements: Garfield Avenue is the only through street on UW-Eau Claire's lower campus. It is also the only pedestrian corridor linking the upper campus residence hall area with lower campus and the north campus via the Chippewa River footbridge. Through decades of aging and heavy use, the roadway and underlying utilities are worn and damaged beyond economical repair. The roadway surface is very rough creating a traffic hazard. The drainage and curb elevations have settled and no longer provide positive drainage to catch basins. Storm water collects in areas, runs over curbs and erodes the river bank. A video camera inspection of the sanitary sewer system documented general deterioration of the piping with many offset joints. Steam lines which run along the south side of the road and cross beneath the road at the pedestrian bridge entry are 45 years old, beyond their useful life and need to be replaced.

In addition to basic infrastructure, this project will correct other issues. The slope of the pedestrian ramp to the footbridge exceeds ADA guidelines, and maintenance vehicle traffic must cross pedestrian traffic at one point resulting in a hazardous condition. The cross slope and low area in the road at the base of the bluff create an unsafe condition for both pedestrians and traffic, and under icy conditions, slips occur frequently. Correcting this issue would have the added benefit of providing a higher elevation roadbed to keep flood waters from entering campus. Sidewalks along Garfield are too narrow for pedestrians causing students to overflow into the street. A natural gas line is needed to serve existing buildings on Garfield Avenue and a future science building to be constructed on the current site of Putnam and Thomas Halls. Parallel parking along Garfield Avenue at Thomas Hall does not meet accessibility design guidelines and needs to be relocated.

West Campus Chilled Water Plant: The campus chilled water system is at capacity. The system does not have capacity to air condition major buildings to be constructed or renovated in the next six years including a new 328,000 GSF science building, a new 161,000 GSF student union and renovation of the existing 51,800 GSF Wittich Hall. In addition, chilled water is needed to air condition eight 1960s vintage residence halls (449,000 GSF) that will undergo renovation over the next ten years. Other longer term chilled water needs for building additions and renovations identified in the Campus Master Plan include a renovation and addition to Mitchell Hall and an addition to the Center for the Arts.

Renovation of residence halls will include the replacement of two pipe heating systems with four pipe heating and cooling systems to enable air conditioning. This project will stub chilled water lines into the residence halls so that each renovation project will have a source of chilled water ready for connection. The provision of air conditioning is seen as a requirement to maintain solid attendance at overnight summer conferences and camps. Summer occupancy provides needed support for residential living capital and operational budgets. Lodging expectations have shifted to expect more amenities. Cooling of residence hall rooms will provide students with medical conditions an acceptable environment when temperatures increase in the months of September and May.

Alternatives

Garfield Avenue Corridor Improvements: None.

West Campus Chilled Water Plants: None.

Project Budget

Project Budgets	UW-Eau Claire	UW-La Crosse	Total
Construction	9,712,000	5,636,000	15,348,000
A/E Design Fees	808,000	451,000	1,259,000
Other Fees	0	0	0
DFD Management	447,000	259,000	706,000
Contingency	1,457,000	845,000	2,302,000
Moveable / Special Equipment	0	0	0
Total	12,424,000	7,191,000	19,615,000

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Funding Sources	UW-Eau Claire	UW-La Crosse	Total
General Fund Supported Borrowing	\$6,127,000	\$3,595,500	\$9,722,500
Program Revenue Supported Borrowing	6,159,000	3,595,500	9,754,500
Gifts & Grants	106,000	0	106,000
Program Revenue-Cash	32,000	0	32,000
Total	\$12,424,000	\$7,191,000	\$19,615,000

Fee Impact

UW - Eau Claire: None.

UW - La Crosse: None.

Impact on Operating Budget

UW - Eau Claire: None.

UW - La Crosse: The annual electrical costs will increase when this additional chilled water production capacity is utilized. The expected cost increase will be estimated as part of the current study.

Project Schedule

Schedule	UW-Eau Claire	UW-La Crosse
A/E Selection	01/2013	10/2013
Design Report Approval	09/2013	10/2014
Bid Date	05/2014	03/2015
Start Construction	06/2014	05/2015
Substantial Completion	09/2014	05/2015
Final Completion	06/2015	08/2015

Project Delivery:

At the present time, it is anticipated that the standard state project delivery process will be used for both projects.

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Agency

University of Wisconsin

Institution

Platteville

Project Title

Facility Renewal
Boebel Hall Renovation - Phase 2

Project Description and Scope

This project will renovate a portion (32,580 ASF/46,315 GSF) of Boebel Hall science building (47,451 ASF/67,274 GSF) for instructional laboratories, undergraduate research space for the Department of Biology and the Department of Social Sciences Geography and Geology Program. The project will also add a total of 2,920 GSF of infill space on the south side of the first floor and 580 SF on the northeast corner of the second floor. It will also include the renovation general-assignment classroom space. This project will complete the second and final phase of Boebel Hall renovation. The renovated facility will support all the space needs for the department of Biology and the department of Social Sciences, Geography and Geology.

	Prior to Renovation	Phase I Renovation		Phase 2 Renovation	Completed Project
Space Type	Existing Total Space (ASF)	Completed Total Space (ASF)	Existing Total Space (ASF) after Phase 1	Proposed Phase 2 Space (ASF) Renovation	Total Space (ASF) after Phase 1 and Phase 2
Classrooms	22 rooms - 16,170	0	12 rooms - 10,113	3 rooms - 3,950	3 rooms - 3,950
Collaborative Spaces	0	0	0	3 rooms - 1,720	3 rooms - 1,720
Teaching Lab. Space	13 rooms - 10,491	4 rooms - 4,000	17 rooms - 14,491	13 rooms - 13,400	17 rooms - 17,400
Lab Support Space	14 rooms - 3,935	5 rooms - 1,240	19 rooms - 5,175	12 rooms - 4,850	19 rooms - 7,120
Open Lab. Space	2 rooms - 1,816	0	2 rooms - 1,816	1 room - 1,000	1 room - 1,000
Research Lab. Space	5 rooms - 854	0	5 rooms - 854	13 rooms - 5,480	13 rooms - 5,480
Other Departmental Space	0	2 rooms - 1,030	2 rooms - 1,030	12 rooms - 2,180	13 rooms - 2,380
TOTAL	33,266 ASF	6,470 ASF	33,480 ASF	32,580 ASF	39,050 ASF

This project will create and renovate two Biology Foundation labs, a Molecular Biology lab, an Anatomy and Physiology lab, an Advanced Anatomy and Physiology lab, a Microbiology lab, a human cadaver storage room, a Botany lab, and an Advanced Botany lab, an animal housing area and surgical prep room, and renovation of the existing greenhouse on the third floor of the building. Space identified to be renovated for Geography and Geology includes two Physical Geography labs, a Geology lab, and a Geographic Information Systems (GIS) lab. Renovation also includes three general access classrooms; a shared computer lab and collaboration space.

This project will replace components of the HVAC system (chiller and air handler have been replaced by DFD #09H2X). Install a new direct digital control (DDC) temperature control system to operate per current Division of Facility Development (DFD) standards including space demand control ventilation, equipment controls, and facility monitoring electrical systems (including electrical switchgear, emergency generator etc.) This project will replace electrical service, branch circuit distribution and panel boards, lighting system, receptacles, switches, occupancy sensors, and install additional electrical circuits. Existing motor control centers will be replaced to serve the proposed HVAC system. This project will replace the emergency generator and segregated emergency distribution equipment. The project will build a new telecommunications room on the second floor to support the entire building, upgrade the existing network and telecom system, including adding voice over internet protocol (VoIP). The existing campus tie and fire alarm panel control panel shall remain, but the existing remote enunciator shall be relocated. New detection and annunciation devices are required throughout the building. The project will install a fire sprinkler system throughout the building.

This project will also support community outreach by creating three new collaboration spaces. Outreach activities that will occur in the renovated spaces are grade school, middle school, and high school outreach programs that are focused on increasing awareness and familiarity with the Science, Technology, Engineering, and Mathematics (STEM) fields. The April 2011 UW-Platteville STEM outreach program was highly successful, receiving more than 900 applications from high school students to participate in STEM related activities in the laboratories and classrooms at UW-Platteville with faculty, staff, and students.

Major Project Request

2013-15 Biennium

Background

Boebel Hall is the only science building on the UW-Platteville campus. Constructed in 1977, this building houses the Department of Biology and the Department of Social Sciences, Geography and Geology instructional laboratories, undergraduate research space, and general assignment lecture rooms.

The Boebel Hall Renovation-Phase 1 project was completed in August 2010, and was limited to a portion of the first floor of the three-floor building. Phase 1 converted ten inferior-shaped, small, outdated classrooms into modern, flexible biology wet labs. The Phase 1 project had high value and immediate impact by replacing existing poorly-sized classrooms with four new high-tech labs and support spaces in a short nine-month construction period.

However the university only partially addressed immediate laboratory needs with the completion of Phase 1. It continues to wrestle with the limitations of older laboratory spaces that cannot meet modern instructional needs and lack undergraduate research space.

Due to the limitations of Boebel Hall, the Department of Biology has been forced to use undesirable options to meet facility needs such as the necessity of using an existing storage room in the university's Industrial Studies building to serve as a secure cadaver storage room and biology laboratory. The immediate laboratory and undergraduate research needs of Geography and Geology departments remain unaddressed.

Architectural and Engineering consultants were hired in July 2011, to examine existing conditions and the programmatic and infrastructure needs of the Department of Biology, the Department of Geography, and the Department of Geology as well as define a scope and budget to complete the renovation of Boebel Hall. This pre-design effort is the basis for this request.

A significant amount of work was completed in Phase 1 to support the Phase 2 renovation, including infrastructure impact work. That work included: (1) construction of automatic fire sprinkler system throughout the remodeled spaces on the first level, including a fire department connection, sprinkler riser and flow switch and (2) installation of a new fume hood variable volume exhaust system including stainless steel ductwork connecting all new fume hoods and snorkel exhaust stations with a single duct riser extended through the existing second and third floor to a new utility set exhaust fan on the roof. Ductwork will be extended from this system to the basement to accommodate anticipated exhaust hood requirements in the Phase 2 programmed spaces in the basement. Another project replaced the Boebel Hall chiller and air handler unit with larger units that were designed to accommodate both Phase 1 and 2.

Boebel Hall currently has a total of seventeen laboratories and twelve general-assignment classrooms. Of the seventeen laboratories, thirteen are functionally outdated and have never been renovated or upgraded, and four new laboratories developed in the Phase 1 Renovation. Of the twelve general-assignment classrooms, seven are undesirable due to either due irregular room shape and poor viewing angles, or an excessively low ceiling height. The twelve existing classrooms range in capacity from twenty-eight to sixty-six capacity.

Analysis of Need

The need for the renovation of Boebel Hall is strongly driven by enrollment growth and the development of new programs and minors. New biology programs recently added are: Biohealth/Physiology (2007), Ecology (2007) and Molecular Genetics (2007), and the new Geography minor of Geographic Information Systems was added in 2008. The number of biology majors has more than doubled since 2000, and there now are more than 440 majors. This figure does not include an increase in biology minors or increases in non-biology students taking biology courses as prerequisites or electives. It is anticipated that biology will continue to be one of the fastest growing departments on the campus. The Boebel Hall labs and support spaces, which were constructed in 1977, cannot support this increase in demand or pedagogical changes without undergoing major renovation.

The 2011 Campus Comprehensive Master Plan identifies a campus enrollment growth increase from 7,142 FTE in fall 2010 to 8,377 FTE in 2015, to more than 10,000 FTE in 2025. The campus has already experienced 47% growth in enrollment during the past decade.

The Boebel Hall Renovation-Phase 2 pre-design identifies seventeen laboratories, three general-assignment classrooms, and undergraduate research space. Phase 2 of the project will not increase the number of laboratories in the building, will provide a lab in-kind replacement, and will completely resolve laboratory and classroom quality and functionality issues by reshaping, relocating,

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and renovating space within the existing building. The net loss of nine general-assignment classrooms is due to the reshaping and relocation of laboratories and laboratory support spaces and the development of undergraduate research space.

Of the nine net classrooms to be lost, all are surplus classrooms, based on the university's classroom demand analysis, which was completed in fall of 2011. The same demand analysis also shows a campus-wide shortage of three classrooms in the 55-capacity range. Phase 2 will have three classrooms; one of 62-capacity, and two of 48-capacity, which are the sizes that the university needs.

Laboratory Space: Lack of sufficient quality laboratory space for Biology students had created bottlenecks specific to the following areas: (1) laboratory practicals, (2) laboratory set-ups that need to remain set up and functional for several identical lab sections, (3) open-lab times that support hands-on lab skills, and (4) lab-based study and review.

Two other undesirable situations include the use of available space in Boebel Hall as live animal facility specimen rooms even though those areas lack adequate room ventilation and environmental controls. The HVAC system connects the specimen room to adjacent laboratories and public spaces and consequently distributes air and odors from the specimen room to those adjacent areas. Another undesirable situation is the reuse of inferior-quality, low-technology space for research space without appropriate functional renovations. For example, an abandoned photographic darkroom space (191 SF) on the third floor of Boebel Hall now serves as ad hoc research space, without upgrades to the lighting or the electrical system, or any other appropriate improvements.

Support Facilities: There is not adequate space for faculty or lab support staff to prepare laboratory materials adjacent to the laboratories. The lack of support and preparation space means that laboratory materials must be prepared directly in the laboratories. This situation means that laboratories are inaccessible for longer periods of time as they are set-up.

Safety: Chemical safety and hygiene standards have changed dramatically in the 35 years since the current labs were designed and built. The thirteen older existing laboratories have improper ventilation by modern standards. Many of the older existing laboratory spaces have inadequate fume hoods or no fume hoods at all.

Phase 1 of the project did construct a wet pipe sprinkler system throughout the remodeled spaces on the first floor, fire department connection, and sprinkler riser. Phase 2 will provide a wet pipe sprinkler system throughout the existing building, and will include a new 6-inch water service to replace the existing 4-inch water service.

This project will replace interior building finishes and components including ceilings, flooring, wall finishes, doors, whiteboards, and chalkboards; reconfigure spaces as required for the future occupants; install systems furniture and casework as needed; install modern audio-visual technology in all classrooms and labs; install specialized equipment used in instructional labs; and comply with all ADA accessibility requirements. This project will remove asbestos-containing materials located throughout the building, including floor tile and mastic, asbestos-containing pipe insulation, linings of the laboratory sinks, transite linings in the fume hoods, any asbestos containing tile grout and mastic, fire doors and transite tabletops, and any other asbestos containing materials.

Alternatives

The option to do nothing to the existing facilities or delay the project until a future biennium does not allow the campus to address the university's critical needs of today. This decision would have significant negative impact on UW-Platteville's ability to serve the needs of students and employers, particularly in the science and biology fields. The backlog maintenance of the building would not be addressed and would result in numerous small All-Agency projects to deal piecemeal with mechanical problems, but not solve the critical laboratory or larger classroom needs of the campus.

Project Budget

Construction Cost:		\$	12,664,000
A/E Design Fees:	8.00%	\$	1,054,000
Other Fees:		\$	167,000
DFD Management Fees:	4.00%	\$	557,000
Contingency:	10.00%	\$	1,266,000
Movable/Special Eqpt:		\$	1,661,000
		\$	<u>17,369,000</u>

Funding Source

GFSB Facilities Renewal Funding	\$	17,369,000
Program Revenue Supported Borrowing	\$	0
Building Trust Funds	\$	0
Gifts and Grants	\$	0
Program Revenue Cash	\$	0
	\$	<u>17,369,000</u>

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Fee Impact

No fee impact.

Impact on Operating Budget

It is anticipated that the operating budget will not increase. This is based on no significant increase in building GSF and energy efficiency gains achieved via improvements in HVAC and lighting control are anticipated to offset increased energy consumption by lab ventilation.

Project Schedule

Request BTF:	09/2013
A/E Selection:	11/2013
Design Report Approval:	07/2014
Bid Date:	02/2015
Start Construction:	05/2015
Substantial Completion:	12/2015
Final Completion:	03/2016

Project Delivery

The university requests the use of single-prime delivery method. This project will require full commissioning by a third-party.

Previous Action

None.

Major Project Request

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Agency

University of
Wisconsin

Institution

River Falls

Project Title

Rodli Hall Renovation

Project Description and Scope

This project will renovate Rodli Hall, an existing 63,473 GSF building on the UW-River Falls campus. The scope includes removing and replacing all building infrastructure systems, windows, roof, and utility services. The building will be brought into current code compliance including accessibility. Remaining asbestos containing materials will be abated. An existing exterior area created by a second floor overhang will be enclosed to capture approximately 2,300 ASF/3,500 GSF of additional interior program space. Chilled water lines will be extended from the main chilled water service located south of the building, steam and condensate line connections will be replaced, and the current water service will be increased in size. Site work includes repair of a retaining wall on the north side of the building and re-routing sidewalks on the south side of the building. The mechanical penthouse on top of the building will be replaced with a new stair-accessible structure. Existing interior partitions, with the exception of two stair tower enclosures and the elevator shaft, will be removed. New partition walls will be constructed and configured for offices and meeting spaces to support a student services center. Departments anticipated to be located in Rodli include:

- Registrar
- Admissions/Welcome Center
- Bursar
- Financial Aid Services
- Career, Health, and Personal Counseling
- Global Connections
- Center for Undergraduate Research, Creative, and Scholarly Activity
- Honors Program
- Academic Success Center
- Outreach
- Social Space

Background

Rodli Hall was constructed in 1967 as a food service building intended to serve all food service needs for the campus. The building has a concrete structure (waffle slab) with exposed concrete and red brick exterior materials. Interior materials are predominantly painted concrete block, brick, and glazed block or tile. Some stained wood is used as accent materials. Ceilings are typically lay-in acoustic tile type, though some areas on the lower level do not have suspended ceilings. The building is heated with steam supplied by the Central Heating Plant. Currently the building is cooled by an independent centrifugal chiller mounted on the roof.

The building served as a food service operation until January, 2007 when food service operations were consolidated in the new University Center. Since then, the building has been underutilized. The facility has been used in a limited capacity for classrooms, a copy center/print shop, and for storage since that time. Limited repairs have been performed on the building to keep it serviceable. Restrooms on the lower level were renovated in 2010 to provide basic ADA access so that classrooms could continue to be used. A complete building evaluation was performed as part of the campus master plan in 2010 and recommended renovation and re-use of the building for office type uses, such as student services.

Analysis of Need

Rodli Hall is in poor overall condition due to obsolescence and previous use as a food service facility. The facilities assessment concludes that all HVAC, mechanical, plumbing, electrical, emergency power, telecommunications, signal, and fire alarm systems are in poor condition, beyond their service life, and need to be replaced. Interior finishes, with the

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exception of terrazzo floor on the lower level, are in fair to poor condition and should be replaced. Interior partitions are not configured properly for re-use of the building as a student services center. The building's exterior is in fair condition, except the roof must be replaced, windows and frames replaced, as well as the exterior doors. In short, the building's structure is in adequate condition, but all other building systems must be removed and replaced to accommodate an adaptive reuse.

The 2010 campus master included a comprehensive space analysis that recommended reorganization and consolidation of campus office uses to increase efficiencies and better access to services. Currently, student service departments are located in four different buildings. The result of the current spatial configuration is inefficient use of staffing, inhibited communications and coordination, and inconvenience to students. The central campus location of Rodli Hall supports its use as a student and visitor focused facility. Furthermore, the space needs of student services align with the available space in Rodli Hall.

Alternatives

Two alternatives were considered prior to and during the campus master planning process that ultimately determined that the highest and best re-use for Rodli Hall was conversion to a student services center.

Prior to the campus master plan, it was already determined that a high priority campus space need was for a consolidated student services center. Part of a growing trend on college campuses, student services centers provide a "one stop shop" for students needing access to various departments and functions such as admissions, financial aid, accounting, bill paying, course registration, academic support services, etc. Existing Hagestad Hall, also located in the middle of campus, was first deemed the logical location for a consolidated student services center.

The campus master plan space analysis later determined that the most urgent space issue to be addressed is the proper location and infrastructure to support future science education needs. The conclusion of that analysis was that Rodli Hall, next to Centennial Science Hall, provided a good location. However, its' distance from the existing Agriculture Science complex does not make it an optimal location. Further, Rodli Hall does not provide the correct structural geometry or capacity for contemporary science space: floor to floor heights are too low, structural bays do not support unitized lab equipment and furnishings, and the floors lack sufficient loading capacity. The decision was made to focus on constructing a new science building on the site of Hagestad Hall, adjacent to and connecting to the Agriculture Science Complex. Therefore, Rodli Hall is available for re-use to meet other pressing space needs.

Project Budget

Construction Cost:		\$	11,361,000
A/E Design Fees:		\$	1,123,000
Other Fees:		\$	393,000
DFD Management Fees:	4.00%	\$	486,000
Contingency:	7.00%	\$	795,000
Movable/Special Eqpt:		\$	942,000
		\$	<u>15,100,000</u>

Funding Source

General Fund Supported Borrowing	\$	11,100,000
Program Revenue Supported Borrowing	\$	2,417,000
Building Trust Funds	\$	0
Gifts and Grants	\$	0
Program Revenue Cash	\$	1,583,000
	\$	<u>15,100,000</u>

Total

Fee Impact

Fiscal Year	Annual Fee
2012-13	\$ 33.00
2013-14	\$ 32.22
2014-15	\$ 32.22
2015-16	\$ 32.22
2016-17	\$ 32.22

Impact on Operating Budget

	<u>FTE</u>		<u>Cost</u>
Custodial Staff:	0.00	\$	16,000
Maintenance Staff:	0.00	\$	0

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Utilities:	\$	73,100
	\$	<u>89,000</u>

Project Schedule

Program Approval:	07/2013
A/E Selection:	09/2013
Design Report Approval:	06/2014
Bid Date:	12/2014
Start Demolition:	02/2015
Start Construction:	04/2015
Substantial Completion:	04/2016
Final Completion:	06/2016

Project Delivery

At the present time, it is anticipated that the standard state project delivery process will be used.

Previous Action

None.

2015-17 GFSB Advance Enumeration

Major Project Request

2013-15 Biennium (2015-17 Advance Enumeration)

Agency

University of Wisconsin

Institution

Milwaukee

Project Title

Integrated Research Center at Innovation Park, (Phase 1), (IRC-IP)

Project Description and Scope

This project will provide funding to purchase the Innovation Park Integrated Research Center (IRC-IP) – Phase 1 building from the UWM Real Estate Foundation, which will construct the project to meet the needs of UWM. The project will be designed and constructed by a developer, competitively selected using an RFP process. The developer will work with UWM personnel on the design, which will also be reviewed by UW system and DSF staff. An operating lease with an option to purchase will be developed, with the purchase taking place as soon as capital funding is available.

The IRC-IP will contain approximately 84,000 ASF/150,000 GSF of research and support space and will bring together engineers, medical informatics, business, health sciences of human movement and occupational therapy, nursing, mathematical sciences, physics and others in a collaborative facility for research. The building will include research labs for biomechanics, ergonomics, imaging, industrial innovation, and rehabilitation.

The UWM Real Estate Foundation will provide a ready-to-build lot for this building. Work will also include a parking lot, site work, utility connections to research park infrastructure, and landscaping. The site and building will be designed to accommodate a future Phase II building that will accommodate a ten-year growth projection for space.

Background

The Integrated Research Center at Innovation Park (IRC-IP) is a crucial next step in UWM's Research Growth Initiative which began in 2006. UWM is one of two public doctoral research universities in the State with over 30,000 students enrolled annually. It enrolls and graduates more Wisconsin residents than any other institution of higher education in the state.

UWM enrollment has grown by 25% over the past ten years but has long been constrained by the physical limitations of its Kenwood campus. To fulfill UWM's research mission in healthcare and industry-related technologies the UWM Real Estate Foundation established Innovation Park in February 2011. Governmental agencies that provided support of Innovation Park include the City of Wauwatosa, Milwaukee County, and the Economic Development Administration of U.S. Department of Commerce. The Innovation Accelerator building, a business accelerator facility currently in development, is the first new building in UWM Innovation Park and is being funded by a grant from the Economic Development Administration. The functions in Innovation Accelerator will complement functions in the IRC-IP. Developing Innovation Park will have a strong positive impact on the economy of the greater Milwaukee area and the State of Wisconsin.

Education and collaboration will be an important component of the program. Growth of degree programs related to biomechanics and industrial innovation will contribute to a highly trained workforce and continued development of related industries in the greater Milwaukee area and throughout Wisconsin. The location of the Integrated Research Center at Innovation Park allows UWM to pursue translational and integrated research in collaboration with other researchers in the Milwaukee Regional Medical Center (MRMC). Phase I quantifies a five year growth projection.

The infrastructure of Innovation Park is currently under development with a Tax Incremental Financing District (TIF) of the City of Wauwatosa. The City will use funds from existing TIF No. 2, and new TIF No. 5 to finance the road, water, and sanitary sewer, and storm water infrastructure work. The current schedule for the basic infrastructure work is to begin in April or May of 2012 and be complete by September or October of 2012. This will include the main road (Technology Drive), the sanitary sewer, storm sewer, and water main; and the storm water management facilities to serve these and other improvements in Innovation Park.

Analysis of Need

UWM has significantly increased its research funding in the last decade, doubling the amount from 2002 to 2011, to a current level of \$62M annually. Growth in research funding is expected to increase at an accelerating pace. Over the last decade,

Major Project Request

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UWM has increased its faculty in response to a mission of increasing the university's impact on the economy and educational environment in metropolitan Milwaukee and southeast Wisconsin. New schools of Public Health and Freshwater Sciences have been formed, and continued growth in areas such as public health, health sciences, biomedical engineering, energy, and freshwater sciences is anticipated. Current research plans target a cluster of multidisciplinary areas including, bioengineering, rehabilitation sciences, biomedical data systems, and biosensors. These initiatives will require up to 50 new faculty members over the next five to ten years in the areas of public health, freshwater sciences, engineering, and health sciences, and growth beyond that is likely as new hires establish themselves in their fields, and the new research initiatives grow.

The 2010 campus master plan included space needs estimates based on fall 2007 data, and projected out ten years. The current overall space deficit is projected to grow to 1,164,000 ASF/1,667,054 GSF in ten years, if no new space is built. The current deficit includes 242,000 ASF of lab space that will grow to 394,000 ASF/570,616 GSF by the end of ten years. Currently there is not enough research lab space available to assign to new hires. The Milwaukee Initiative has begun to address this deficit with new space for the Zilber School of Public Health, the construction of an addition at the School of Freshwater Sciences, and construction of the new Kenwood Integrated Research Center. These projects will provide approximately 300,000 GSF or 18% of the overall deficit. The IRC-IP – Phase I project will provide an additional 150,000 GSF of engineering and health-related research space, satisfying another 9% of the deficit. Completion of this project will bring the total to about 27% of the projected lab space needed by 2017. A phase II project will be constructed as research expands at the Innovation Park site.

Research increasingly includes collaborations between existing schools and colleges, and collaborations with external partners, such as the Medical College of Wisconsin. Examples of those research programs include biomedical engineering, medical informatics, drug discovery, and rehabilitation sciences. All of these will require new state-of-the-art research facilities that are ideally located close to collaborative partners. Over the last five years, UWM has developed a closer relation with the Medical College of Wisconsin (MCW). Both institutions are members of the Clinical and Translational Science Institute (CTSI) along with Children's Hospital, Froedtert Hospital, Blood Center of Wisconsin, the Clement J. Zablocki VA Medical Center, Marquette University and Milwaukee School of Engineering. The CTSI has provided a framework for collaborative research awards and projects, increased access to facilities, and more peer-to-peer interactions. The proximity of Innovation Park to the Milwaukee Regional Medical Center will increase collaborations as UWM researchers share educational and professional programs, laboratory space, and facilities. An outcome of the initial planning for Innovation Park is collaboration in the area of biomedical engineering. UWM and MCW have collectively hired about 20 faculty members in biomedical engineering and related disciplines who currently are located what is at least a half-hour commute apart. The development of the Integrated Research Center will intensify and focus discussions about how to develop a collaborative research array that would support integrated research projects, graduate education programs, and research technology transfer and creation of new business. Current partners are eager to have the Integrated Research Center built, since completion of IRC will foster growth in collaborative research, gain more external funding, and increase potential commercial start-ups and local jobs.

Alternatives

An alternative to construction of new facilities would be leasing existing space in the Milwaukee Regional Medical Center vicinity. However, research lab space in the quantity and types needed does not exist in the area.

Project Budget

Construction Cost:		\$	60,795,000
A/E Design/Other Fees:	7.0%	\$	4,426,000
Management Fees:	3.5%	\$	2,128,000
Movable/Special Eqpt:		\$	3,344,000
Owner Contingency:	7.1%	\$	4,307,000
			\$ 75,000,000

Funding Source

Total

15-17 General Fund Supported Borrowing	\$	75,000,000
Program Revenue Supported Borrowing	\$	00
Building Trust Funds	\$	00
Gifts and Grants	\$	00
Program Revenue Cash	\$	00

Fee Impact

Not Applicable.

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Impact on Operating Budget

Municipal Services	0.05	\$	7,500
Energy and Utilities	2.50	\$	375,000
Maintenance & Repairs	1.00	\$	150,000
Building and Grounds	1.10	\$	165,000
Security	0.55	\$	82,500
Transportation	1.15	\$	172,500
Total	6.35	\$	952,500

Project Schedule

Pre-Design complete:	03/2010
Program Approval	07/2012
Developer Selection:	10/2012
Lease Approval by BOR/SBC:	06/2013
Start Construction Building Shell:	11/2013
Fit-out Design:	06/2014
Fit-out Construction Start:	08/2014
Substantial Completion:	06/2015
Final Completion:	07/2015
Occupancy:	08/2015

Project Delivery

The state project delivery system of standard design/bid/build was considered. However, it will not provide the space that is needed soon enough to accommodate recently hired and proposed new faculty. Careful consideration of project delivery methods has indicated that utilizing a "Lease to Own" agreement will provide space approximately three years sooner than the standard process. This method has proved successful with the Zilber School of Public Health project, completed in June 2012.

Previous Action

None.

2013-15 Program Revenue and
Gift/Grant Funded Requests

Major Project Request

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Agency

University of Wisconsin

Institution

Eau Claire

Project Title

New Residence Hall

Project Description and Scope

The project will construct a four-story, 350-bed, semi-suite style residence hall of approximately 121,000 ASF/151,000 GSF. This may be the first phase of a building with multiple similar wings, if the selected site supports that density. The building will have recreational, study, and community amenities typical to student residence halls, but will not replace the existing campus recreational amenities available nearby. There will be a mix of approximately 75% four-person single room suites and 25% four-person double room suites, with each suite sharing a bathroom.

The design services for the project will include analysis of the designated site to see if a future phase can be accommodated. A facility condition assessment of Horan Hall will be done to determine whether that building should be demolished to provide a site for the future phase. It is intended that the design will allow for the future phase to be connected, thus sharing some of the recreational, study, and community amenities. The feasibility of constructing underground parking in one or both phases will be studied.

The site will be developed to implement design ideas in the Master Plan, including aesthetic and functional improvements that create a formal quad and required fire lanes on the site, while preserving open and recreation space as much as possible.

Background

UW – Eau Claire has 4,080 residence hall beds on campus, 324 of these are in apartment/suite single units in the most recently constructed residence – 12-year-old Chancellor's Hall. The remaining 3,756 beds are in traditional double rooms in buildings with an average age of 40 years. This leaves the institution with a mostly monolithic inventory of traditional rooms in aging buildings.

As part of the recent campus master plan, a market study of campus housing was conducted. It found that there is a potential demand for 4,700 beds, but that a mix of unit types would be desirable. This results in an inventory of traditional beds over twice what is demanded in the market and a deficit of over 3,400 beds in accommodations that UW-Eau Claire currently cannot provide. It also found that the existing halls are more crowded than current benchmark standards suggest.

Analysis of Need

UW–Eau Claire houses approximately 4,126 residents annually at the peak time in the fall with 4,080 in campus-owned housing, including beds in lounges and other spaces that have been converted to provide capacity. Even then, for over a decade some students have needed to be housed in nearby hotels to meet demand. To meet the demand and market expectations, new housing will need to be built and existing housing will need to be renovated to reduce density to desirable/marketable levels and to provide amenities expected in modern campus housing.

A first step to meet the market demand deficit is to construct a new residence hall that has the potential of adding a second similar or identical wing in the future. In order to provide unit types that do not exist now, the project will be semi-suite type units that offer more privacy than traditional housing, while still offering opportunities for community.

The direction of the building program for campus housing in the master plan is to build one project first that could bring the students housed in leased housing back to campus, and to relieve crowding in the existing residence halls. This project must be designed in such a way as to make optimal use of the limited site opportunities of the campus. In that regard, underground parking will be investigated to see if incorporating it beneath the building is economically feasible.

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Alternatives

There really is no alternative to meeting demand other than building new beds. An alternative to building more beds on campus is to construct beds off-campus, an alternative that will be used as part of the Confluence Project. However, this alternative is only viable for housing upper division students who are art majors. Freshmen and sophomores are best served in a campus setting, where necessary resources are readily available. Additional alternatives will be studied in the planning, programming, and pre-design of this project.

Project Budget

Construction Cost:		\$	25,681,000
A/E Design Fees:	8.00%	\$	2,137,000
Other Fees:	1.00%	\$	367,000
DFD Management Fees:	4.00%	\$	1,130,000
Contingency:	10.00%	\$	2,568,000
Movable/Special Eqpt:		\$	1,118,000
		\$	<u>33,000,000</u>

Funding Source

Program Revenue Supported Borrowing	\$	33,000,000
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Total

	\$	<u>33,000,000</u>
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Fee Impact

This project will increase room rates on campus by approximately \$152 - \$220 (5%) per year distributed as follows:

Room Type	2011-12 Rate	2012-13 Rate
Double room	\$3,040	\$3,192
Apartment style single room (Chancellor's Hall)	\$4,390	\$4,610

Impact on Operating Budget

	FTE		Cost
Resident Staff	2.00	\$	90,000
Custodial Staff:	2.00	\$	90,000
Maintenance Staff:	1.00	\$	45,000
Utilities:		\$	200,000
		\$	<u>425,000</u>

Project Schedule

A/E Selection:	06/2012
Design Report Approval:	11/2013
Bid Date:	07/2014
Start Construction:	09/2014
Substantial Completion:	05/2016
Final Completion:	08/2016

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Project Delivery

An accelerated construction schedule is proposed in order to meet the need to have this project completed by spring semester of 2015. Because of better coordination and a single point of responsibility, single-prime bidding is a delivery method that is more effective at achieving accelerated schedules than multiple-prime delivery. Accordingly, a waiver of §16.855 Wis. stat. under §13.48(19) Wis. stat. will be sought to allow for single-prime bidding.

Previous Action

None.

Major Project Request

2013-15 Biennium

Agency

University of Wisconsin

Institution

La Crosse

Project Title

Gymnastics Practice and Campus Storage Buildings

Project Description and Scope

This project constructs two separate but similar structures on the same general site on the UW-L north campus. The scope of the project and the two space occupancies is as follows:

UW-La Crosse Womens Gymnastics Practice Facility

This portion of the project constructs a 12,000 ASF/15,000 GSF structure to accommodate all practice activities of the UW-L Women's Gymnastics Team. It will be a pre-engineered structure constructed on a slab on grade. The facility will include toilet, shower, and dressing areas. It will be located on a site on the north campus that is currently occupied by a gravel parking lot.

UW-La Crosse Storage/Mail & Materials Processing Facility

This project will design and construct a new 10,000 ASF/ 12,000 GSF storage and materials handling building. The facility will be a pre-engineered metal building constructed on a concrete slab on grade. It will create both heated and non-heated secure general storage space, along with space for campus mail and materials delivery, processing, and distribution. It will be located on the north campus, adjacent to the Maintenance and Stores and Landscape Services buildings.

Background

UW-La Crosse Womens Gymnastics Practice Facility

UW-La Crosse is fortunate to have a very successful and robust Women's Gymnastics program. The team has won 15 NCGA Division III championships with ten of those titles during the last eleven years, and Coach Barb Gibson was named NCGA Co-Coach of the Year in 2010.

The team currently practices in Wittich Hall, which is listed on the Federal Register of Historic Places, and was constructed in 1916 as the original campus physical education building. The original building space consisted of a men's gymnasium, including a suspended walking track, a swimming pool, various locker rooms, and ancillary facilities. An addition to house a women's pool, gymnasium, and locker room was added to the south end of the building in the early 1930s. The last significant work that was completed in the facility was a partial renovation in 1971 that removed the pool from the original building and constructed an office suite in its place.

The gymnasiums in the building are currently used by the UW-La Crosse women's gymnastics team for their practice, and the pool in the building addition was converted to a large warm water therapy pool. The pool and the locker rooms are used by various publicly accessed programs facilitated by the departments of Recreation Therapy and Therapeutic Recreation, as well as some Adaptive PE classes. Faculty offices for those academic programs were formerly located in the building, but the university used its own funds in 2009 to renovate space in the Health Science Center to relocate those departmental offices out of Wittich Hall. Those vacated offices are now used as transition space for faculty when permanent office space is not available.

UW-La Crosse Storage/Mail & Materials Processing Facility

The university has long suffered a severe shortage of any type of storage space. It has been identified in the physical development plan as a major space deficiency issue for several biennia. Attempts to include unfinished storage areas into recent building projects have been unsuccessful due to the high cost of providing such unoccupied and nonproductive space in buildings with expensive per square foot construction costs. However, the need to provide storage space for document retention, theatre arts props, replacement parts, and mechanical equipment for building maintenance has reached a critical level.

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In addition, the university desires to relocate the mail processing function out of Graff Main Hall so the finished space currently occupied by that function could be converted to office and work space for departments that suffer that type of space deficiency. The mail processing and materials handling function could occur in more economical building space on the north campus, rather than occupying space in an academic building on the main campus.

Analysis of Need

Womens Gymnastics Practice Facility

The Wittich Hall facility is in a state of advanced deterioration. The mechanical ventilation and plumbing systems are served by essentially the same infrastructure as originally constructed in the building more than ninety years ago. The building is not connected to the campus central chilled water plant, therefore the areas that do have air conditioning are served by various stand-alone pieces of equipment, including once-through city water units as well as multiple residential type window air conditioners. The existing heating system consists of a single-zone steam system that does not allow fine control. The electrical distribution system, while adequate for the current limited occupancy of the building, could not support any increased facility use. The fire alarm systems are very basic and not compliant with current building and fire codes. The windows are in an advanced state of disrepair and allow significant amounts of air and moisture penetration into the facility. The large, warm water therapy pool is problematic to maintain and expensive to operate as it uses excessive amounts of energy, water conditioning chemicals, and staff time to maintain the water temperature and cleanliness at appropriate levels. The building contains hazardous materials, including large areas of flaking paint that contain lead, and the facility is not Americans with Disabilities Act (ADA) compliant. Finally, all of the finishes in the building are well beyond their expected life and are in such poor condition that it is difficult for campus custodians to maintain them as presentable.

The constraints of existing funding categories have made it difficult to achieve any type of improvement in the facility, and replacement of building finishes is not typically funded at all. It has also been difficult to complete any limited work funded and managed locally by the university, as it is extremely problematic to limit project scope to address any one issue in the facility without directly affecting other issues in the building. Also, trying to address all of the significant building issues separately through multiple project requests that access available funds from the existing funding categories would result in having to vacate the building multiple times for many years. This is not practical on a campus that is already suffering from critical space shortages. Consequently, as the building continues to deteriorate, it will eventually have to be closed to occupancy unless a complete renovation of the facility occurs.

At the same time, the UW-La Crosse College of Business Administration (CBA) has struggled with unmet space needs for several biennia. The newly established Facility Stewardship funding program has provided a mechanism to implement a major renovation project in Wittich Hall that will allow a more complete use of the facility by one of the three academic colleges at UW-La Crosse. As such, it is the intent of the university to access this funding to completely renovate Wittich Hall to preserve the facility, and to accommodate the relocation of the entire College of Business Administration and Small Business Development Center to that building. Also, vacation of space in Wimberly Hall by the College of Business Administration and the Small Business Development Center will allow other university academic departments, which are also suffering from a shortage of space, to either decompress into these areas or relocate to Wimberly from other buildings, thus solving other university space issues.

However, before renovation of Wittich occurs, there must be space identified for use by the UW-La Crosse Women's Gymnastics Team. The type of space required for this activity is essentially an expansive, high volume space that will accommodate the layout of multiple pieces of gymnastics equipment, large open areas with mats covering the floor, and some areas that can accommodate specialized padded pits for safely practicing various techniques. Miscellaneous toilet, shower, and dressing areas are also required, but they will be a small percentage of the overall building volume. Since the space required has little need for interior walls, a pre-engineered structure would economically provide the needed practice space.

UW-La Crosse Storage/Mail and Materials Processing Facility

As indicated above, the university has suffered from a lack of storage space for many years. The problem has been exacerbated in recent years by an influx of additional faculty and staff as a result of the implementation of the Growth, Quality and Access Initiative. Most of the buildings on campus were not designed with any significant amount of storage space. And, as spaces in the academic buildings that were once used storage and utility type areas have been remodeled to provide offices and research space for new faculty and staff, the area available for storage in those buildings has dwindled to a negligible amount.

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Because there is no storage space available on campus, large amounts of material that needs either long term or short term storage is now being deposited in the campus stores and receiving area in the Maintenance and Stores building. As a result, the receiving area has become crowded and the operations space is difficult to navigate with forklifts, delivery vehicles, etc. This situation creates a hazardous environment. Additional short-term storage needs that have developed in recent years also require additional space. This includes temporary storage of multiple pallets of computer equipment that are retained until adequate quantities justify pick-up from the recycling center in Madison.

Along with the need for material storage, there is a need for grounds and maintenance equipment storage. Construction of a new stadium has resulted in the loss of storage space for multiple pieces of landscape services motorized equipment that was once secured under the former concrete grandstand structure. The year-around occupancy of spaces within the new stadium facility prohibits the storage of gasoline engine powered equipment in the building. As a result, the equipment either sits outside exposed to the elements, or it is stored in two garages that the university acquired when it purchased on campus residential properties in recent years. However, those garages are soon slated for demolition to provide a site for the new police and parking ramp building, so that vehicle storage space will no longer be available.

Other bulk items requiring storage included props and temporary stage components for the Theatre Arts Department; university-owned chairs and tables that are used for large gatherings and student functions throughout the year; field equipment used for archeological exploration; equipment used by River Studies for field exploration; building materials used by the maintenance groups; surplus furnishings and equipment that are stored temporarily and redistributed for use throughout the campus buildings; etc. Some of these items and material are currently stored off campus. This creates operational inefficiencies and continuing costs for departments that are required to lease the off campus space.

At the same time, the university desires to consolidate its mail processing and materials receiving and distribution functions to provide better and more efficient services to the campus. Consolidation of these functions in a facility designed for this function will provide finished space in Graff Main Hall for occupancy by offices in that building that have a space deficiency. It will also accommodate the relocation of the materials receiving and distribution functions out of the Maintenance and Stores Building, which will then allow all of the maintenance functions to solve their space deficiencies that have been documented in several of the university's most recent physical development plans.

The intent of this project is to construct a pre-engineered structure to mitigate all of the operational deficiencies that are caused by the currently fragmented mail and materials handling functions and to solve the large quantity and variety of unmet storage needs. Providing a central location for these operations in an area of campus that is already accustomed to circulation of delivery and maintenance vehicles offers the most logical solution to the problem, and construction of a pre-engineered building to accommodate storage offers the most economical solution as well.

Alternatives

Womens Gymnastics Practice Facility

Alternative 1 – Do Nothing.

This alternative would eliminate the possibility of performing the necessary renovations to Wittich Hall. In this scenario, the building will continue to deteriorate until one or more of the buildings systems completely fail, or the environmental health conditions within the building will continue to decline to the extent that it is no longer safe to occupy the building. The facility will then have to be closed to occupancy.

Alternative 2 – Move Women's Gymnastics practice activities to Mitchell Hall.

Mitchell Hall currently suffers from the same lack of space that most of the academic buildings on campus currently experience. There are multiple academic, athletic, and student recreation activities that compete for space in the building. As a result, the building is currently open seven days a week, with extended hours on most days. In order to accommodate Women's Gymnastics practice activities in Mitchell Hall, access for other activities will need to be scaled back, further exacerbating the space deficiency issues.

UW-La Crosse Storage/Mail & Materials Processing Facility

There are two alternatives to construction of a storage facility on the campus.

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The first is to continue to try to operate without any storage space. This would require the continued use of the campus receiving floor area for temporary and long term storage. As this is creating a safety hazard, this is not an acceptable alternative. Consequently, the campus would begin to dispose of materials rather than store them for any period of time. This is an undesirable situation as it would most certainly result in items being disposed of instead of being reallocated, and then similar items being purchased as they are needed. In addition, building materials and equipment will be required to sit out in the elements on a more frequent basis as the Maintenance and Stores Building continues to be used as a storage area. This will result in a lower life expectancy for most of that equipment. In addition, if the structure is not constructed, the mail processing and materials handling functions will continue to operate in a fragmented, inefficient way, and the campus maintenance operations will continue to be hindered by a lack of space.

The second alternative is to lease more off-campus storage space. This option simply isn't feasible as the university does not have the staff or the vehicles to accommodate continuing transfer of materials to and from campus. In addition, as operational budgets are continually shrinking, there are no funds available for leasing storage space.

Project Budget

Construction Cost:		\$	3,551,000
A/E Design Fees:	8.34%	\$	296,000
Other Fees:	1.00%	\$	35,000
DFD Management Fees:	4.00%	\$	153,000
Contingency:	8.00%	\$	284,000
Movable/Special Eqpt:		\$	192,000
		\$	<u>4,511,000</u>

Funding Source

	<u>Total</u>
General Fund Supported Borrowing	\$ 0
Program Revenue Supported Borrowing	\$ 0
Building Trust Funds	\$ 0
Gifts and Grants	\$ 0
Program Revenue Cash	\$ 4,511,000
	<u>\$ 4,511,000</u>

Fee Impact

None.

Impact on Operating Budget

	<u>FTE</u>		<u>Cost</u>
Custodial Staff:	0.50	\$	14,000
Maintenance Staff:	0.00	\$	0
Utilities:		\$	0
		\$	<u>14,000</u>

Project Schedule

A/E Selection:	11/2012
Design Report Approval:	03/2013
Bid Date:	07/2013
Start Construction:	08/2013
Substantial Completion:	03/2014
Final Completion:	06/2014

Project Delivery

Due to the simplicity of constructing a metal storage building, a design-build or single prime delivery method will be requested. Accordingly, a waiver of §16.855 Wis. Stat. under §13.48(19) Wis. Stat. will be sought to allow for design-build or single-prime bidding.

Previous Action

None.

Major Project Request

2013-15 Biennium

Agency

University of Wisconsin

Institution

La Crosse

Project Title

Student Union

Project Description and Scope

This project constructs 102,000 ASF/162,000 GSF of new space. The new student union will be designed to provide student gathering and social areas, offices and workspaces for student organizations, offices for Student Centers administration, food service management offices, general use meeting rooms, student lounge/study/gathering/casual recreation areas, performance venues, food service kitchens and dining areas, various retail spaces, a campus bookstore and a textbook rental area. In addition, the pre-planning study also established additional prioritized occupancies that will be included in the program if more detailed budget analysis completed during the early phases of final design indicate that additional building space can be accommodated by the project budget.

The new facility will be located in the north central portion of campus on a site recommended by the 2005 UW-La Crosse Master Plan. It will be adjacent to the main public entrance to campus and also adjacent to the new parking ramp and to the Veterans Memorial Sports Field Complex and Roger Harring Stadium, which were completed in 2009. Exterior site development will include outdoor gathering and performance venues, spaces for passive recreation, and biofiltration features to mitigate stormwater runoff. After the completion of the new union, the existing Cartwright Center will be used as surge space for other campus projects or the campus will pursue its immediate demolition.

Background

The existing student union facility, the Cartwright Center, was constructed in 1958, and additions to it were constructed in 1964 and 1985. The building houses the offices of Student Centers Administration, foodservice management, various university services, student government and other student organizations. It also houses general meeting rooms, a satellite student dining facility, the campus bookstore and textbook rental, a larger meeting/performance venue and small "pocket" student lounges. The building is located on the far south back edge of the campus.

In coordination with the Division of Facilities Development, UW System, and the university, an extensive pre-design study (DFD Project #11A2A) was completed in July 2012. With a clear understanding of the importance to establish a responsible and defensible case for need, the study included rigorous analysis of existing building conditions and investigations of possible reuse of the existing Cartwright Center. An extensive programming effort was undertaken with student and campus staff involvement. A student vote was conducted in the spring of 2012 that supported the addition of segregated fees for a new union. With a turnout of 25% of the student population, over 88% voted in favor of the new union.

Analysis of Need

The existing student union facility consists of a 59,000 GSF original building constructed in 1958, and two additions totaling 80,000 GSF that were constructed in 1964 and 1985.

Although this facility is one of the most publicly accessed buildings on campus, the layout of the spaces in the building makes wayfinding extremely difficult. The spaces currently used for the campus bookstore and textbook rental and the kitchen and dining facility are undersized and do not function well. The floor elevations do not match up to the elevations of the entrances at grade, which makes accessibility very difficult. The Student Center's administrative office area is too small and does not accommodate the staff well. The large meeting/performance venue is outdated, not sized correctly, and does not have the appropriate infrastructure to support the activities these spaces must accommodate.

The infrastructure in the facility is original to the construction of the building and its additions, and it is not adequate to provide the necessary environment for the activities that occur in the building. The HVAC systems are well beyond their useful life and have minimal controls. In addition, although the building must accommodate multiple public performances and events throughout the year, the facility is not Americans with Disabilities Act (ADA) compliant. Accessibility into and throughout the building is very limited due to the building's elevation changes and the lack of a publicly accessible elevator.

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Most of the floor, wall, and ceiling finishes in the building are original to its construction and are in need of complete replacement.

In addition, the existing building is located where adjacent parking is not available and vehicular access is difficult at the far southeast corner back door of the campus, which is the opposite end of campus from the location of the residence halls. The 2005 UW-La Crosse Campus Master Plan recommended replacing the building with a new facility located adjacent to the main entrance, or front door of the campus. This front door site would place it directly across the street from the Veterans Memorial Sports Complex constructed in 2009, and adjacent to the new UW-La Crosse parking ramp that will be completed in 2013. As such, it is the intent of this project to replace the existing non-functional building with a new student union facility located closer to the residence halls and adjacent to the main campus entrance.

Alternatives

Because Cartwright Center is the only student union building on campus, the only alternative to the construction of a new facility would be to perform a complete renovation of the existing building, which would include complete replacement of the building infrastructure. However, a complete renovation of the existing building would be very costly and would not solve the most significant deficiencies of the facility. The existing building would still not have an at-grade entrance, which makes ADA access problematic, the building would still have multiple levels that do not align and the existing structure would make it difficult to create a logical circulation layout of the building. In addition, the facility would still not have enough space to satisfy program needs, and it would not be in a location that is easily accessible by vehicles to allow for the arrival and departure of public event attendees. The building would still be difficult for the public to locate, and it would still be remote from the campus residence halls. Also, the building would need to be taken offline for approximately two years to accommodate renovations. During that time, the university would need to provide a temporary facility somewhere on campus. This would most likely be achieved through the use of temporary structures established in a university parking lot. This would be expensive, and it would result in a shortage of parking stalls on campus. In summary, a complete renovation of the existing Cartwright Center would be costly, temporarily displace the functions occurring in the building to temporary type facilities, not provide the additional program space needed, and not correct the most of the significant deficiencies of the existing building.

Project Budget

Construction Cost:		\$ 40,776,000
A/E Design Fees:		\$ 2,969,000
Other Fees:		\$ 421,000
DSF Management Fees:	4.00%	\$ 1,794,000
Contingency:	7.00%	\$ 4,078,000
Movable/Special Eqpt:		\$ 3,262,000
		\$ 53,300,000

Funding Source

	<u>Total</u>
General Fund Supported Borrowing	\$
Program Revenue Supported Borrowing	\$ 50,966,000
Building Trust Funds	\$ 0
Gifts and Grants	\$ 0
Program Revenue Cash	\$ 2,334,000
	\$ 53,300,000

Fee Impact

<u>Fiscal Year</u>	<u>Annual Fee</u>
2012-13	\$ 20.00
2013-14	\$ 20.00
2014-15	\$ 20.00
2015-16	\$ 20.00
2016-17	\$ 230.00
	(Cumulative increase \$310)

Impact on Operating Budget

	<u>FTE</u>	<u>Cost</u>
Custodial Staff:	2.00	\$ 55,000
Maintenance Staff:	0.00	\$ 0
Utilities:		\$ 0
		\$ 55,000

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Project Schedule	
Program Approval:	06/2012
A/E Selection:	09/2013
Design Report Approval:	06/2013
Bid Date:	12/2013
Start Construction:	05/2013
Substantial Completion:	03/2015
Final Completion:	06/2015

Project Delivery

The university may later request the use of alternative delivery methods that would be advantageous to the university and the state.

Previous Action

None.

Major Project Request

2013-15 Biennium

Agency

University of Wisconsin Madison

Project Title

Memorial Union Renovation, Phase II

Project Description and Scope

This project constructs 4,337 ASF/7,600 GSF of new space and renovates 72,400 ASF/135,000 GSF of existing space in the central and east wings of the Memorial Union, located at 800 Langdon Street on the UW-Madison campus. A majority of the work addresses the building infrastructure, including replacement of the deteriorated roof, window, and curtain wall; cleaning and repair of exterior stone, terra cotta, and glass block; tuck pointing; replacement of external architectural lighting systems; and repair of damaged exterior soffits and fascia. Building plumbing, mechanical, and electrical systems will be repaired, upgraded, or replaced. A new service elevator will be installed. Hazardous materials will be abated, life safety and security systems will be upgraded, and improvements will be made to meet current ADA requirements. New space consists of small additions for mechanical, electrical, and maintenance functions.

The project includes major renovations of existing office areas, food service venues, and the catering/production support facilities in those parts of the building as well as the existing commons, lobby, and hotel guestrooms. Exterior improvements will include renovations to the terrace to improve accessibility, construction of an underground loading dock, and the reconstruction of Lot 1 into Alumni Plaza (a separate enumerated project).

Background

The 120,800 ASF/224,500 GSF Memorial Union was completed in 1928, and is an architectural icon on the Madison campus, second only to Bascom Hall. The building welcomes more than five million people a year, and is second only to the State Capitol in its number of out-of-town visitors. More than 21,000 meetings and functions are held each year at the Memorial Union, ranging from student groups to wedding receptions and large conferences. The Wisconsin Union Directorate (WUD) also produces more than 1,000 student led programs and events, in addition to the thousands of Hooper classes, trips, meetings, and boat use. Throughout the day and evening, students dine in the several food service venues and study in the Main Lounge or anywhere a table and chair can be found. Mini Courses and the Craft Shop attract students and Union Members with their many different offerings in the arts and crafts, and the Hoopers is a popular club with a history almost as old as the Memorial Union building itself. The Wisconsin Union Theater is an integral part of the Memorial Union and its performing spaces and is visited by patrons of the arts as well as those attending political or public discussions, travelogues and ceremonial occasions. Throughout the Union artwork is hung for all to experience, fulfilling the wishes of the first Union Director, Porter Butts, who believed art should be a part of daily life.

Recognizing the need to take a comprehensive look at the aging Wisconsin Union facilities, the Wisconsin Union hired a consulting team in 2001 to conduct a master plan study of both Union South and Memorial Union. This master plan considered the condition of existing facilities as well as student and other user impressions and expectations. This master plan identified a number of major functional deficiencies with Union South that, when combined with an aging infrastructure, suggested the need for a replacement facility. In 2005, the Union Council retained a consultant to undertake conceptual planning and preliminary programming for a Union South replacement project. The Wisconsin Union Master Plan also identified infrastructure, functionality, and space deficiencies in Memorial Union that needed to be addressed. In October 2006, the student body voted to increase their segregated fees in support of constructing a new Union South and renovating the Memorial Union theater wing. Those projects were subsequently enumerated in the 2007-2009 capital budget. The new Union South opened in spring 2011.

Updated programming and design for both phases of the Memorial Union renovation began in June 2010, with the goal of preserving a building which is both historic and loved. Phase I of the Memorial Union renovation is in final design and will be under construction by summer 2012. The project requested here is the second and final phase of the project to improve the building's functionality, circulation, life safety, and service functions.

Major Project Request

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Analysis of Need

With no substantial renovation of infrastructure in these wings since the building was initially constructed, the plumbing, mechanical, and electrical systems are long past their usable life and in need of replacement. The basic building systems are antiquated and not flexible enough to meet the facility's multi-purpose use requirements. Fire, life safety, and security systems fall short of current standards. The following major building deficiencies that need to be addressed are:

- Thirteen different levels in one building make accessibility a major problem, and restrooms are not available on every floor
- Thirty-eight independent mechanical systems
- No fire sprinklers; many areas lack compliant fire suppression and ventilation
- Several meeting rooms lack modern day amenities; scattered offices need consolidation.
- Need additional women's restroom facilities.
- Current loading dock is inadequate in size and function
- No modern freight elevator with access to all floors
- Dining service support areas are inadequately sized
- Art collection storage lacks temperature and humidity control.
- Historic murals need restoration and repair
- Historic rooms need restoration, most notably Great Hall (including the crystal dome) the Rathskeller, the Main Lounge, the Paul Bunyan Room, and the Old Madison space
- Building exterior is in need of repair, including: roof, façade, and the grand main staircase
- Hotel guest rooms are not universally accessible
- Varying levels of the Terrace are not universally accessible

Existing food service production facilities and back of house support facilities are either not present in the building or contain deficiencies that negatively affect the Union's quality of service. The basement production kitchen is in need of upgrades and space reconfiguration. Production storage areas are not close to the spaces they serve and the existing service elevator in the east wing is undersized. The existing loading dock is inadequate in size and currently occupies the space designated for the Alumni Park.

Alternatives

The cost of not doing or delaying the refurbishment of the east and commons wings of Memorial Union will only increase over time, and deferred maintenance has already reached a critical juncture. Additionally, with the Phase I work underway, not completing the second phase will leave the campus with a building with mismatched Mechanical/Electrical/Plumbing (MEP) systems and renovated and un-renovated spaces.

Project Budget

Construction Cost:		\$	33,847,000
A/E Design/Other Fees:	7%	\$	2,464,000
Other Fees:		\$	264,000
DFD Management Fees:	4%	\$	1,449,000
Contingency:	7%	\$	2,369,000
Movable/Special Eqpt:	7%	\$	1,692,000
			00
		\$	<u>42,085,000</u>

Funding Source

		\$	0
General Fund Supported Borrowing		\$	9,000,000
Program Revenue Supported Borrowing		\$	0
Building Trust Funds		\$	25,500,000
Gifts and Grants		\$	7,585,000
Program Revenue Cash		\$	
		\$	<u>42,085,000</u>

Fee Impact

There are no segregated fees associated with this project.

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Impact on Operating Budget

The Union will not be hiring additional custodial or maintenance staff as the result of this project. It is anticipated that utility costs will decrease somewhat because more efficient air handling systems will be installed.

Project Schedule

Program Approval:	12/2011
A/E Selection:	07/2012
Design Report Approval:	07/2013
Bid Date:	07/2014
Start Construction:	09/2014
Substantial Completion:	05/2017
Final Completion:	06/2017

Project Delivery

The combination of a complex, yet aggressive schedule, the difficulties of demolition and construction of a large project on a constricted site, and the difficulties of renovation work in a historic structure, will require an unusual amount of coordination and project control. Construction manager at-risk is a delivery method that would offer a single point of responsibility and better coordination than the traditional state project delivery method. Similar to Phase I, a waiver of §16.855 under §13.48(19) will be sought to allow for construction manager at-risk project delivery.

Previous Action

None.

Major Project Request

2013-15 Biennium

Agency

University of Wisconsin

Institution

Madison

Project Title

Sellery and Witte Halls Renovation

Project Description and Scope

This project renovates Sellery and Witte residence halls, located at 821 and 615 West Johnson Street, respectively. In both residence halls, the two central building cores, first floor, and basement areas will be renovated and expanded to accommodate three new elevators each, improved common spaces (floor lounge, study space, and kitchenette), and bathrooms. Interior stairwells will receive selective upgrades, including painting, flooring, and lighting as required. Resident rooms will be painted, doors/locks replaced, and resident floor hallways will be upgraded with modern finishes and lighting. HVAC systems will be replaced/upgraded adding air conditioning and individual heat controls in rooms. Roofing and exterior windows will be replaced and the existing exterior pre-cast panel joints will be resealed.

Additional work in Sellery Hall includes construction of a new main entrance and lobby on the East Campus Mall. The existing entrance on Johnson Street, adjacent lobby area, and the Residence Life Office area will be renovated and all exterior areas around the hall will be improved, including screening of the dock area.

Additional work in Witte Hall includes remodeling of the existing entry lobby area. Improvements to exterior areas around the building will include the creation of an at-grade dock area for trash/recycling removal and deliveries.

Background

The 151,795 ASF/230,408 GSF Sellery Hall was constructed in 1961. It is composed of two wings and nine floors, and houses first year students and some returning second year students. Double occupancy rooms are arranged along central corridors with shared bathrooms in the center core of each floor.

Witte Hall was constructed in 1964. The 147,794 ASF/230,799 GSF building is composed of two wings with nine floors on each wing. Double occupancy rooms are arranged along central corridors with shared bathrooms in the center core of each floor.

In 2004, the Division of University Housing completed a Residence Hall and Dining Services Master Plan. The plan, which was updated in 2008 and continues until 2020, addresses deficiencies in the residence halls and food service facilities. Construction of new residence halls and renewal of existing residence halls as recommended by the plan ensures that UW Madison's student housing facilities are well maintained and capable of meeting the changing needs of future students.

To date, two new residence halls have been constructed (Smith and Ogg Halls), and two more are in design or under construction (Lakeshore I and II). A new dining facility is being constructed as part of the Lakeshore I residence hall project and a new Gordon Commons dining facility is also under construction. Renovations at Chadbourne and Barnard Halls are complete while renovations for Elizabeth Waters Hall and Carson Gulley Commons are in design.

Analysis of Need

The renovation of Sellery and Witte Residence Halls is an integrated component of the Division of University Housing renovation program that addresses deficiencies in the residence halls and makes improvements to meet future student needs. Improvements will make the buildings safer, more efficient, and reduce maintenance costs. All windows and HVAC systems are original to the building and beyond their normal service life. Resident floor bathrooms have received periodic fixture upgrades but supply piping has not been replaced and bathroom configurations do not meet current code or functional requirements. Common area finishes are in need of upgrades to be consistent with the core area renovations, as well as improve lighting and acoustics.

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Existing elevator systems (two cars per tower) are inadequate for staff and residents. This project will provide a new three car elevator tower that is constructed at the building perimeter. This configuration will provide faster, reliable service and allow the previous core elevator space on each floor to be converted to other functional space. This increased functional space on each floor will allow the addition of kitchen and study space and reconfiguration of the bathrooms and floor lounge. Resident rooms are relatively small which raises the need for appropriate shared areas to congregate and study. Currently, each residential floor has a single den that does not support multiple activities and limits availability of programing/study space.

The main entrance for Sellery Hall is now considered to be on the East Campus Mall. Creating a new main entrance and lobby in this location will align the building with overall campus functional circulation.

Currently, there is no at-grade trash/recycling removal area at Witte Hall. All trash and recycling is brought up to grade via two freight elevators. This is labor intensive and the elevators require constant repair due to this heavy use.

Alternatives

Consistent with the completed housing master plan study, complete removal and replacement of these residence halls or failure to complete timely comprehensive renovations are not viable alternatives. On-campus housing is a highly sought option by undergraduate students and their parents, especially when it offers the amenities and spaces that satisfy the requirements and needs of students. Failure to undertake renovations, especially when they are provided at peer institutions, negatively affects the university's ability to attract and retain students. Also, continued lack of basic building functionality and addressing of obsolescence will eventually lead to uninhabitable buildings. The state and university have already invested in the creation of these facilities and the proposed renovations will allow for many years of continued positive return on that investment.

<u>Project Budget</u>	<u>Sellery Hall Renovation</u>	<u>Funding Source</u>	<u>Total</u>
Construction Cost:	\$ 19,331,000	General Fund Supported Borrowing	\$ 0
A/E Design Fees:	\$ 1,605,000	Program Revenue Supported Borrowing	\$ 16,000,000
Other Fees:	\$ 0	Building Trust Funds	\$ 0
DFD Management Fees: 4.00%	\$ 851,000	Gifts and Grants	\$ 0
Contingency: 10.00%	\$ 1,933,000	Program Revenue Cash	\$ 7,720,000
Movable/Special Eqpt:	\$ 0		
	<hr/>		<hr/>
	\$ 23,720,000		\$ 23,720,000

<u>Project Schedule – Sellery Hall</u>	Phase I - B Tower	Phase II - A Tower
Program Approval:	07/2013	07/2013
A/E Selection:	09/2014	09/2014
Design Report Approval:	02/2015	02/2015
Bid Date:	02/2016	02/2017
Start Construction:	05/2016	05/2017
Substantial Completion:	08/2016	08/2017
Final Completion:	09/2016	09/2017

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<u>Project Budget</u>	<u>Witte Hall Renovation</u>	<u>Funding Source</u>	<u>Total</u>
Construction Cost:	\$ 18,971,000	General Fund Supported Borrowing	\$ 0
A/E Design Fees:	\$ 1,577,000	Program Revenue Supported Borrowing	\$ 8,000,000
Other Fees:	\$ 0	Building Trust Funds	\$ 0
DFD Management Fees: 4.00%	\$ 835,000	Gifts and Grants	\$ 0
Contingency: 10.00%	\$ 1,897,000	Program Revenue Cash	\$ 15,280,000
Movable/Special Eqpt:	\$ 0		
	<hr/>		<hr/>
	\$ 23,280,000		\$ 23,280,000

<u>Project Schedule – Witte Hall</u>	Phase I – B	Phase II – A
	Tower	Tower
Program Approval:	07/2013	07/2013
A/E Selection:	09/2014	09/2014
Design Report Approval:	02/2015	02/2015
Bid Date:	02/2018	02/2019
Start Construction:	05/2018	05/2019
Substantial Completion:	08/2018	08/2019
Final Completion:	09/2018	09/2019

Note: The schedules are subject to change due to potential construction efficiencies. The A/E team will need to review and recommend possible alternate schedules that allow for academic year occupancy.

Fee Impact

The cost for these projects is included in the Master Plan rate schedule developed in 2004-2005. During the course of this project, annual room rates going forward for all residence halls will increase between \$200 and \$225. The increase includes adjustments for inflation, new residence hall construction, and planned maintenance and upgrades in existing residence halls.

Impact on Operating Budget

There will be no change in existing FTE custodial or maintenance staff. It is anticipated that heating and electrical costs will decrease but cooling costs will increase due to added air conditioning.

Project Delivery

These projects need to be completed during the summer months. Because of better coordination and a single point of responsibility, single-prime bidding is a delivery method that is more effective at achieving accelerated schedules than multiple-prime delivery. Accordingly, a waiver of §16.855 under §13.48(19) will be sought to allow for single-prime bidding.

Previous Action

None.

Major Project Request

2013-15 Biennium

Agency

University of Wisconsin

Institution

Madison

Project Title

University Houses Renovation

Project Description and Scope

This project will complete selective renovations in all 144 units of the existing 138,509 ASF/173,497 GSF University Houses Apartment Complex to address maintenance items, mechanical system upgrades, code compliance, and functional/programmatic improvements. To complete the work, the units will be closed for approximately one year beginning in July 2014.

Hot water heating boilers, pumps, domestic water heaters, and water softeners serving the complex will be replaced. Inside the units, hot water loop convactor piping and covers, plumbing fixtures, domestic water piping, and kitchen cabinetry/countertops will be replaced along with electrical upgrades and painting. Kitchen and bathroom exhaust will be added to all units. Flooring will be replaced following abatement of existing vinyl asbestos tile and mastic. Upgrades to the exterior will include brick masonry repair and storm door replacement.

In a continued effort to provide a diversity of accessible university housing, this project will convert five existing units into three ADA compliant apartments (one each of one, two and three bedrooms).

Eight existing three bedroom units will be reconfigured to include their own laundry closets. The common laundry areas, currently located in five basement locations, will be replaced with three new common laundry spaces at ground level to allow for safe and ADA compliant access. This will also provide improved ventilation and better access for maintenance of the commercial grade washers and dryers.

If funding is available, the project will also include improvements to pedestrian and vehicular (bicycles, mopeds and cars) site circulation on the circle drive within the complex as well as on Haight Road.

Background

The University Houses complex is located at 2902 Haight Road, on the northwest end of campus. It consists of thirty two-story buildings that house a community of 144 unfurnished one, two and three bedroom apartments.

The buildings were constructed in 1947 and have had few comprehensive capital improvements. Roofs and kitchen cabinetry were replaced in the 1970's, windows replaced in the 1990's, and internet connections to all apartment units in 1995. Some limited exterior brick tuck pointing and bathtub inserts have been completed by University Housing as needed. Recently, Building 39 of the complex was renovated to provide a child care facility (DFD Project No. 08A2I) and replacement of underground electrical, water, sewer and heating piping was completed (DFD Project No. 09H2U-01).

A Master Plan Study (DFD Project No. 05E2A) was completed in 2006. It reviewed the apartment complex not only for required maintenance, upgrades, and long-term viability but also performed a market rate assessment to determine the appropriate rental rates for a renovated complex. The study recommended the construction of new apartments and/or extensive renovations.

The cost of complete replacement or extensive renovation and the amount of time the units would be unavailable or closed for construction was not feasible. Therefore, a new programming/planning study (DFD 11A1X) with a more selective renovation scope was completed in fall 2011 and is the basis for this request.

Major Project Request

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Analysis of Need

University Houses neighbors Eagle Heights, and serves the same population of graduate students, student families, and post-doctoral researchers. While each complex is distinct in architecture and style, they share the same eligibility for residency; and are served by the same staff, services, and programs. These are provided to all members of the household, so that the students are able to focus to the greatest extent possible on their degrees and/or research.

Rents range from \$770 a month for a one bedroom apartment to \$990 a month for a three bedroom apartment, which is comparable to other apartment complexes in the surrounding community. The renovation of these apartments will provide appearance and functionality that tenants expect of market rate apartments.

Alternatives

The alternatives considered in the 2006 University Houses Master Plan were demolition of all the current buildings followed by new construction or more extensive renovations. Those alternatives were not selected because of cost and prolonged loss of available housing units.

Failure to undertake the project will result in further accumulation of maintenance backlog and deterioration of an existing and important component of UW-Madison's graduate housing stock. It will also hinder the recruitment of graduate students.

Project Budget

Construction Cost:		\$	12,051,000
A/E Design Fees:	7.50%	\$	913,000
Other Fees:	0.00%	\$	0
DFD Management Fees:	4.00%	\$	542,000
Contingency:	12.4%	\$	1,494,000
Movable/Special Eqpt:		\$	0
			\$ 15,000,000

Funding Source

	<u>Total</u>
General Fund Supported Borrowing	\$ 0
Program Revenue Supported Borrowing	\$ 8,000,000
Building Trust Funds	\$ 0
Gifts and Grants	\$ 0
Program Revenue Cash	\$ 7,000,000
	\$ 15,000,000

Fee Impact

All rents in university apartments (Eagle Heights, Harvey Street, and University Houses) will increase by 2.1% beginning in 2012-13 to pay for on-going operating expenses and the cost of the renovations. When completed, the rate of the renovated units in University Houses will be increased \$50.00 per month.

Impact on Operating Budget

There will be no additional custodial or maintenance staff hired as a result of this renovation. It is anticipated that there will be utility and maintenance cost savings.

Major Project Request

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Project Schedule

A/E Selection:	04/2013
Design Report Approval:	09/2013
Bid Date:	04/2014
Start Construction:	07/2014
Substantial Completion:	04/2015
Final Completion:	06/2015

Project Delivery

An accelerated construction schedule is proposed in order to meet the need to have this project completed by summer of 2015. Because of better coordination and a single point of responsibility, single-prime bidding is a delivery method that is more effective at achieving accelerated schedules than multiple-prime delivery. Accordingly, a waiver of §16.855 under §13.48(19) will be sought to allow for single-prime bidding.

Previous Action:

None.

Major Project Request

2013-15 Biennium

Agency

University of Wisconsin

Institution

Oshkosh

Project Title

Conference Center

Project Description and Scope

This project will provide \$4,000,000 (\$3,100,000 Gifts and Grants - Insurance Settlement and \$900,000 Program Revenue-Cash) to an estimated \$12,000,000 UW-Oshkosh Foundation development initiative that will construct an approximately 38,000 GSF new conference and welcome center for the UW-Oshkosh campus. It is anticipated that this development will be gifted to the UW System Board of Regents upon completion.

A majority of the center will include meeting rooms and banquet facilities. Several outreach functions including the UW Oshkosh Foundation, Alumni Affairs, a satellite facility for the Parking Office, and a satellite facility for the Admissions Office, will be relocated to this new building.

To connect with campus systems, the development will also include: installation of approximately 380 lineal feet of sewer and water distribution lines and approximately 380 lineal feet of electric/telecommunications ductbank. Installation of a fully functional campus network and telecommunications systems, including voice over internet protocol (VOIP) capabilities, wireless access, security cameras and an emergency notifications/clock system, will also be included. It is anticipated that the construction of this facility will meet or exceed the requirements of USGBC LEED (US Green Building Council Leadership in Energy and Environmental Design) for new construction Gold certification with the intended incorporation of renewable energy and commissioning. Due to site considerations, this structure will be constructed on pilings.

Background

The River Center, built in 1967, contained 51,596 gross square feet of space on two levels. It was rendered unusable after a flooding incident on June 12, 2008. The basement level contained conference facilities, the Residence Life Custodial and Maintenance Department, a loading dock, and HVAC and electrical support spaces. The ground level also contained conference facilities in addition to offices and classrooms dedicated to the Department of Corrections regional training.

A feasibility study was undertaken by the campus in 2011 to develop a preliminary program and budget for a development that would replace the spaces in the River Center.

Analysis of Need

Student and student organizations are given priority for banqueting and meeting space at the Reeve Union. The turndown rate for the Reeve Union banquet and meeting rooms are at 35%. Private market studies have determined that there are 130 annual events that are not able to be accommodated within the Fox Valley market area.

After much investigation regarding the damage to the existing River Center, it was determined that a new site adjacent to the Fox River could accommodate the functions lost in the flood as well as create a signature front door to campus. In addition, the ability to have this development address identified alumni and public needs for conferencing was determined to provide a benefit that would serve the campus well into the future.

Alternatives

An alternative site located directly adjacent to the River Center was evaluated. It was not selected due to the greater prominence and ease of access to the preferred building site on the river and due to the near-term project to develop recreational uses on alternate the site.

Major Project Request

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Project Budget

Construction Cost:	\$	
A/E Design Fees:	\$	
Other Fees:	\$	
Contingency:		
Movable/Special Eqpt:	\$	
	\$	Not Applicable

Funding Source

	<u>Total</u>
General Fund Supported Borrowing	\$ 0
Program Revenue Supported Borrowing	\$ 0
Building Trust Funds	\$ 0
Gifts and Grants – Insurance Settlement	\$ 3,100,000
Program Revenue Cash	\$ 900,000
	<u>\$ 4,000,000</u>

Fee Impact

None.

Impact on Operating Budget

	<u>FTE</u>		<u>Cost</u>
Custodial & Maintenance Staff:	0.4	\$	345,377
Utilities:		\$	172,800
		\$	518,177

Project Schedule

Approximately 06/2014

Project Delivery

The overall development initiative will be undertaken through the UW-Oshkosh Foundation and subsequently conveyed to the Board of Regents as a gift from the UW-Oshkosh Foundation.

Previous Action

None.

Major Project Request

2013-15 Biennium

Agency

University of Wisconsin

Institution

Oshkosh

Project Title

Fletcher Hall Renovation

Project Description and Scope

This project remodels and renovates 65,518 ASF/98,700 GSF of existing space in Fletcher Hall, which is located on the east edge of the campus near the student union. An addition is anticipated to be added on the Elmwood Avenue side of the facility to create an enhanced entry, expanded circulation and social space. The project will completely replace plumbing, HVAC, electrical, and telecommunications infrastructure. The existing steam radiant heating system will be replaced with a four-pipe system that provide for a hot water system with air conditioning. Individual room thermostatic control will be allowed within a pre-set range. An automatic fire sprinkler system and elevator will be installed. Hazardous materials will be abated and finishes will be updated. Exterior work will include masonry repair and tuckpointing, and replacement of exterior doors and windows.

Background

Fletcher Hall is a four-story plus basement, modified H-shaped, walk-up residence hall that was constructed in 1964. Fletcher Hall is located near the campus academic core and Blackhawk Commons, which is the primary campus dining hall, is in relatively close proximity.

Fletcher Hall, like many of our residence halls, is in need of complete rehabilitation. The building has been well maintained but has seen very few changes or upgrades since its original construction. This project provides a total building overhaul and will completely replace the engineering systems of the building as well as address exterior envelope areas such as the windows and the roof. The majority of these systems are past their anticipated life span and are in need of replacement. The basement and public spaces will see significant renovations and upgrades to address the needs of the building's users and eliminate backlog maintenance. All interior finishes will be refurbished to provide an up-to-date sustainable building that will serve the students and the campus well for many years.

Currently, Fletcher Hall provides 520 beds in typical double occupancy dorm rooms. Upon completion, the building will provide near that amount. Some beds may be taken off line to create additional square footage for a student gathering spaces on each floor.

Analysis of Need

The total renovation of Fletcher Hall is a very cost effective way to regenerate this building for another 30 to 40 years. It is about half the cost of new construction and will allow the building to continue serving the needs of the students and campus. The project will include new mechanical and electrical systems and fire sprinklers. It will eliminate health, safety, and code deficiencies and improve access to all existing floors for those with disabilities. Exterior upgrades include roof and window replacements, entry access improvements, security enhancements, and exterior lighting and site improvements. The finishes in rooms and all common spaces will be new.

Alternatives

Option 1: Do nothing. This will result in the eventual demolition of the buildings due to safety, maintenance and functionality issues as building systems do not last forever. It will become more difficult to populate the residence halls as deterioration worsens and students become unwilling to live in a deteriorating building.

Option 2: Tear down the halls and build new. Many students cannot afford the higher board costs associated with newer suite-style buildings. They are willing to continue living in a traditional residence hall, but want it to have updated aesthetics and amenities. The Office of Residence Life values maintaining a mixture of room types so it is able to serve all students'

Major Project Request 2013-15 Biennium

needs. The total renovation of these buildings is a very cost effective way to regenerate them for another 30-40 years of usage and is about half the cost of new construction.

Project Budget

Construction Cost:		\$	13,382,000
A/E Design Fees:	8.00%	\$	1,071,000
Other Fees:	0.00%	\$	176,000
DFD Management Fees:	4.00%	\$	589,000
Contingency:	10.00%	\$	1,338,000
Movable/Special Eqpt:		\$	1,071,000
		\$	17,627,000

Funding Source

General Fund Supported Borrowing	\$	0
Program Revenue Supported Borrowing	\$	17,627,000
Building Trust Funds	\$	0
Gifts and Grants	\$	0
Program Revenue Cash	\$	0
	\$	17,627,000

Housing Type	Current Room Rate 2011-12	Cumulative Rate Increase			
		2013-14	2014-15	2015-16	2016-17
Double Room	3,752	56	76	80	80
Single Room	5,192	104	104	108	102
Suite	4,304	88	88	88	88

Fiscal Year	Annual Fee Increase	Cumulative Annual Fee Increase
2013-2014	\$83	\$83
2014-2015	\$89	\$172
2015-2016	\$92	\$264
2016-2017	\$90	\$354

Impact on Operating Budget

None.

Project Schedule

(MM/YYYY)

A/E Selection:	03/2013
Design Report Approval:	10/2013
Bid Date:	01/2014
Start Construction:	05/2014
Substantial Completion:	06/2015
Final Completion:	11/2015

Project Delivery

Due to the complexity of renovating a residence hall, in a location when the operation of adjacent occupied residence hall buildings, utilities, and circulation must remain safe and functional, a single prime delivery method will be requested. Accordingly, a waiver of §16.855 Wis. Stat. under §13.48(19) Wis. Stat. will be sought to allow for single-prime bidding.

Previous Action

None.

Major Project Request

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Agency

University of Wisconsin

Institution

Oshkosh

Project Title

Reeve Union Entrance and Expansion

Project Description and Scope

This project constructs 3,742 ASF/7,214 GSF of new space and renovates 13,204 ASF/20,858 GSF of existing space on the basement, first, and second floors of the west end of Reeve Memorial Union, which is located at 748 Algoma Boulevard on the UW Oshkosh campus. A majority of the work will address the accessibility of the building, its visual appearance, and space needs for student organizations. Windows will be replaced in the older sections of the building in order to improve energy efficiency and aesthetics. Internal circulation issues will be addressed by remodeling in conjunction with the addition. The project also aims to address universal accessibility needs in terms of access to both restrooms and functional spaces.

Background

The Reeve Memorial Union (23,324/37,618 ASF /GSF) was first constructed in 1957. For the next 38 years it underwent a series of additions and upgrades to building services, including an elevator and accessible entry in 1986. More significant additions occurred in 2000 and 2001, which included the University Bookstore. Other minor repairs and upgrades have occurred in subsequent years. With all of the renovation the facility currently has 118,404 ASF/177,966 GSF of space.

Reeve Memorial Union serves as the main student support facility at the UW Oshkosh campus. A \$16.3 million dollar renovation and 65,000 square foot expansion of the facility, which was completed in 2003, created a large beautiful functional space where students can congregate, relax, and socialize. Unfortunately, much of the exterior development planned as part of the project was deferred due to lack of funding. As a result, the minimal exterior development and lack of ADA accessibility at the main entrance along Algoma Boulevard detracts from the overall use and impression of the facility. The outdoor improvements included in this project are designed to provide additional exterior space where students can congregate and enhance the student recreational experience.

The volume of use of the student programs has increased since the 2001 addition. The related space needs, combined with the union's evolving position on campus, have increased the awareness of a need for better entry to the building. The proximity of the new residence hall to the union and the development of a quad facing the building heighten the significance of the Algoma Street entrance. Recognizing the growth need of the student leadership and involvement center and the potential for expanding the facility to meet this need, the university hired architectural/engineering consultants to complete a pre-design document with six project objectives:

- Create an accessible, inviting entry on the west façade which ties in visually to the more recent building additions
- Improve the entry/arrival sequence on the interior of the Algoma Boulevard entrance
- Create welcome desk and entry for Student Life Involvement Center (SLIC) that is more visible to the main corridor, and functional from within
- Provide additional program space and lounge space for student organizations housed in SLIC
- Reconfigure the offices and spaces within the SLIC to bring in more natural light and facilitate student organizations' activities
- Improve energy efficiency of the older building portions.

Upon completion of the pre-design, the Oshkosh Student Association added a referendum to their spring 2012 ballot to fund the addition and renovation with segregated fees. This referendum passed.

Analysis of Need

The Reeve Union main entrance is the eastern terminus of the planned pedestrian mall that will run from Reeve to the Student Recreation facility on the Fox River. The western portion of the mall was completed in 2010 and the eastern section of the mall between High Ave and Algoma Blvd will be completed by fall of 2013. The \$16.3 million spent in 2003 to renovate and expand the Reeve Memorial Union addressed much of the program space concerns but did little to enhance the overall impression of the grounds surrounding the facility or create an accessible entrance along Algoma Blvd. The lack

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of an ADA accessible main entrance needs to be resolved. The majority of public parking is located near the main entrance on Algoma Blvd. Only the north and east entrances of Reeve Union are accessible for wheelchair visitors. Existing sidewalks surrounding the facility, are cracked, worn, and inadequately sized for current pedestrian traffic patterns and flow.

The student leadership and involvement center (SLIC) has been extremely successful. There are always more requests for space by organizations than available. There are approximately 150 different student organizations and groups on the UW-Oshkosh campus with approximately 650 students served weekly. As policy, any student organization may request a space within the SLIC. Depending on the size of the group and its level of activity, that space could range from a mailbox, to a storage locker, a cubicle, or a hard walled office. The current space accommodates approximately half of the requests.

Physical planning issues including site/existing conditions, utilities/infrastructure, transportation/circulation and existing building conditions were evaluated as part of the pre-design evaluation and report. Existing city of Oshkosh water, sanitary, and storm utilities are not anticipated to change as a result of the building renovations. Campus steam and existing natural gas service will likely be impacted by expansion to the facility and may require relocation during construction. Existing campus power and signal duct should not be impacted. The existing campus chilled water supply/return system is expected to continue to provide adequate chilled water. Vehicular and bicycle transportation should not be impacted by this renovation. Parking that is across the street and a vehicle drop-off area along Algoma Boulevard should not be impacted during or after construction. Pedestrian access should be greatly improved with a new entrance that is required to meet the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and revisions to the walks leading to and surrounding the building, which need to be sloped at grade at or below 5%.

The original building structural area appears to be in good to moderate working order and structurally sound and useful to incorporating a building remodeling or expansion. The existing cast-in-place concrete perimeter beams at the second floor will allow the exterior walls to be removed. The existing sun deck structure is a continuation of the cast-in-place concrete structure of the second floor, and it can be utilized as new floor space. Select structural modifications to the existing 1957 building will probably be necessary to accommodate the proposed addition. Existing steam generator and water recirculation pump(s) are in good condition. The Storage tank and existing water softener are in fair condition. Plumbing fixtures are in good condition but could be replaced to be more water conservative. Existing building mechanical systems consists of four air handling units with hot water reheat. The variable volume air handling unit serving the basement and first floor are in good operating condition and were sized with additional capacity. Three constant volume air units with hot water reheat serve the second floor. These units are all 25 years old and should be replaced by switching them to variable volume units with demand control ventilation and outside air damper reset. While main duct runs and piping can possibly be reused, it is recommended that the outdated distribution devices and controls are updated in the remodel. The majority of the basement and first floor are protected adequately with sprinkler heads, but only a portion of the second floor is sprinklered. Sprinklers should be added to the balance of the second floor as well as the additional square footage. The fire alarm system is expandable. The Andover Security System is expandable. The location of the existing 12.47 KV primary service into the building may limit the size of an addition in that area. The main unit substation is in new condition and has a capacity for future expansion. The existing emergency generator may be near maximum capacity and should be utilized for emergency lighting only. Interior lighting will need replacement within the remodeled areas. The voice, data, and community access television (CATV) systems are in fair condition and are expandable.

Alternatives

Option 1: Do nothing. This option does not address the need for increased space required to meet the increasing involvement of our students in student organizations nor does it address the accessibility limitations to a main campus building entrance at the terminus of a main pedestrian mall.

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Project Budget

Construction Cost:		\$	6,000,000
A/E Design Fees:	8.00%	\$	480,000
Other Fees:	0.00%	\$	79,000
DFD Management Fees:	4.00%	\$	260,000
Contingency:	8.50%	\$	510,000
Movable/Special Eqpt:		\$	300,000
		\$	<u>7,629,000</u>

Funding Source

General Fund Supported Borrowing	\$	0
Program Revenue Supported Borrowing	\$	7,629,000
Building Trust Funds	\$	0
Gifts and Grants	\$	0
Program Revenue Cash	\$	0
	\$	<u>7,629,000</u>

Total

Fee Impact

The segregated fee will be increased by \$28.00 per semester as approved by the Oshkosh Student Association on the spring of 2012 ballot.

Fiscal Year

2013 - 18 \$

Annual Fee

\$ 56.00

Impact on Operating Budget

	<u>FTE</u>		<u>Cost</u>
Custodial Staff:	0.00	\$	0
Maintenance Staff:	0.00	\$	0
Utilities:		\$	5,411
		\$	<u>5,411</u>

Project Schedule

A/E Selection:	11/2012
Design Report Approval:	14/2012
Bid Date:	09/2013
Start Demolition:	11/2013
Start Construction:	12/2013
Substantial Completion:	08/2014
Final Completion:	12/2014

Project Delivery

At the present time, it is anticipated that the standard state project delivery process will be used.

Previous Action

None.

Major Project Request

2013-15 Biennium

Agency

University of Wisconsin

Institution

Platteville

Project Title

Residence Hall and Dining Facility

Project Description and Scope

This project will purchase a Residence Hall and Dining Facility of approximately 172,166 GSF for 430 students on the campus for the University of Wisconsin-Platteville. The building will be constructed by the University of Wisconsin - Platteville Real Estate Foundation (REF) through a request for proposal (RFP) process. The style of the residential living units will be two double occupancy rooms with a common shared bathroom.

Background

The University of Wisconsin-Platteville has been facing a critical housing shortage for several years. The current total student enrollment is 7,900. Enrollment is projected to increase to more than 8,200 by 2013. The current on-campus housing provides a total of ten (nine traditional and one suite-style) residence halls with approximately 2,700 available beds. The sophomore and freshman projected population for 2012 will be 3,000. In 2011 the campus began turning away transfer students who requested housing. In response to this demand, the University is currently working with a consultant team to undertake a Student Housing Master Plan, with the first component being a Market and Demand Analysis. The REF recently opened a 620-bed residence hall.

The nine original residence halls were constructed in the 1960s. These facilities lack many of the current amenities and are in need of eventual updating or replacement. The gross square footage of these legacy buildings also provides far less space per bed than modern buildings. The 1960s era buildings are traditional double rooms with common lavatory and bathing facilities on each floor or wing. In 2005, a single 380-bed suite-style residence hall was constructed (Southwest Hall).

The UW-Platteville Master Plan provides for a new residence hall and dining facility in Phase 1 (2011-2017) at the location requested for the development. The dining facility is planned to serve Southwest Hall, this facility, the off-campus Roundtree Commons, and other students, employees, and others.

Analysis of Need

The University of Wisconsin-Platteville is the fastest growing campus in the University of Wisconsin System. On-campus enrollment has increased 48% from 1999 to 2011. Fall 2011 enrollment was 7,504 and the campus is committed in incrementally increasing this number to 10,000 by fall 2025. The university's master plan goal is to provide housing for about 50% of students (5,000+) on-campus or in off-campus housing that includes quality management, programming, and other services that support increased retention and higher graduation rates.

The dining portion of this project is being designed to serve three halls; Southwest Hall (380 beds-completed fall 2006), Roundtree Hall (620 beds-completed fall 2012) and this hall at (430 beds to be completed fall 2013). Currently, the only board dining facility on campus is Glenview Commons located on northwestern part of campus, which is currently serving 2,700 beds. The final goal is for this new dining area to serve 1,430 beds while Glenview will be reduced to serve 2,320 beds.

An additional goal of this project is reduce student housing demand pressure on the University's host community. The city of Platteville is a relatively small host community (population approximately 11,000 people), given the increasing enrollment of the University (7,504 in fall 2011). The student housing demand has placed a unique and ongoing burden on the city of Platteville, with approximately 50% of homes in the city being licensed as rental property.

Major Project Request

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Alternatives

An option to purchasing the new residence hall upon occupancy is to lease the facility for a longer term basis. This is less desirable because student costs can be minimized by purchasing the building upon completion.

Project Budget

Purchase Price: \$ 29,287,000

Funding Source

General Fund Supported Borrowing	\$	0
Program Revenue Supported Borrowing	\$	29,287,000
Building Trust Funds	\$	0
Gifts and Grants	\$	0
Program Revenue Cash	\$	0
	<u>\$</u>	<u>29,287,000</u>

Total

Fee Impact

The annual fee per bed specific to this building (Semi-Suite style rooms) is shown to the right. The debt service specific to the housing component shall be paid by the new residence hall housing component. The dining component will be managed as part of overall food service operations. The existing campus housing stock does provide different housing style options, each with a different annual fee rate. In addition to Semi-Suite, these options are: Double, Single, and Suite. The annual fee increases are anticipated to be 5% per fiscal year, through 2017-18 for all housing styles. The Suite Style room rates are specific to Southwest Hall, and are an adjustment based on true cost of Southwest Hall.

Fiscal Year

Annual Fee

Double Room Rates	2013-14	\$	5,100
Suite Style Room Rates - Southwest Hall	2014-15	\$	5,202
Suite Style Room Rates – (Southwest Hall based on true cost)	2015-16	\$	5,306
	2016-17	\$	5,465
	2017-18	\$	5,738

Food service rates shown to the right represent the most common meal plan of 19 meals per week. The annual fee increases are anticipated to be 3% per fiscal year, as shown. This 3% increase is consistent across all meal plan options offered.	2013-14	\$	3,696
	2014-15	\$	4,649
	2015-16	\$	5,256
	2016-17	\$	3,033
	2017-18	\$	3,124

Impact on Operating Budget

	<u>FTE</u>		<u>Cost</u>
Custodial Staff:	4.00	\$	144,000
Maintenance Staff:	1.75	\$	136,500
Utilities:		\$	819,000
		<u>\$</u>	<u>1,099,500</u>

Project Schedule

Start Construction: 07/2012
 Substantial Completion: 06/2013
 Final Completion: 08/2013

Project Delivery

The building will be constructed under a RFP proposal issued by the UW-Platteville Real Estate Foundation and is scheduled to be completed by fall of 2013.

Major Project Request 2013-15 Biennium

Previous Action

April 13, 2012
Resolution 10062

Granted authority to permit the University of Wisconsin Platteville Real Estate Foundation under s. 13.48(12), to construct a student residence hall and dining facility on the UW-Platteville campus, under terms of a land use agreement with the University of Wisconsin System Board of Regents.

Major Project Request

2013-15 Biennium

Agency

University of Wisconsin

Institution

Stevens Point

Project Title

North DeBot Residence Hall Renovation - Phase II

Project Description and Scope

This project will renovate Watson Hall and Thomson Hall, which are located in the north DeBot quadrangle. The halls comprise a total of 107,834 GSF and 540 beds (270 each) and will receive targeted renovations that will include resident room window, door, lighting, and floorcovering replacement; a thin-coat plastering of masonry block in the resident rooms and corridors; and the replacement of closet side panels. All windows will be replaced with energy efficient frames and glazing. Existing wood fiber cement panels will be removed in the corridors and all ceilings will be repainted. The front desk lobby area will be reconfigured and updates will be made to the lounge area. Both hall directors' apartments will have finishes renovated, cabinetry replaced, and an outside entrance and porch landing installed. Americans with Disabilities Act (ADA) access modifications will include a five-stop elevator; revised exterior ramps; modified private baths on floors two through four to accommodate wheelchair restricted residents/guests; two lower level restrooms converted to provide fully accessible, gender-neutral facilities; eleven resident rooms on various floors will be made fully accessible; and doorknobs will be replaced throughout the building with lever handles. Fire sprinklers will be installed in the entire building and updates performed on the fire alarm system. The existing steam radiant heating system will be replaced with a four-pipe system that provide for a hot water system with air conditioning. Individual room thermostatic control will be allowed within a pre-set range. Augmentative domestic solar hot-water collection panels will be installed on each building. Emergency electrical power will be provided through connection to an existing generator, which was installed during a previous renovation project.

To maximize construction during the 2013-15 biennium, the design process will be initiated spring 2013. The overall project will demonstrate commitment to sustainable design, construction, and long-term maintenance through the pursuit of LEED® Existing Building (LEED-EB) certification. Very limited asbestos abatement is required because all exposed areas and the spaces behind the plumbing walls were abated during the 1990s.

Background

UWSP presently manages a housing physical plant of just over 672,000 GSF in twelve four-story residence halls with beds for approximately 2,900 students and one suite-style hall with a capacity of 323 beds. The twelve traditional residence halls with double loaded corridors and centrally located group bathroom facilities on each floor were mostly built in the 1960s. A series of renovations occurred in each residence hall throughout the 1990s. The work concentrated primarily on common areas such as the bathrooms. Recycling chutes were added and kitchenettes were installed on each floor. Voice and data wiring was upgraded and fire alarm systems were updated to the standards of that time. Asbestos in public areas was abated. Beginning in 2007, the improvements described above were begun on a schedule of renovating one hall per summer, and the renovation of six halls will be completed as of summer 2013.

Analysis of Need

Watson Hall was constructed in 1968 and Thomson Hall in 1969. Although the common areas in both halls received significant upgrades in the 1990s, little lighting, heat control or finish work was done in the sleeping rooms. Repeated concerns expressed by student residents during annual surveys are the limited room lighting options, poor ability to control heat, and problems with operating the windows. Inadequate and aging lighting fixtures remain a strong concern among the residents requesting more versatility and illumination within the rooms. The cinder block walls are noted for their sterile institutional appearance. The current radiant heat system is controlled by a single thermostat room which regulates heat for an entire four-story tower of rooms. This temperature control system consequently creates a waste of heat energy as residents open their windows to regulate individual room temperature. The majority of spaces in each residence hall remain out of compliance with current ADA norms and standards. The first floors of the halls are only marginally accessible to persons with disabilities. Although not required, sprinklering is considered a standard life safety feature in new construction and should be added when possible. The fire alarm systems are not addressable, nor are strobe lights synchronized.

Major Project Request

2013-15 Biennium

Alternatives

These two halls represent the seventh and eighth halls to be renovated in this manner and most alternatives have been generated and thoroughly vetted to come to the current array of renovation improvements. Numerous locations for placement of the elevator were considered in two separate design reviews. Options that would have saved bed-count by placing the elevator in an exterior tower would create obstructed views from some resident rooms and/or compromise individual privacy. Postponing the renovation remains an option, but the poor existing conditions would remain and ADA accessibility would not be addressed.

Project Budget

Construction Cost:		\$ 11,243,000
A/E Design Fees:	7.00%	\$ 819,000
Other Fees:	1.00%	\$ 147,000
DFD Management Fees:	4.00%	\$ 481,000
Contingency:	7.00%	\$ 787,000
Movable/Special Eqpt:		\$ 0
		\$ 13,477,000

Funding Source

General Fund Supported Borrowing	\$ 0
Program Revenue Supported Borrowing	\$ 13,477,000
Building Trust Funds	\$ 0
Gifts and Grants	\$ 0
Program Revenue Cash	\$ 0
	\$ 13,477,000

Fee Impact

Housing Type	Current Room Rate 2011-12	Cumulative Rate Increase		
		2014-15	2015-16	2016-17
Double Room	3,552	144	288	288
Single Room	4,896	144	288	288
Suite	5,280	144	288	288

Fiscal Year	Annual Fee Increase	Cumulative Annual Fee Increase
2014-2015	\$144	\$144
2015-2016	\$144	\$288
2016-2017	\$0.00	\$288

Impact on Operating Budget

	<u>FTE</u>		<u>Cost</u>
Custodial Staff:	0.00	\$	0
Maintenance Staff:	0.00	\$	0
Contract services	NA		4,104
Utilities:		\$	0
		\$	4,104

Major Project Request 2013-15 Biennium

Project Schedule

(MM/YYYY)

	Watson	Thomson
Program Approval:	03/2013	-
A/E Selection:	04/2013	-
Design Report Approval:	09/2013	-
Bid Date:	01/2014	01/2015
Start Demolition:	05/2014	05/2015
Start Construction:	05/2014	05/2015
Substantial Completion:	08/2014	08/2015
Final Completion:	12/2014	12/2015

Project Delivery

At the present time, it is anticipated that the standard state project delivery process will be used. The 2011-13 project had both halls designed and bid together with only one hall per year being renovated. Repeating this approach will be evaluated prior to submitting a request for authority to construction

Previous Action

None.

Major Project Request

2013-15 Biennium

Agency

University of Wisconsin

Institution

Stout

Project Title

McCalmont Hall Renovation

Project Description and Scope

This project renovates the existing 21,156 ASF/40,762 GSF McCalmont Residence Hall to provide programmatic and infrastructure upgrades that will improve functionality, efficiency and code compliance. The project scope includes McCalmont Hall additions of approximately 2,820 ASF/4,300 GSF to accommodate expanded toilet/shower areas and 1,000 ASF/1,300 GSF for expanded lounge/kitchen space. The elevator lobby and stairwells of 2,541 ASF/3,500 GSF will receive finish upgrades. Finally, the existing 650 ASF/715 GSF hall director apartment in adjacent existing Antrim Hall will be remodeled including an addition of 500 ASF/600 GSF to expand the apartment on the first floor. All together, the project will renovate approximately 24,347 ASF/44,977 GSF and add 4,320 ASF/6,200 GSF of space and remove an estimated \$1,272,300 of existing maintenance backlog.

The existing toilet/shower rooms on each floor will be expanded and updated to replace the inadequate and deteriorating facilities as well as provide ADA modifications. ADA modifications will also address accessible route issues. All wall, floor and ceiling finishes and interior doors and hardware will be replaced. The building infrastructure is deteriorating and all building systems, including MEP (mechanical/electrical/plumbing), MEP controls, telecommunications and life safety, will be replaced. This building has central chilled water connections that allow the building to be air conditioned. The existing elevator will be modernized. An automated fire sprinkler system and new fire alarm system will be installed. An emergency generator will be added. An existing pedestrian walkway connects McCalmont Hall to the existing Vocational Rehabilitation building. This pedestrian walkway is being renovated by a separate project.

The scope also includes replacement of utility piping from the building to the mains in the street. A new and larger water service is required to supply the fire sprinkler system. The new water service will feed only the McCalmont Building. All other utilities will be separated from adjacent buildings to provide stand-alone utilities for McCalmont Hall. The gas service will be replaced from the building to the street and extended for laundry dryers and the backup domestic water heater. The existing 50 year old underground steam pipe feed to the building will be replaced. Telephone, fiber optic and cable TV services will also be replaced.

Building envelope repairs will include the replacement of exterior doors, masonry tuck pointing, and caulking. Site lighting will be replaced.

Asbestos, lead-based paint and other hazardous materials will be abated as necessary.

Background

McCalmont Hall, located on main campus, was constructed in 1963. It is connected to Antrim Hall and Froggatt Hall, both existing residence halls, and currently provides 144 beds for University Housing. Recreation, lounge, laundry and building service spaces are provided. Currently, the first through third floors and the fifth floor are assigned to University Housing. The School of Education (SOE) occupies offices on the fourth floor. As a result of this project, the SOE offices will be relocated and all of McCalmont Hall will be assigned to University Housing. There have been no previous major renovation projects to the building. For the purpose of developing a long-range plan for the renovation of campus residence halls, a campus Residence Hall Study was completed in fall 2009. The study provided planning guidance relative to facility deficiencies, scope of potential remodeling projects, estimated project costs, and phasing considerations. McCalmont Hall will provide 184 beds after completion of the project. In 1982, a stair and elevator addition was completed. The windows were replaced in 2008 and the roof was replaced in 2011. New central chilled water service was brought into the building in 2011. Emergency power is currently provided by the generator in the Vocational Rehabilitation building; this project will provide a new generator for McCalmont Hall.

Major Project Request

2013-15 Biennium

Analysis of Need

Renovation of McCalmont Hall is consistent with recommendations made in the Residence Hall Study. As the renovation of existing residence halls proceeds, swing space is required. The renovation of McCalmont Hall will provide short term swing space and long term permanent housing rooms. Mold issues and plumbing/heating system piping leaks have increased over the past few years, prompting the campus to reevaluate the priority and schedule for the renovation of McCalmont Hall. It has been estimated that renovation of McCalmont Hall will result in an annual energy savings of \$9,500.

In general, the building has many infrastructure system deficiencies that make it difficult to maintain and keep operational. Most of the mechanical, electrical, and plumbing infrastructure is deteriorated and obsolete. The restrooms and shower rooms are not code compliant for accessibility. The single elevator in the building requires modernization to meet current standards for accessibility, improve operation and reduce maintenance costs. The proposed relocation of the SOE offices in McCalmont Hall will provide additional beds to address the need for more housing on main campus.

Alternatives

Demolition of McCalmont Hall and replacement with a new residence hall was considered. This alternative proved to be too expensive. It is more cost-effective to reinvest in the current asset.

Project Budget

Construction Cost:	\$	6,026,000
A/E Design Fees:	\$	487,000
Other Fees:	\$	60,000
DFD Management Fees: 4.00%	\$	265,000
Contingency: 10.00%	\$	603,000
Movable/Special Eqpt:	\$	0452,000
	\$	<u>7,893,000</u>

Funding Source

General Fund Supported Borrowing	\$	0
Program Revenue Supported Borrowing	\$	7,893,000
Building Trust Funds	\$	0
Gifts and Grants	\$	0
Program Revenue Cash	\$	0
	\$	<u>7,893,000</u>

Fee Impact

This project will require an increase of \$200/year in all room rates making the most popular room rate \$3,950/yr.

Fiscal Year	Annual Fee
2014 - 15	\$ 3,950.00

Impact on Operating Budget

No additional air-conditioning is proposed. McCalmont Hall is connected to the central chilled water system. All utilities/building infrastructure will be replaced. Energy savings are anticipated as a result of building control system upgrades. No additional custodial or maintenance staff will be added.

Project Schedule

A/E Selection:	09/2012
Design Report Approval:	06/2013
Bid Date:	11/2013
Start Construction:	01/2014
Substantial Completion:	07/2014
Final Completion:	08/2014

Project Delivery

At the present time, it is anticipated that the standard state project delivery process will be used.

Previous Action

None.

Major Project Request

2013-15 Biennium

Agency

University of Wisconsin

Institution

Stout

Project Title

North Hall Renovation

Project Description and Scope

This project renovates the existing 43,856 ASF/76,136 GSF North Residence Hall, providing programmatic and infrastructure upgrades that will improve functionality, efficiency, and code compliance. It also constructs 8,000 ASF/12,300 GSF of additional new space to accommodate expanded toilet/shower rooms on each floor and new stairs.

The existing toilet/shower rooms on each floor will be remodeled into commons, lounge, and kitchen spaces. ADA modifications will address accessible route issues and will include the modernization of the elevator. All wall, floor, and ceiling finishes will be replaced or upgraded. All interior doors and door hardware will be replaced. All building systems, including MEP (mechanical, electrical and plumbing), MEP controls, telecommunications, security and life safety, will be replaced. Air conditioning will not be installed. All exterior windows, doors, frames, and door hardware will be replaced. The roof will not be replaced. Exterior masonry repair, tuck-pointing and caulking are included. Asbestos abatement is required. Telecom room(s) will be constructed as part of the telecommunications systems upgrade. The fire alarm system will be replaced and a new automatic sprinkler system will be installed. The project removes approximately \$3,218,400 of backlog maintenance items and will provide an annual estimated energy savings of \$18,000.

This project will need to be completed in two phases to limit the loss of housing beds. The project will be constructed with Cubes A and B in Phase 1 and Cube C in Phase 2.

Background

North Hall, constructed in 1967, is a four story residence hall configured in three building cubes (A, B and C). It currently provides 371 beds for University Housing. It also provides recreation, lounge, laundry, and building service spaces. An ADA remodeling project was completed in 2007 that included select toilet room remodeling. A remodeling of the director's apartment was completed in 2008. Emergency power is provided by a generator that was installed in 2009 and is not included in this project. North Hall houses the technology core for the Main Campus residence halls and Student Life Services. The Cube A roof was replaced in 2005 and Cube B and C roofs were replaced in 2007.

For the purpose of developing a long-range plan for the renovation of campus residence halls, a campus Residence Hall Study was completed in fall 2009. The study provided planning guidance relative to facility deficiencies, scope of potential remodeling projects, estimated project costs, and phasing considerations.

Analysis of Need

Renovation of North Hall is consistent with recommendations made in the Residence Hall Study. The following issues were relevant in determining the high priority need to complete this project:

- Most of the original building heating and ventilation systems perform poorly and require constant maintenance to sustain operations. Portions of the mechanical and electrical infrastructure do not serve present needs. For example, the electrical system lacks adequate capacity to support the increased student use of personal computers, etc.
- Plumbing fixtures, water piping and valves, water heaters, waste/vent piping, and roof drains need replacement.
- The HVAC equipment and piping is original and needs replacement.
- The water service is not adequate to supply a fire sprinkler system.
- All electrical distribution equipment is obsolete and needs replacement.
- The medium voltage distribution system should be upgraded to a loop configuration.
- Additional panel boards are required to provide adequate capacity to resident rooms.
- All wiring is original and needs replacement.

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- The fire alarm system notification panels need replacement to comply with code required notification requirements.
- Restrooms and shower rooms do not meet current ADA standards for accessibility or building codes.
- The single elevator in the building was installed in 1997 and requires modernization to meet current standards for accessibility, improve operation and reduce maintenance costs.
- Asbestos-containing material on the water and storm conductor piping systems needs abatement.

Alternatives

Demolition of North Hall and replacement with a new residence hall was considered. This alternative proved to be too expensive. It is more cost-effective to reinvest in the current asset.

Project Budget

Construction Cost:		\$	10,558,000
A/E Design Fees:	8.00%	\$	853,000
Other Fees:		\$	211,000
DFD Management Fees:	4.00%	\$	465,000
Contingency:	10.00%	\$	1,056,000
Movable/Special Eqpt:		\$	107,000
		\$	<u>13,250,000</u>

Funding Source

General Fund Supported Borrowing	\$	0
Program Revenue Supported Borrowing	\$	13,250,000
Building Trust Funds	\$	0
Gifts and Grants	\$	0
Program Revenue Cash	\$	0
	\$	<u>13,250,000</u>

Fee Impact

This project will require an increase of \$450/year in all room rates making the most popular room rate \$4,400/yr. This increase will be spread over two fiscal years as shown in the table.

Fiscal Year		Annual Fee
2015 - 16	\$	4,150.00
2016 - 17	\$	4,400.00

Impact on Operating Budget

No additional air-conditioning is proposed. All utilities/building infrastructure will be replaced. Energy savings are anticipated as a result of window replacement and building control system upgrades. No additional custodial or maintenance staff will be added.

Project Schedule

A/E Selection:	06/2013
Design Report Approval:	02/2014
Bid Date:	10/2014
Start Construction Phase I:	01/2015
Subst. Completion Phase I:	07/2015
Start Construction Phase II:	01/2016
Subst. Completion Phase II:	07/2016
Final Completion:	12/2016

Project Delivery

At the present time, it is anticipated that the standard state project delivery process will be used.

Previous Action

None.

Major Project Request 2013-15 Biennium

Agency

University of Wisconsin

Institution

Whitewater

Project Title

Indoor Tennis Building

Project Description and Scope

This project will construct an Indoor Tennis Facility of approximately 50,000 GSF with overhead clearance of 35 feet at the net and 20 feet at the base line on the UW-Whitewater campus. The project constructs a pre-engineered structural building that meets the minimum requirements for NCAA intercollegiate tennis tournament play for four courts. The main entry will contain a two story vestibule on the north side of the building that is sized to accommodate a future stair to the mezzanine level. A secondary ground-level entry will be located on the south side of the building to provide convenient access from the Kachel Fieldhouse and the Williams Center. Public toilet facilities, custodial space, and spectator seating will also be provided at the ground level.

This new Tennis Facility will initially be a stand-alone facility with the potential for a future addition of a pedestrian bridge connection at an upper level to the north end of Kachel Fieldhouse.

Background

The UW-Whitewater Athletics program provides varsity athletic programs in nine men's and eleven women's sports. The men's tennis program began in 1966 and the women's program began in 1974. The current tennis facilities include the Wangerin Tennis Courts with 12 outdoor courts and the multi-purpose Kachel Fieldhouse which provides four indoor courts within a perimeter track. The courts at Kachel Fieldhouse are not designed or suited for competitive tennis, however these facilities do support instruction, intramural sports tennis matches during the academic year, and summer tennis camps.

Analysis of Need

The women's intercollegiate tennis season occurs in the fall and the men's occurs in the spring. However, training and competitive tournament activities take place during winter and throughout the entire academic year. To meet the demands of this competitive tennis program, the university currently rents space at private indoor tennis clubs, as needed. During the summer, these facilities are highly utilized by the summer tennis camp program.

Recognizing this increasing need, UW-Whitewater with UW-System and the Department of Facilities Development initiated a feasibility study to help define program needs and determine estimated project costs. This feasibility study resulted in a full program description and two proposed project budgets: 1) Custom engineered, highly translucent building and 2) a pre-engineered building with the same programmatic spaces but with economies in structural and building envelope systems. Both budget options were beyond what the campus and athletics department are able to support. The program was further broken down into clearly defined, phased components that can be designed and bid as alternates or as a future project when funds become available.

Alternatives

The option of doing nothing will not address the need for additional tennis courts to support the tennis program year round. The campus would need to continue renting costly space at private indoor tennis clubs to meet the training requirements of the tennis program. In addition, the transportation of athletes to the off-campus tennis clubs involves both the costs of money and time.

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Agency

University of Wisconsin

Institution

Whitewater

Project Title

Residence Hall

Project Description and Scope

This project will construct a four-story, 400 bed, semi-suite style residence hall of approximately 81,000/118,000 ASF/GSF. It will provide living units with double occupancy bedrooms and shared bathrooms. The building will provide common spaces on each floor for lounges and study rooms, individual rooms for resident assistants, and telecom/data rooms. Other spaces that may be located on the first or lower levels include a residence life advisor apartment and office, a laundry room, a front desk and mail room, a building wide kitchen, a multipurpose/TV room, collaborative learning rooms, a Learning Involvement Team/Hall Council room and various storage areas as space permits.

This site selection will be confirmed as part of the upcoming campus master plan. Currently, the campus has identified four potential sites on campus, most of which are on the north campus near Esker Hall.

Background

UW-Whitewater has 4,430 residence hall beds on campus and 446 of these are in suites or single bedroom units in two-year-old Starin Hall, which is the most recently constructed residence hall. The remaining 3,984 beds are in traditional double rooms in buildings with an average age of 40 years. This leaves the institution with a mostly monolithic inventory of traditional rooms in aging buildings.

Due to both campus growth, and the deteriorating condition of off-campus housing, the campus has experienced a housing shortage during the last four years. The campus contracted with off-campus landlords to house 450 students in order to ease the burden for the halls that are off-line for renovation. However, the campus has recently resorted to using lounges to house 200 additional students.

In early 2000, two residence halls were taken off-line and demolished to make way for a new academic building. Starin Hall was completed in 2010 to replace some of those lost beds. The Office of Residence Life has developed a long-range plan to accomplish the remodeling and maintenance of the older halls by taking one hall off line for one year.

Analysis of Need

UW-Whitewater Office of Residence Life contracted with the architectural firm of Potter Lawson in 2011 to help them study various design options for dealing with the deficiencies of Wells Hall and to address contemporary student needs and programming initiatives as well as enhancing the ability of the UW-Whitewater Office of Residence Life to sustain itself in a competitive market environment. The study addressed the expense of remodeling with various bed capacity scenarios. It also looked at estimates of new construction. The study concluded that the high per-bed cost of renovation with the minimum accommodations required by Americans with Disabilities Act (ADA) did not meet the mission of campus housing. The campus does not plan to demolish Wells Hall until replacement beds are constructed, which may not be until 2030.

This new hall and other future new halls would eventually replace Wells Hall, constructed in 1967. Wells Hall is a two tower structure with a capacity of 1,200 beds in double-occupancy rooms and common restrooms/showers. To meet the current housing shortage and to accommodate the eventual demolition of Wells Hall, the campus will need to construct a total of 1,600 beds within the next twenty years.

Alternatives

The campus is currently short of needed beds and is renting space off campus to house 450 students. One alternative would be to allow freshmen and sophomore students to live off campus, but the residency requirement serves to integrate students more successfully into academic life and studies have shown that the students who reside on campus are more

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successful academically and more likely to graduate. There is really no alternative to meeting demand other than building a new residence hall.

Project Budget

Construction Cost:		\$	21,767,000
A/E Design Fees:	7%	\$	1,585,000
Other Fees:		\$	184,000
DFD Management Fees:	4%	\$	958,000
Contingency:	7%	\$	2,177,000
Movable/Special Eqpt:	5%	\$	1,329,000
			\$ 28,000,000

Funding Source

	Total
General Fund Supported Borrowing	\$ 0
Program Revenue Supported Borrowing	\$ 28,000,000
Building Trust Funds	\$ 0
Gifts and Grants	\$ 0
Program Revenue Cash	\$ 0
	\$ 28,000,000

Impact on Operating Budget

	<u>FTE</u>		<u>Cost</u>
Custodial Staff/Supplies:	2	\$	100,212
(Maintenance Staff/Supplies:	1	\$	68,600
Utilities:		\$	<u>288,471</u>
		\$	457,283

Fee Impact

This project will increase room rates on campus by approximately \$96 - \$144 (2.8%) per year distributed as follows:

Room Type	2011-12 Rate	2012-13 Rate
Double room traditional halls	\$1,680/sem	\$1,728/sem
Apartment style single room (Starin Hall)	\$2,496/sem	\$2,568/sem

Project Schedule

A/E Selection:	February 2013
Design Report Approval:	November 2013
Bid Date:	June 2014
Start Construction:	August 2014
Substantial Completion:	May 2016
Final Completion:	September 2016

Project Delivery

Due to the complexity of constructing a residence hall, in a location when the operation of adjacent occupied residence hall buildings, utilities, and circulation must remain safe and functional, a single prime delivery method will be requested. Accordingly, a waiver of §16.855 Wis. Stat. under §13.48(19) Wis. Stat. will be sought to allow for single-prime bidding.

Previous Action

None.

UW ACCOUNTABILITY REPORTING 2011-12

BACKGROUND

The University of Wisconsin System has annually published detailed accountability reports since 1993. These reports reflect the UW System's longstanding commitment to demonstrating its accountability to the citizens of Wisconsin. Each annual accountability report covers a broad spectrum of higher education performance measures that address diverse constituent interests. Over the years, ongoing refinements and enhancements have been made to these reports to ensure their continued relevance and value as a resource for all potential users.

The current report, *Investing in Wisconsin's Future*, builds upon two earlier publications: *Achieving Excellence*, issued annually from 2001 to 2008, and its predecessor, *Accountability for Achievement*, published from 1993 to 1998. *Accountability for Achievement* was one of the first accountability reports for a university system. The current report reflects the strategic framework for advancing the UW System's Growth Agenda for Wisconsin. *Investing in Wisconsin's Future* is available electronically on the internet at: <http://www.uwsa.edu/opar/accountability/>.

The 2011-13 biennial budget required submission of an annual report by the UW System Board of Regents regarding all UW System institutions other than UW-Madison, and a separate annual report from the Chancellor of UW-Madison.

REQUESTED ACTION

This report is for information only.

DISCUSSION

UW System Senior Vice President Mark Nook will present an overview of *Investing in Wisconsin's Future*, which represents the UW System's continuing commitment to broad-based accountability to the citizens of Wisconsin. All of the measures in *Investing in Wisconsin's Future* were designed with the mission of the UW System in mind, concentrating on the many ways in which the University of Wisconsin seeks to serve its students and the State of Wisconsin. While it is not feasible to report on every possible area of university activity in a single document, *Investing in Wisconsin's Future* attempts to provide a balanced approach, representing a broad diversity of stakeholder interests.

Investing in Wisconsin's Future includes updated information on the UW System's progress on its strategic priorities, which serve as the blueprint for the UW System's Growth Agenda for Wisconsin. The performance measures in the report include not only the traditional, widely-used indicators of access, equity and diversity, enrollments, retention, graduation, and resource management, but also indicators of the UW System's impact on Wisconsin communities through

civic participation and community outreach and engagement. In this way, the report more fully reflects the ways in which the UW System is investing in Wisconsin's future.

Since 2002, each of the 15 UW institutions has produced its own annual report as a companion to the systemwide report. Since last year, these reports have the same structure and expanded framework of the systemwide report to provide common performance measures across institutions, but also to highlight the unique accomplishments of each UW campus. The institution-specific reports were developed in response to suggestions from members of the Board of Regents who felt that our accountability efforts would be enhanced by the reporting of institutional measures in a format that is consistent across all campuses. The institutional reports are designed to demonstrate accountability in light of the specific character and mission of each institution. The institutional reports are available on the web at: <http://www.uwsa.edu/opar/accountability/>.

New reports will also be presented this year, as required by the 2011-13 biennial budget. This budget required submission of an annual report by the UW System Board of Regents regarding all UW System institutions other than UW-Madison, and a separate annual report from the Chancellor of UW-Madison. A number of the performance indicators in these last two reports are new; therefore, it will be an ongoing process to determine how best to collect, organize, analyze, and present the data necessary to respond to them. These "Act 32 reports" will be presented by Senior Vice President Nook and UW-Madison Provost Paul DeLuca. These reports are available on the web at: <http://www.uwsa.edu/opar/accountability/>.

In addition to the above mentioned reports, the UW System further demonstrates its accountability to the public through participation in the Voluntary System of Accountability (VSA). The VSA is a voluntary initiative of public four-year colleges and universities to provide information to parents and students on measureable educational outcomes in an accessible, understandable, and comparable way. Each UW four-year institution provides a College Portrait as part of this initiative, available at: <http://collegeportraits.org>.

RELATED REGENT AND UW SYSTEM POLICIES

No applicable Regent Policy Documents

BOARD OF REGENTS OF THE UNIVERSITY OF WISCONSIN SYSTEM

I.1. Education Committee -

August 23, 2012
1820 Van Hise Hall
1220 Linden Drive
Madison, Wisconsin

2:30 p.m. Education Committee – 1820 Van Hise Hall

a. Consent Agenda:

1. Approval of the Minutes of the June 7, 2012, Meeting of the Education Committee;
2. UW-Green Bay: Faculty Personnel Rule Revisions;
[Resolution I.1.a.(2)]
3. UW-Madison: B.S. in Athletic Training;
[Resolution I.1.a.(3)]
4. UW-Oshkosh: Bachelor of Science in Radiologic Science;
[Resolution I.1.a.(4)]
5. UW-River Falls: Master of Science in Clinical Exercise Physiology;
[Resolution I.1.a.(5)]
6. UW-Green Bay, UW-Oshkosh, UW-Parkside, UW-Stout and UW-Superior:
Collaborative Online Master of Science in Sustainable Management.
[Resolution I.1.a.(6)]

b. UW-La Crosse and UW-Milwaukee: Dissolution of Consortial Doctor of Physical Therapy Program and Authorizations of Independent Doctor of Physical Therapy Programs at UW-La Crosse and UW-Milwaukee.
[Resolution I.1.b.]

c. Presentation on Milwaukee Partnership Academy.

d. Proposed Revisions to the Board of Regents Policy on Academic Program Planning, Review, and Approval
[Resolution I.1.d.]

e. Report of the Senior Vice President:

1. 2012-13 UW System *Growth Agenda for Wisconsin* Grant Program;
2. 2012-13 Strategic Directions for Academic Affairs;
3. Discussion of Education Committee Priorities for 2012-13.

Amendments to
Faculty Personnel Rules
University of Wisconsin-Green Bay

EDUCATION COMMITTEE

Resolution I.1.a.(2):

That, upon the recommendation of the Chancellor of the University of Wisconsin-Green Bay and the President of the University of Wisconsin System, the Board of Regents approves the amendments to the UW-Green Bay Faculty Personnel Rules.

**FACULTY PERSONNEL RULES
UNIVERSITY OF WISCONSIN-GREEN BAY**

EXECUTIVE SUMMARY

BACKGROUND

Section UWS 2.02, Wisconsin Administrative Code (“Faculty Rules: Coverage and Delegation”) requires that rules, policies, and procedures developed by each institution in the System pursuant to Chapters UWS 3, 4, 5, 6, 7 and 8 must be approved by the Board of Regents before they take effect.

The proposed revisions to the UW-Green Bay Faculty Personnel Policies entail changes to four sections of the UW-Green Bay *Faculty Handbook*. The revisions were approved by the UW-Green Bay Faculty Senate between January 26, 2012, and May 2, 2012, and by Chancellor Harden and Provost Wallace on May 21, 2012. The proposed changes have also been reviewed by the UW System Office of General Counsel and the Office of Academic and Student Affairs, which have determined that the revisions meet the requirements of Wisconsin Administrative Code, existing law, and Regent Policy.

REQUESTED ACTION

Approval of resolution I.1.a.(2), approving the amendments to the UW-Green Bay Faculty Personnel Rules.

DISCUSSION

The proposed revisions to the UW-Green Bay Faculty Personnel Policies entail changes to four sections of the UW-Green Bay *Faculty Handbook*: (1) Section UWGB 53.12, entitled “Graduate Program;” (2) Section UWGB 3.10 on the “Merit Review Process;” (3) UWGB Section 52.01, entitled “Jurisdiction of the Senate;” and (4) UWGB Section 52.06 on “Meetings.”

UWGB 53.12 clarifies the conditions and terms for the appointment and renewal of faculty who wish to become members of the graduate program, as well as specific responsibilities for service, instruction, and program development and approval. The changes also clarify the responsibilities and authority of the Graduate Studies Council, its oversight by the Associate Provost and Vice Chancellor, its relationship to the Faculty Senate, as well as appeal processes for programs initially not approved by the Graduate Studies Council.

UWGB 3.10 was changed to specify that at least once every five years a faculty member’s performance must be reviewed by the respective interdisciplinary unit executive committee for purposes of merit review.

The changes to UWGB 52.01 pertain to the availability of regular reports from the University Committee at each meeting of the Faculty Senate.

UWGB 52.06 clarifies the time frame for scheduling meeting times of the UW-Green Bay faculty senate.

RECOMMENDATION

UW System Administration recommends approval of Resolution I.1.a.(2), approving the amendments to the UW-Green Bay Faculty Personnel Rules.

(A)

UW-Green Bay Faculty Handbook Changes– Original, UNCHANGED Version

53.12 GRADUATE PROGRAM

A. Graduate Degree Programs: Membership. The faculty of a graduate program shall consist of those UW-Green Bay faculty members holding professorial rank and Lecturers with faculty status who have been appointed to that program by the Provost/Vice Chancellor for Academic Affairs on recommendation of the Dean of Professional and Graduate Studies and the graduate program executive committee. A faculty member may have a split appointment or assignment with another graduate program but may vote in only one program.

B. Executive Committee: Membership and Functions

1. A graduate degree program executive committee shall consist of all tenured members of a graduate degree program. The executive committee shall consist of no fewer than three members. When there are fewer than three qualified members in a graduate degree program to form an executive committee, the qualified members shall, in consultation with the Dean of Professional and Graduate Studies, designate the remaining members from graduate faculty whose academic training and experience relate to the graduate degree program.
2. Graduate degree program executive committees have the responsibility to make recommendations concerning appointments, curriculum, and other matters related to the graduate degree program which are transmitted to the Dean of Professional and Graduate Studies and to the Provost/Vice Chancellor for Academic Affairs.

C. Chairperson: Selection

1. The chairperson shall be elected by a simple majority of members of a graduate degree program with the approval of the Dean of Professional and Graduate Studies for a term of three years. There is no limit to the number of terms that a chairperson may serve. The vote shall be at a graduate degree program meeting with the results to be counted and announced immediately at said meeting. The results of the election shall be transmitted to the Dean of Professional and Graduate Studies for approval. Removal of the chairperson by the Dean of Professional and Graduate Studies during the term of office normally shall take place following a vote of no confidence. A vote to determine confidence in the chairperson may be held at any time upon petition of fifty percent of the faculty of a graduate degree program or on the request of the Dean of Professional and Graduate Studies.

D. Chairperson: Duties

1. Serves as the official channel of communication for all matters affecting graduate studies as a whole at UW-Green Bay, between the program and other

academic units, the Chancellor, Provost/Vice Chancellor for Academic Affairs, the appropriate Dean(s), the Associate Dean for Graduate Studies and Research, and other University officials and units.

2. Calls meetings of the graduate program faculty and its executive committee and presides over the meetings. The chairperson shall also call a meeting at the request of any two members of the program. Each program shall meet at least once every semester.
3. Has charge of all official correspondence of the graduate program and of all program matters included in the graduate catalog or other University publications.
4. Determines that all necessary records of faculty activities within a graduate program are properly recorded.
5. Reports to the Associate Dean for Graduate Studies and Research regarding the activities and needs of the program.
6. Submits, through the Associate Dean, new courses, major revisions of existing courses, and deletions of courses proposed by the graduate program for action by the appropriate interdisciplinary unit, the Graduate Faculty Board of Advisors, Academic Affairs Council, and the Provost/Vice Chancellor for Academic Affairs.
7. Acts as the chief executive officer of the graduate program.

E. Graduate Faculty Board of Advisors. The Graduate Faculty Board of Advisors is elected from among the tenured members of the graduate faculty. The Board is convened by and serves in an advisory capacity to the Dean of Professional and Graduate Studies. The Board has the authority to make recommendations concerning curriculum, program and personnel within the graduate program.

1. The Board of Advisors consists of voting members of the graduate faculty [as defined in 53.12 (A)] holding the tenured associate or full professor ranks. Two at-large members serve for three years, with terms staggered to ensure continuity, and may not be elected for consecutive terms. Graduate program chairs and the chairs of cooperative graduate programs shall, *ex officio*, also serve as voting members of the Board. The Dean of Liberal Arts and Sciences shall also serve as a non-voting *ex-officio* member. Additionally, the graduate student union shall elect one of its members each year to sit without vote on the Board for a one-year term.
2. The Committee on Committees and Nomination shall nominate members for vacancies on the Board of Advisors, ensuring that the two at-large members do not belong to the same graduate program.

F. Curriculum Review. The course proposals and curriculum of the graduate program are subject to review and approval by the Academic Affairs Council.

3.10 REVIEW PROCEDURES (MERIT, PROMOTION, RENEWAL)

1. Merit Review Procedures for all Faculty

a. The performance of each tenured faculty member shall be reviewed annually or biennially (every second year) by the faculty member's interdisciplinary unit executive committee. Non-tenured faculty will be reviewed annually by the executive committee, or the review may be combined with a retention review in a given year. The review shall be of the faculty member's performance from the beginning of one appointment period to the beginning of the next appointment period. The results of the review shall be communicated to the faculty member by his/her chairperson within 30 days of the completion of the review.

52.01 JURISDICTION OF THE SENATE

- A. The Senate shall represent the Faculty in all matters within the jurisdiction and powers of the Faculty as enumerated in UWGB Chapter 50.04.
- B. The Senate may decide, in matters of major importance, to request that action by the Faculty be taken.
- C. The Senate shall receive regular monthly reports from the University Committee on appropriate matters, including educational policy, budget, legislation, and actions taken by the Board of Regents, and by the various faculties and faculty committees, and by other bodies or individuals related to the UWGB campus. The Senate may take appropriate action in response to these reports.

52.06 MEETINGS

- A. The Senate shall normally meet once a month during the academic year, or as business dictates.
- B. Special Senate meetings may be called by the Speaker of the Senate or by petition of five senators.
- C. The majority of members constitutes a quorum.
- D. Any member of the University community (students or employees of UWGB) may be recognized by the Presiding Officer to speak on any matter on the agenda.
- E. Faculty shall receive agenda and summary minutes automatically, and may have access to the full proceedings on request to the Secretary of the Faculty and Academic Staff.
- F. There shall be time allotted for new business at each meeting. Items submitted at this time shall be discussion items at the next meeting and action items at the next.

(B)

UW-Green Bay Faculty Handbook– VERSION with TRACKED CHANGES

UWGB 53.12 GRADUATE PROGRAM

A. Graduate Degree Programs: Membership, **Responsibilities, Appointment Process.**

1. Membership. The faculty of a graduate program shall consist of those UW-Green Bay faculty members holding professorial rank and Lecturers with faculty status who have been appointed to that program by the Provost/Vice Chancellor for Academic Affairs on **the** recommendation of the ~~Dean of Professional and Graduate Studies~~ and **appropriate Dean** and the graduate program executive committee. A faculty member may have a split appointment or assignment with another graduate program but may vote in only one program.

2. Responsibilities. Graduate program faculty members will be expected to regularly contribute to the success of the program in one or more of the following ways: (1) serve on thesis committees, either as major professor and/or committee member (in programs that require a culminating research project, the expectation is that faculty will regularly serve as project advisors); (2) provide graduate level instruction either through the teaching of graduate level courses, cross-listed courses, or independent studies/internships; and/or (3) contribute to the graduate program’s development (e.g., serving on program committees, attending program meetings, etc.). **Interdisciplinary Budget Units are strongly encouraged to recognize the contributions of individuals with an appointment to a graduate program as part of the individual’s budgetary unit periodic performance review.**

3. Appointment Process. Graduate program faculty appointments will be for a period of three years. Prior to the end of the second year of the appointment an individual should be considered for renewal by members of a program’s Executive Committee. Faculty determined not to have met graduate faculty expectations would not have their graduate program appointment renewed. An individual could also decline the opportunity to have her/his appointment renewed by submitting a note to the program chair.

B. Executive Committee: Membership and Functions

1. A graduate degree program executive committee shall consist of all tenured members of a graduate degree program. The executive committee shall consist of no fewer than three members. When there are fewer than three qualified members in a graduate degree program to form an executive committee, the qualified members shall, in consultation with the ~~Dean of Professional and Graduate Studies~~ **appropriate Dean**, designate the remaining members from graduate faculty whose academic training and experience relate to the graduate degree program.

2. Graduate degree program executive committees have the responsibility to make recommendations concerning appointments, curriculum, and other matters related to the graduate degree program which are transmitted to the ~~Dean of Professional and Graduate Studies~~ **appropriate Dean** and to the Provost/Vice Chancellor for Academic Affairs.

C. Chairperson: Selection

1. The chairperson shall be elected by a simple majority of members of a graduate degree program ~~with the approval of the Dean of Professional and Graduate Studies~~ **usually** for a term of three years. **In circumstances where both the Executive Committee and the Dean are in agreement, the term of appointment may be set for one to five years.** There is no limit to the number of terms that a chairperson may serve. The vote shall ~~be by written ballot~~ at a graduate degree program meeting with the results to be counted and announced immediately at said meeting. The results of the election shall be transmitted to the ~~Dean of Professional and Graduate Studies~~ **appropriate Dean** for approval. Removal of the chairperson by the ~~Dean of Professional and Graduate Studies~~ **appropriate Dean** during the term of office normally shall take place following a vote of no confidence. A vote to determine confidence in the chairperson may be held at any time upon petition of fifty percent of the faculty of a graduate degree program or on the request of the ~~Dean of Professional and Graduate Studies~~ **appropriate Dean**.

D. Chairperson: Duties

1. Serves as the official channel of communication for all matters affecting graduate studies as a whole at UW-Green Bay, between the program and other academic units, the Chancellor, Provost/Vice Chancellor for Academic Affairs, the appropriate Dean(s), the Associate ~~Dean~~ **Provost for Academic Affairs/Director** of Graduate Studies ~~and Research~~, and other University officials and units.

2. Calls meetings of the graduate program faculty and its executive committee and presides over the meetings. The chairperson shall also call a meeting at the request of any two members of the program. Each program shall meet at least once every semester.

3. Has charge of all official correspondence of the graduate program and of all program matters included in the graduate catalog or other University publications.

4. Determines that all necessary records of faculty activities within a graduate program are properly recorded.

5. ~~Reports~~ **Communicates** to the Associate **Provost for Academic Affairs/Director** ~~Dean~~ of Graduate Studies ~~and Research~~ regarding the activities and needs of the program.

6. Submits, ~~through the Associate Dean,~~ new courses, major revisions of existing courses, and deletions of courses proposed by the graduate program for action by the appropriate interdisciplinary unit, **appropriate dean**, the Graduate Faculty Board of Advisors, Academic Affairs Council, and the Provost/Vice Chancellor for Academic Affairs.

7. Acts as the chief executive officer of the graduate program.

E. Graduate Faculty ~~Board of Advisors~~ **Studies Council**. **Members of the Graduate Faculty Board of Advisors is Studies Council are** elected from among the tenured members of the graduate faculty [as defined in 53.12 (A)]. The Board is convened by the Associate ~~Dean~~ **Provost for Academic Affairs/Director** of Graduate Studies ~~and Research~~ and serves in an

advisory capacity to the **Provost and Vice Chancellor for Academic Affairs, Dean of Professional and Graduate Studies Associate Provost for Academic Affairs/Director of Graduate Studies and appropriate Dean(s)** through the Associate Dean. The Board has the authority to make recommendations concerning curriculum, program and personnel within the graduate program.

1. ~~The Board of Advisors~~ **is Council members are elected from among the tenured members of the graduate faculty and** consists of ~~voting members of the graduate faculty [as defined in 53.12 (A)] holding the tenured associate or full professor ranks. T~~ two at-large members **who** serve for three years, with terms staggered to ensure continuity, and may not be elected for consecutive terms. Graduate program chairs and the chairs of cooperative graduate programs shall, *ex officio*, also serve as voting members of the ~~Board~~ **Council. The Associate Provost for Academic Affairs/Director of Graduate Studies, Dean of the College of Professional Studies, and Dean of the College of Liberal Arts and Sciences serve *ex-officio*, non-voting.** Additionally, ~~the a graduate student union shall elect one of its members each year~~ **be selected by the Associate Provost for Academic Affairs/Director of Graduate Studies to sit without vote on** serve as a nonvoting member of the ~~Board~~ **Council** for a one-year term.

2. The Committee on Committees and Nomination shall nominate members for vacancies on the Board of Advisors, ensuring that the two at-large members do not belong to the same graduate program.

3. Upon the request of the appropriate Dean(s), the Graduate Studies Council shall approve or disapprove all new programs or modifications to existing programs, and on all new credit courses or modifications to existing credit courses at the graduate level.

4. The Graduate Studies Council shall have the responsibility and authority for review and approval of all credit courses and all academic programs at the graduate level. Its official decision shall be forwarded to the Faculty Senate through the University Committee. The Faculty Senate will publish all curricular decisions made by the Graduate Studies Council in the minutes of its monthly meetings and forward them along with copies of all official Graduate Studies Council correspondence to the Provost/Vice Chancellor for Academic Affairs.

5. In a case where the Graduate Studies Council does not approve a new course or program, the initiator of that new course or program may ask the Graduate Studies Council for reconsideration of the decision, providing new arguments or supplementary evidence in support of the proposal to address the Graduate Studies Council's objections. If this appeal fails to produce a satisfactory conclusion, in the view of the initiator, an appeal to the University Committee can be made. In such cases the University Committee may investigate the appeal themselves or establish an ad hoc committee to do so. If the University Committee chooses to overturn the decision of the Council, the results of that deliberation will be reported to the Senate, published in the Senate minutes and forwarded to the Provost/Vice Chancellor for Academic Affairs.

6. On its own initiative, or upon request of the University Committee, the Graduate Studies Council may advise the Faculty Senate about issues of graduate level education policy and implementation that falls within the jurisdiction of the Faculty.

7. The Graduate Studies Council shall annually provide the Secretary of the Faculty and Academic Staff, for inclusion in the *Faculty Governance Handbook*, a current list of graduate programs, and graduate level certificate programs.

~~F. Curriculum Review. The course proposals and curriculum of the graduate program are subject to review and approval by the Academic Affairs Council.~~

UWGB 3.10 REVIEW PROCEDURES (MERIT, PROMOTION, RENEWAL)

1. Merit Review Procedures for all Faculty

a. The performance of each tenured faculty member shall be reviewed ~~annually or biennially (every second year)~~ **at least once every five years** by the faculty member's interdisciplinary unit executive committee. Non-tenured faculty will be reviewed annually by the executive committee, or the review may be combined with a retention review in a given year. The review shall be of the faculty member's performance from the beginning of one appointment period to the beginning of the next appointment period. The results of the review shall be communicated to the faculty member by his/her chairperson within 30 days of the completion of the review.

UWGB 52.01 JURISDICTION OF THE SENATE

- A. The Senate shall represent the Faculty in all matters within the jurisdiction and powers of the Faculty as enumerated in UWGB Chapter 50.04.
- B. The Senate may decide, in matters of major importance, to request that action by the Faculty be taken.
- C. The Senate shall receive ~~regular monthly~~ reports **at each Senate meeting** from the University Committee on appropriate matters, including educational policy, budget, legislation, and actions taken by the Board of Regents, and by the various faculties and faculty committees, and by other bodies or individuals related to the UWGB campus. The Senate may take appropriate action in response to these reports.

UWGB 52.06 MEETINGS

- A. The Senate shall normally meet once ~~a month~~ **every three weeks starting three weeks after the beginning of the contract period (not counting spring break and winter break)** during the academic year, or as business dictates.
- B. Special Senate meetings may be called by the Speaker of the Senate or by petition of five senators.
- C. The majority of members constitutes a quorum.
- D. Any member of the University community (students or employees of UWGB) may be recognized by the Presiding Officer to speak on any matter on the agenda.
- E. Faculty shall receive agenda and summary minutes automatically, and may have access to the full proceedings on request to the Secretary of the Faculty and Academic Staff.
- F. There shall be time allotted for new business at each meeting. Items submitted at this time shall be discussion items at the next meeting and action items at the next.

(C)

UW-Green Bay Faculty Handbook– includes FINAL VERSION with all changes accepted

UWGB 53.12 GRADUATE PROGRAM

A. Graduate Degree Programs: Membership, Responsibilities, Appointment Process.

1. **Membership.** The faculty of a graduate program shall consist of those UW-Green Bay faculty members holding professorial rank and Lecturers with faculty status who have been appointed to that program by the Provost/Vice Chancellor for Academic Affairs on the recommendation of appropriate Dean and the graduate program executive committee. A faculty member may have a split appointment or assignment with another graduate program but may vote in only one program.

2. **Responsibilities.** Graduate program faculty members will be expected to regularly contribute to the success of the program in one or more of the following ways: (1) serve on thesis committees, either as major professor and/or committee member (in programs that require a culminating research project, the expectation is that faculty will regularly serve as project advisors); (2) provide graduate level instruction either through the teaching of graduate level courses, cross-listed courses, or independent studies/internships; and/or (3) contribute to the graduate program's development (e.g., serving on program committees, attending program meetings, etc.). Interdisciplinary Budget Units are strongly encouraged to recognize the contributions of individuals with an appointment to a graduate program as part of the individual's budgetary unit periodic performance review.

3. **Appointment Process.** Graduate program faculty appointments will be for a period of three years. Prior to the end of the second year of the appointment an individual should be considered for renewal by members of a program's Executive Committee. Faculty determined not to have met graduate faculty expectations would not have their graduate program appointment renewed. An individual could also decline the opportunity to have her/his appointment renewed by submitting a note to the program chair.

B. Executive Committee: Membership and Functions

1. A graduate degree program executive committee shall consist of all tenured members of a graduate degree program. The executive committee shall consist of no fewer than three members. When there are fewer than three qualified members in a graduate degree program to form an executive committee, the qualified members shall, in consultation with the appropriate Dean, designate the remaining members from graduate faculty whose academic training and experience relate to the graduate degree program.

2. Graduate degree program executive committees have the responsibility to make recommendations concerning appointments, curriculum, and other matters related to the graduate degree program which are transmitted to the appropriate Dean and to the Provost/Vice Chancellor for Academic Affairs.

C. Chairperson: Selection

1. The chairperson shall be elected by a simple majority of members of a graduate degree program usually for a term of three years. In circumstances where both the Executive Committee and the Dean are in agreement, the term of appointment may be set for one to five years. There is no limit to the number of terms that a chairperson may serve. The vote shall at a graduate degree program meeting with the results to be counted and announced immediately at said meeting. The results of the election shall be transmitted to the appropriate Dean for approval. Removal of the chairperson by the appropriate Dean during the term of office normally shall take place following a vote of no confidence. A vote to determine confidence in the chairperson may be held at any time upon petition of fifty percent of the faculty of a graduate degree program or on the request of appropriate Dean.

D. Chairperson: Duties

1. Serves as the official channel of communication for all matters affecting graduate studies as a whole at UW-Green Bay, between the program and other academic units, the Chancellor, Provost/Vice Chancellor for Academic Affairs, the appropriate Dean(s), the Associate Provost for Academic Affairs/Director of Graduate Studies, and other University officials and units.
2. Calls meetings of the graduate program faculty and its executive committee and presides over the meetings. The chairperson shall also call a meeting at the request of any two members of the program. Each program shall meet at least once every semester.
3. Has charge of all official correspondence of the graduate program and of all program matters included in the graduate catalog or other University publications.
4. Determines that all necessary records of faculty activities within a graduate program are properly recorded.
5. Communicates to the Associate Provost for Academic Affairs/Director of Graduate Studies regarding the activities and needs of the program.
6. Submits new courses, major revisions of existing courses, and deletions of courses proposed by the graduate program for action by the appropriate interdisciplinary unit, appropriate dean, the Graduate Faculty Board of Advisors, Academic Affairs Council, and the Provost/Vice Chancellor for Academic Affairs.
7. Acts as the chief executive officer of the graduate program.

E. Graduate Studies Council. Members of the Graduate Studies Council are elected from among the tenured members of the graduate faculty [as defined in 53.12 (A)]. The Board is convened by the Associate Provost for Academic Affairs/Director of Graduate Studies and serves in an advisory capacity to the Provost and Vice Chancellor for Academic Affairs, Associate Provost for Academic Affairs/Director of Graduate Studies and appropriate Dean(s)

1. Council members are elected from among the tenured members of the graduate faculty and consists of two at-large members who serve for three years, with terms staggered to ensure continuity, and may not be elected for consecutive terms. Graduate program chairs and the chairs of cooperative graduate programs shall, also serve as voting members of the Council. The Associate Provost for Academic Affairs/Director of Graduate Studies, Dean of the College of Professional Studies, and Dean of the College of Liberal Arts and Sciences serve *ex-officio*, non-voting. Additionally, a graduate student shall be selected by the Associate Provost for Academic

Affair/Director of Graduate Studies to serve as a nonvoting member of the Council for a one-year term.

2. The Committee on Committees and Nomination shall nominate members for vacancies on the Board of Advisors, ensuring that the two at-large members do not belong to the same graduate program.

3. Upon the request of the appropriate Dean(s), the Graduate Studies Council shall approve or disapprove all new programs or modifications to existing programs, and on all new credit courses or modifications to existing credit courses at the graduate level.

4. The Graduate Studies Council shall have the responsibility and authority for review and approval of all credit courses and all academic programs at the graduate level. Its official decision shall be forwarded to the Faculty Senate through the University Committee. The Faculty Senate will publish all curricular decisions made by the Graduate Studies Council in the minutes of its monthly meetings and forward them along with copies of all official Graduate Studies Council correspondence to the Provost/Vice Chancellor for Academic Affairs.

5. In a case where the Graduate Studies Council does not approve a new course or program, the initiator of that new course or program may ask the Graduate Studies Council for reconsideration of the decision, providing new arguments or supplementary evidence in support of the proposal to address the Graduate Studies Council's objections. If this appeal fails to produce a satisfactory conclusion, in the view of the initiator, an appeal to the University Committee can be made. In such cases the University Committee may investigate the appeal themselves or establish an ad hoc committee to do so. If the University Committee chooses to overturn the decision of the Council, the results of that deliberation will be reported to the Senate, published in the Senate minutes and forwarded to the Provost/Vice Chancellor for Academic Affairs.

6. On its own initiative, or upon request of the University Committee, the Graduate Studies Council may advise the Faculty Senate about issues of graduate level education policy and implementation that falls within the jurisdiction of the Faculty.

7. The Graduate Studies Council shall annually provide the Secretary of the Faculty and Academic Staff, for inclusion in the *Faculty Governance Handbook*, a current list of graduate programs, and graduate level certificate programs.

UWGB 3.10 REVIEW PROCEDURES (MERIT, PROMOTION, RENEWAL)

1. Merit Review Procedures for all Faculty

a. The performance of each tenured faculty member shall be reviewed at least once every five years by the faculty member's interdisciplinary unit executive committee. Non-tenured faculty will be reviewed annually by the executive committee, or the review may be combined with a retention review in a given year. The review shall be of the faculty member's performance from the beginning of one appointment period to the beginning of the next appointment period. The results of the review shall be communicated to the faculty member by his/her chairperson within 30 days of the completion of the review.

UWGB 52.01 JURISDICTION OF THE SENATE

- A. The Senate shall represent the Faculty in all matters within the jurisdiction and powers of the Faculty as enumerated in UWGB Chapter 50.04.
- B. The Senate may decide, in matters of major importance, to request that action by the Faculty be taken.
- C. The Senate shall receive reports at each Senate meeting from the University Committee on appropriate matters, including educational policy, budget, legislation, and actions taken by the Board of Regents, and by the various faculties and faculty committees, and by other bodies or individuals related to the UWGB campus. The Senate may take appropriate action in response to these reports.

UWGB 52.06 MEETINGS

- A. The Senate shall normally meet once every three weeks starting three weeks after the beginning of the contract period (not counting spring break and winter break) during the academic year, or as business dictates.
- B. Special Senate meetings may be called by the Speaker of the Senate or by petition of five senators.
- C. The majority of members constitutes a quorum.
- D. Any member of the University community (students or employees of UWGB) may be recognized by the Presiding Officer to speak on any matter on the agenda.
- E. Faculty shall receive agenda and summary minutes automatically, and may have access to the full proceedings on request to the Secretary of the Faculty and Academic Staff.
- F. There shall be time allotted for new business at each meeting. Items submitted at this time shall be discussion items at the next meeting and action items at the next.

Program Authorization (Implementation)
B.S. in Athletic Training
UW-Madison

EDUCATION COMMITTEE

Resolution I.1.a.(3):

That, upon the recommendation of the Chancellor of the University of Wisconsin-Madison and the President of the University of Wisconsin System, the Chancellor be authorized to implement the Bachelor of Science in Athletic Training.

**NEW PROGRAM AUTHORIZATION
Bachelor of Science in Athletic Training
University of Wisconsin-Madison**

EXECUTIVE SUMMARY

BACKGROUND

In accordance with the procedures outlined in the UW System Academic Planning and Program Review policy (ACIS-1.0, revised April 2010), the new program proposal for a Bachelor of Science (B.S.) in Athletic Training at the University of Wisconsin-Madison is presented to the Board of Regents for consideration. If approved, the program will be subject to a Regent-mandated review to begin five years after its implementation. The University of Wisconsin-Madison and UW System Administration will conduct that review jointly, and the results will be reported to the Board.

The B.S. in Athletic Training will be housed in the Department of Kinesiology in the School of Education. The B.S. in Athletic Training is designed to prepare students to meet national certification and state licensure requirements as Athletic Trainers. Athletic trainers are health care professionals who collaborate with physicians to optimize life-long physical activity of patients and clients. Athletic training encompasses the prevention, diagnosis, and intervention of emergency, acute, and chronic medical conditions involving impairment, functional limitations, and disabilities. The athletic trainer functions as an integral member of the health care team in secondary schools, colleges and universities, professional sports programs, sports medicine clinics, private/industrial workplaces, and other health care settings.

UW-Madison has offered an accredited Athletic Training program since 2000, first as an undergraduate certificate earned in conjunction with a bachelor's degree program (2000 to 2005) and subsequently as an option (sub-major) within the B.S. in Kinesiology program (since 2005). UW-Madison is now seeking to convert the option to a distinct degree/major program; the curriculum, goals, and context for the proposed program are essentially identical to the existing option.

REQUESTED ACTION

Approval of Resolution I.1.a.(3), authorizing the implementation of the Bachelor of Science in Athletic Training at the University of Wisconsin-Madison.

DISCUSSION

Program Description

The Bachelor of Science in Athletic Training will educate graduates for certification as athletic trainers in accordance with national standards and program goals. At the end of the program students will sit for the national Board of Certification Examination for Athletic Trainers. Accredited programs include formal classroom instruction in areas such as

injury/illness prevention, first aid and emergency care, assessment of injury/illness, human anatomy and physiology, treatment and rehabilitation, nutrition, and pharmacology. These classroom experiences are enhanced through clinical education opportunities.

The five program components are:

1. Liberal Studies: At least 40 credits that include General Education requirements, and coursework in the humanities, social studies, and sciences.
2. Science Core: Science and Mathematics preparation includes introductory Chemistry, introductory Biology, General Physics, Mathematics through introductory Calculus, Statistics, Human Physiology, and Anatomy (lecture and lab class).
3. Athletic Training Core: 38 credits of advanced study in theory and clinical practice.
4. Kinesiology Core: 21-23 credits exploring how the body responds and adapts to exercise, the role of psychological factors in sports and exercise, mechanics applied to biological systems, and how movement is controlled, learned, and developed over the life-span.
5. Electives: Courses of interest to the student to round out the requirement for 120 credits.

Program Goals and Objectives

The B.S. in Athletic Training will integrate a variety of student-centered learning opportunities to develop critical-thinking, problem-solving, and decision-making skills. The program prepares students for successful completion of the Board of Certification (BOC) examination. Graduates are prepared both for continued study in graduate programs and for entry-level athletic trainer positions in a variety of settings.

The student learning outcomes for the B.S. in Athletic Training program encompass the University's Essential Learning Outcomes (http://www.provost.wisc.edu/content/WI_Exp_ELOs.pdf): knowledge of human culture, intellectual and practical skills, personal and social responsibility, and integrative learning. In addition, the curriculum includes elements of the Wisconsin Experience by focusing on substantial research experiences, global and cultural competency, leadership and activism opportunities, and application of knowledge. Graduates of the B.S. in Athletic Training will:

1. Understand the role of the athletic trainer within the broader health care system.
 - a. Work collaboratively with a range of practitioners.
2. Demonstrate appropriate oral and written communication skills.
3. Provide patient care that is rooted in ethical behavior, honest communication, and advocacy for patient needs.
 - a. Abide by the Standards of Practice established by the Board of Certification.
 - b. Abide by all state laws governing the practice of athletic training.
 - c. Provide culturally competent athletic training care.
 - d. Understand how athletic training principles are applied in a variety of clinical environments with diverse patient populations.
4. Maintain the highest standards of evidence-guided clinical practice.
 - a. Incorporate quality evidence into clinical practice.
 - b. Utilize tools that examine the quality of patient care.

- c. Demonstrate skill in the examination, diagnosis, management, and rehabilitation of injuries.
 - d. Demonstrate skill in the examination, diagnosis, management, and rehabilitation of illnesses as they pertain to physical activity.
 - e. Develop treatment plans consistent with contemporary disablement models.
 - f. Track patient outcomes for the purpose of improving quality of care.
5. Participate in activities to promote life-long learning and professional development.
 6. Promote the profession of athletic training.
 - a. Maintain membership in the National Athletic Trainers Association

Relation to Institutional Mission

The UW-Madison is distinctive in Wisconsin as the only university where physician training, a range of ancillary and allied health profession programs, and a research mission are fully combined. The Athletic Training program, as a member of this health sciences community, contributes to the research, instructional, and outreach mission of the campus.

The presence of this program at a major research university like UW-Madison places it in a strong position to create a vibrant experience for students. The presence of the School of Medicine and Public Health, as well as programs in Physical Therapy, Occupational Therapy, Nursing, Pharmacy, and Physician Assistant, provide opportunities for interdisciplinary education among health sciences students. The Division of Intercollegiate Athletics, University Health Services, UW Health Hospitals and Clinics, UW Health Sports Medicine and Athletic Training Outreach, and local secondary schools provide a full range of clinical education opportunities. The opportunity to expose students to cutting-edge sports medicine research has a positive impact on both patient care and student interest in graduate study.

The Bachelor of Science in Athletic Training will allow students to learn from faculty with active research programs committed to the creation of new knowledge in the field of athletic training. The program emphasizes evidence-guided practice, quality outcomes, and the adherence to disablement models of patient care. The program adheres to a student-centered teaching philosophy that promotes active learning. The guiding principles of the program outline a learning environment dedicated to intellectual curiosity, integrity, communication, critical thinking, problem-solving, decision-making, and advocacy. The program has evolved to fully support the “Wisconsin Idea” by producing graduates who can mature into leaders in the athletic training profession at the local, state, and national levels.

Program Assessment

A substantial assessment plan is already in place for the Athletic Training program to provide evidence for student learning and to support accreditation requirements (see Table 1).

Table 1. Athletic Training Program Goals and Methods of Assessment

Program Goal	Method of Assessment
1. Recruit and admit highly qualified students with a strong foundation in the basic sciences, challenging them and supporting them to program completion.	<ul style="list-style-type: none"> • Admissions Process Review • Student Self-Assessment • Graduate Survey • Senior Exit Interview
2. Prepare athletic training professionals for graduate study and/or entry-level employment through proper didactic and clinical education experiences.	<ul style="list-style-type: none"> • Graduate Survey • Employer Survey • Graduate School Placement Record • Board of Certification Exam Scores • Senior Exit Interview
3. Graduate scholarly clinicians who promote and adhere to evidence-based practices.	<ul style="list-style-type: none"> • Graduate Survey • Employer Survey • Senior Exit Interview
4. Contribute to evidence-based practice through faculty and student scholarship.	<ul style="list-style-type: none"> • Faculty Merit Review • Academic Staff Merit Review
5. Recruit and retain faculty, academic staff, and clinical preceptors who exemplify excellence in teaching and scholarship and serve as role models for the athletic training profession.	<ul style="list-style-type: none"> • Student Course Evaluations • Faculty Merit Review • Academic Staff Merit Review • Clinical Site Evaluations • Student Evaluations of Clinical Instructors • Senior Exit Interview

Need

The 2010-11 U.S. Bureau of Labor Statistics data reports that employment of athletic trainers is projected to grow 37 percent from 2008 to 2018, much faster than the average for all occupations, because of their role in preventing injuries and reducing healthcare costs. Job growth will be concentrated in the health care industry, including hospitals and offices of health practitioners. Fitness and recreation sports centers will provide new jobs, as these establishments grow and need additional athletic trainers to provide support for their clients. In some states, there are efforts underway to have an athletic trainer in every high school to work with student-athletes. The demand for preventative health care will grow as the population ages and greater emphasis is placed on prevention programs. Increasing physical activity among the general population is frequently cited as a key mechanism to improve health and reduce the cost of care; demand for athletic trainers will grow as these programs are implemented. Increased licensure requirements and regulation have led to a greater acceptance of athletic trainers as qualified health care providers. As a result, third-party reimbursement is expected to continue to grow for athletic training services. Athletic trainers will benefit from this expansion because they provide a cost-effective way to increase the number of health professionals in an office or other setting.

Projected Enrollment (5 years)

Table 2. Projected Enrollment B.S.in Athletic Training

Year	Year 1 2013-14	2nd year 2014-15	3rd year 2015-16	4th year 2016-17	5th year 2018-19
New students admitted	0	20	20	20	20
Continuing students	*36	18	20	20	20
Total enrollment	36	38	40	40	40
#Graduating students	18	18	18	18	18

The B.S. in Athletic Training will enroll 18 to 20 students per year. This is the same capacity as the current Athletic Training option. Limitations are due to limited availability of clinical placements and enrollment limits in core Kinesiology courses. Year 1 represents a transition of students from the current option to the B.S. program, rather than new admissions.

Comparable Programs

The Athletic Training program at UW-Madison was the second program in Wisconsin to secure national accreditation (2000). Since that time, additional programs have been accredited at UW institutions, including UW-La Crosse, UW-Oshkosh, UW-Stevens Point, UW-Eau Claire, and UW-Milwaukee. The presence of six Athletic Training programs with distinct identities and approaches within the UW System provides students with broad pedagogical and location choices for athletic training education in Wisconsin. Minnesota has seven accredited athletic training programs—five public and two private—but none are offered at a major research university. Iowa has eleven accredited athletic training programs, two public and nine private school programs. Illinois has thirteen athletic training programs, five offered at public institutions and eight in private settings.

Collaboration

The Athletic Training program is proactive in collaborating with departments whose courses provide instruction of educational competencies in athletic training. Support for the B.S. in Athletic Training has been confirmed by departments offering required courses, e.g., Anatomy, Pharmaceutical Sciences, Nutrition, and Nursing. The B.S. in Athletic Training program will continue to collaborate with various campus- and community-based clinical sites for placement of students (University Health Services, UW Health Sports Medicine, UW Health Athletic Training Outreach Program, and the Division of Intercollegiate Athletics Sports Medicine Program).

Among the six Athletic Training programs in the UW System, each has elected to stand alone and none has pursued a collaborative program structure. This approach is driven by local clinical placements and the infusion of clinical education from start to finish in the professional sequence. Programs require local supervision and assessment of clinical competencies across the curriculum. After careful consideration and discussions with colleagues at other UW

institutions, consensus among program directors is that the program design, required content, and required local clinical experiences are best suited for a single campus-based delivery model, as opposed to a collaborative model offered across multiple campuses.

Diversity

Student Diversity. The B.S. in Athletic Training program will seek to attract students and faculty from diverse social, economic and ethnic backgrounds, and to be sensitive and responsive to those groups that are under-represented within the athletic training profession. The Athletic Training program is dedicated to providing graduates with necessary cultural competency skills in the area of patient evaluation and treatment, and addresses these issues in multiple locations across the curriculum. The Athletic Training program will avail itself of all UW-Madison resources to help actively recruit under-represented students and faculty. Specifically, the program will work closely with the School of Education Office of Undergraduate Recruitment and Retention. The program will provide public service by collaborating with other campus applied health sciences programs (Physical Therapy, Occupational Therapy, and Medicine), participating in activities that address issues of cost, quality, and access to health care services.

Faculty Diversity. This program will be delivered with existing faculty and any future faculty hires for this program will be aligned with the faculty diversity hiring initiatives of the School of Education and UW-Madison. Hiring departments must file a Recruitment Efforts Plan (REP) before advertising a faculty position. Efforts to expand the pool of minority and women candidates in the sciences, in particular, have been the special focus of the Women in Science and Engineering Leadership Institute (WISELI), which has served as a campus- and nation-wide resource for teaching hiring committees how to overcome implicit bias in reviewing applications, interviewing candidates, and making hiring decisions. All chairs of search committees in the School of Education/Department of Kinesiology are required to participate in WISELI workshops. If the opportunity arises, the department will make use of university-level Strategic Hiring Funds that help fund the initial years of high-priority faculty hires, including tenured or tenure-track minority faculty.

Evaluation from External Reviewers

Distinguished educators from the Athletic Training programs at East Carolina University, the University of Delaware, the University of Virginia, and Boston University provided letters of evaluation. Reviewers commented on the strong liberal arts and sciences foundation, the professional curriculum, the clinical placements, and the quality of the program faculty as program strengths. Also noted as strengths are the connections the program has to other health and allied health professions programs at UW-Madison, which include Medicine, Occupational Therapy, Physical Therapy, Nursing, Pharmacy, and the Physician Assistant program.

Resource Needs

The B.S. in Athletic Training will be supported entirely by a reallocation of the instructional and student services resources that currently support the B.S. in Kinesiology option in Athletic Training (an option which will be discontinued upon implementation of the B.S. in

Athletic Training). The estimated current/first-year resources are \$586,000. Approximately \$501,000 is budgeted for faculty and instructional staff (6.88 FTE), \$80,000 for staff support (0.68 FTE), and \$5,000 for supplies and expenses. Four faculty are primarily associated with the Athletic Training program and an additional seven faculty in the Department of Kinesiology make substantial teaching contributions to the program.

RECOMMENDATION

The University of Wisconsin System recommends approval of Resolution I.1.a.(3), authorizing the implementation of the Bachelor of Science in Athletic Training at the University of Wisconsin-Madison.

RELATED REGENT AND UW SYSTEM POLICIES

Regent Policy Document 4-12: Planning and Review Principles for New and Existing Academic Programs and Academic Support Programs

Academic Informational Series #1 (ACIS-1.0, revised April 2010): Statement of the UW System Policy on Academic Planning and Program Review

TABLE OF ESTIMATED TOTAL COSTS AND RESOURCES

	First Year		Second Year		Third Year	
	#FTE	Dollars	#FTE	Dollars	#FTE	Dollars
CURRENT COSTS						
Personnel	6.88	\$581,319	6.88	\$598,759	6.88	\$616,721
Faculty/Instructional Staff	6.20	\$500,703	6.20	\$515,725	6.20	\$531,196
Non-instructional Academic/Classified Staff	0.68	\$80,616	0.68	\$83,034	0.68	\$85,525
Non-personnel						
Supplies & Expenses		\$5,000		\$5,250		\$5,513
Capital Equipment						
Computing						
Other (Define)						
Subtotal		\$586,319		\$604,009		\$622,234
ADDITIONAL COSTS						
Personnel						
Faculty/Instructional Staff						
Graduate Assistants						
Non-instructional Academic/Classified Staff						
Non-personnel						
Supplies & Expenses						
Capital Equipment						
Computing						
Other (Define)						
Subtotal		\$0		\$0		\$0
TOTAL COSTS		\$586,319		\$604,009		\$622,234
CURRENT RESOURCES						
General Purpose Revenue (GPR)		\$577,319		\$595,009		\$613,234
Gifts and Grants		9,000		9,000		9,000
Fees						
Other (Define)						
Subtotal		\$0		\$0		\$0
ADDITIONAL RESOURCES						
GPR Reallocation (list sources)						
Gifts and Grants						
Fees						
Other (Define)						
Subtotal		\$0		\$0		\$0
TOTAL RESOURCES		\$586,319		\$604,009		\$622,234

Program Authorization (Implementation)
B.S. in Radiologic Science
UW-Oshkosh

EDUCATION COMMITTEE

Resolution I.1.a.(4):

That, upon the recommendation of the Chancellor of the University of Wisconsin-Oshkosh and the President of the University of Wisconsin System, the Chancellor be authorized to implement the Bachelor of Science in Radiologic Science.

NEW PROGRAM AUTHORIZATION

Bachelor of Science in Radiologic Science University of Wisconsin-Oshkosh

EXECUTIVE SUMMARY

BACKGROUND

In accordance with the procedures outlined in Academic Planning and Program Review (ACIS-1.0, Revised April 2010), the new program proposal for a Bachelor of Science (B.S.) in Radiologic Science in the Department of Biology and Microbiology at the University of Wisconsin-Oshkosh is presented to the Board of Regents for consideration. If approved, the program will be subject to a regent-mandated review to begin approximately five years after its implementation. UW-Oshkosh and UW System Administration will conduct that review jointly, and the results will be presented to the Board.

Baccalaureate-trained radiologic technologists use high-end instrumentation to perform diagnostic medical imaging procedures such as CT, MRI, and ultrasound, and take on leadership as well as coordinating roles in the field. The proposed B.S. in Radiologic Science is part of UW-Oshkosh's strategic plan to increase the number of graduates in high-demand STEM disciplines and to better meet workforce development needs in the region by providing advanced degree options to practitioners in the health industry. As the American health care system becomes increasingly complex and characterized by rapid technological change, there is an increased need for highly qualified radiologic professional practitioners and clinical program coordinators with advanced preparation beyond the associate degree level. Until recently, professional Radiologic Science education consisted of one year of study in a technical college and two years in a clinical (hospital) setting (1+2). Such certificate programs are currently hosted at nine Wisconsin Technical Colleges, with 14 sites across Wisconsin providing the clinical portion.

Since wide variations in pre-clinical and clinical radiologic science education have long been a concern to professional organizations, the American Society of Radiologic Technologists (ASRT) recently issued new certification requirements for four-year degree preparation in the field as the entry-level minimum credential for professional practice. The new ASRT certification requirements will take effect in January, 2015. Because of its existing faculty expertise and experience in providing health technology degrees, UW-Oshkosh is poised to deliver an innovative and intellectually rigorous B.S. in Radiologic Science through optimal use of resources and new partnerships with hospital-based Schools of Radiology in the region, which are equipped neither to offer a full range of college curricula nor to grant degrees. The distinguishing feature of the proposed program is that it offers students a strong liberal studies education combined with training in a career that will increasingly require the understanding of complex scientific and societal issues.

REQUESTED ACTION

Approval of Resolution I.1.a.(4), authorizing the implementation of the Bachelor of Science in Radiologic Science at UW-Oshkosh.

DISCUSSION

Program Description

UW Oshkosh's 120-credit Bachelor of Science in Radiologic Science will be offered by the Department of Biology and Microbiology in the College of Letters and Science and through an accredited clinical setting at a partnering medical facility. The proposed program is designed as a *two-plus-two college completion program*, in which students will begin their studies at UW-Oshkosh and complete degree requirements for the Radiologic Science clinical core of the curriculum in an accredited clinical setting. Students will earn their first 69 to 71 credits (depending on courses chosen by students) at UW-Oshkosh, including 42 credits in General Education, as required by the College of Letters and Sciences, and meeting all university-wide degree and graduation requirements.

Additional UW-Oshkosh courses in anatomy, physiology, and anthropology will specifically support the advanced diagnostic imaging training students will undertake in the clinical setting. The proposed program requires students to complete 51 credits of on-site clinical training at UW-Oshkosh-approved Schools of Radiology, all of which must be accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT) and the American Registry of Radiologic Technologists (ARRT). JRCERT establishes education standards for the profession; ARRT administers the certification exams that are the gateway to professional practice.

The curriculum for the B.S. in Radiologic Science includes the following academic and clinical courses (courses required for the major are starred). Students will choose 42 credits from the General Education program for the Bachelor of Science degree:

Introductory Composition (WBIS)	3 credits
Advanced English Composition	3 credits
*Mathematics: 104-106 or 108, <u>and</u> Statistics	8 credits
Physical Education, Phys Ed 105	2 credits
Non-Western Culture course (NW)	3 credits
Speech Communication COM 111	3 credits
Literature course (HU)	3 credits
Three additional Humanities courses (HU)	9 credits
*Introductory Biology, BIO 105 (NS)	4 credits
*Human Anatomy, BIO 211 (NS)	3 credits
*Chemistry or Physics 2-course Series (NS)	8-10 credits
History course (SS)	3 credits
*Introductory Psychology, PSY 101 (SS)	3 credits
*Introductory Anthropology, ANTH 102 (SS)	3credits
*Physical Anthropology, ANTH 202 (SS)	3 credits

Ethnic Studies course (ES) 3 credits

Students must also complete the following content requirements:

*Human Physiology, BIO 212 4 credits

*Computer literacy course 3 credits

The Clinical curriculum delivered at the clinical site will include these or similar courses from the accredited core curriculum:

RT 310 Fundamentals of Radiologic Science and Health Care-(no credit)

RT 311 Patient Care in Radiologic Sciences-3 credits

RT 320 Ethics in Law in Radiologic Sciences-2 credits

RT 312 Medical Terminology-1 credit

RT 324 Darkroom and Film Processing-3 credits

RT 383 Human Structure and Function I: Radiographic Procedures and Clinical Practice-25 credits

RT 463 Principles of Radiographic Exposure-3.5 credits

RT 384 Human Structure and Function II: Radiographic Procedures and Clinical Practice-15 credits

RT 464 Special Procedures-3 credits

RT 409 Introduction to Digital Imaging Modalities-2 credits

RT 428 Radiation Production and Characteristics-3 credits

RT 429 Pharmacology and Drug Administration-1.5 credits

RT 462 Principles of Radiation Protection-2.5 credits

RT 431 Image Analysis-no credits

RT 432 Sectional Anatomy-2 credits

RT 417 Introduction to Quality Control-2.5 credits

RT 410 Imaging Equipment-2 credits

RT 421 Principles of Radiation Biology-1 credit

RT 455 Radiographic Pathology-3 credits

RT 433 Human Diversity-.5 credits

RT 451 Registry Review-no credits

While participating in clinical training at an approved site, students will continue to be enrolled at UW-Oshkosh, providing them full access to financial aid and student services that are available online as well as face-to-face.

In designing the program in collaboration with qualified clinical site faculty, UW-Oshkosh faculty members examined all clinical curricular components taught as a standard core curriculum in clinical Schools of Radiology and used existing department formulae to convert clinical hours of instruction to credit-equivalents. Licensed and qualified specialists in radiologic science who meet accreditation standards will teach the required 34 radiologic technology lecture credits and the 11 laboratory clinical credits of the proposed degree program.

As part of the degree-completion requirements, students will earn six credits in unpaid internships under the supervision of a radiologic health professional in a variety of professional

locations in the region either during the summer semester or concurrent with fall or spring enrollment. The internship is designed to provide a quality, hands-on leadership experience that is specifically related to the student's career goals. Full-time students can complete all UW-Oshkosh graduation requirements in four years.

Program Goals and Objectives

The objectives of the proposed program in Radiologic Science are aligned with the standards of the American Society of Radiologic Technologists and the Joint Review Committee on Education in Radiologic Technology guidelines for accreditation of Radiologic Science programs. Further, the curriculum will also prepare students for obtaining licensure in the State of Wisconsin and national certification. The learning outcomes of the proposed program include the following:

1. Knowledge of cell biology, human physiology, gross human anatomy, sectional human anatomy, pharmacology, microbiology pertaining to infection control, and pathology;
2. Knowledge and understanding of the physics of electromagnetic radiation as pertaining to imaging;
3. Knowledge and understanding of best-practice procedures that blend physics, anatomy, psychology, and patient care;
4. Knowledge of medical law and ethics;
5. Understanding of the diversity inherent in human populations, and the ability to work with individuals from diverse backgrounds;
6. Ability to develop skills in advanced anatomy, radiation biology, pharmacology and pathophysiology, biology; and
7. Ability to develop knowledge in general education (humanities and social sciences).

Relationship to Institutional Mission

The B.S. in Radiologic Science is fully aligned with the University of Wisconsin-Oshkosh mission to provide “students access to a high-quality, affordable, comprehensive education” and to foster “scholarly activities of faculty, students, and staff.” The proposed program will enable students to obtain access to a professional discipline in the biological/medical sciences and in-demand careers in Radiologic Science, while also meeting the aims of the College of Letters and Science to “develop the whole person who values knowledge for its own sake as well as for the achievement of specific objectives,” and to develop “responsible citizens who understand and contribute to the changing world in which they live.” The proposed B.S. in Radiologic Science also supports UW-Oshkosh's central function of “sharing [its] intellectual and specialized capabilities with individuals, organizations, and communities in our Wisconsin region, and beyond,” especially since a variety of regional and national stakeholders and health organizations, including Schools of Radiology in the region, are active contributors to the program.

Program Assessment

Data about student learning presents a valuable component of program review and the assessment of student learning is used to both inform program changes and to serve as an indicator of student mastery of academic content. In order to receive accreditation of the B.S. in Radiologic Science through JCERT, faculty designed the curriculum in collaboration with an external Advisory Board consisting of radiology technology professionals currently working at Schools of Radiology in Wisconsin. This Advisory Board will remain in place to consult with the faculty and routinely provide feedback on the relevance of the curriculum to the profession and the emerging issues in the field of Radiologic Technology. The program will also be evaluated through the existing university-wide Academic Program Review process and via an assessment plan created by the Department of biology and Microbiology. Faculty will assess students' content knowledge during a key introductory biology course required for the proposed program, using a pre-test/post-test assessment tool. A second exam of content knowledge takes place during a mid-point course. All students must complete an end-of-program assessment exam. The exam covers concept-specific information and quantitative skills, as well as analytical thinking and synthesis gained during the two years of coursework at UW-Oshkosh coupled with the knowledge and skills gained while training at the clinical site. Faculty members will assess students in a clinical setting during their internship experiences. Students provide regular written assessments of their progress in the internship, as does the internship supervisor. Graduates will take a state licensure exam required for practice in the field as radiologic technicians.

Need

The rapid, ongoing development of diagnostic imaging technology and its wide implementation into health care has created a nationwide shortage of highly qualified radiologic scientists trained in multiple imaging modalities. According to the Bureau of Labor Statistics' Occupational Outlook Handbook 2010-11, employment of radiologic technologists is expected to grow much faster than average, at 17% nationally from 2008-18. The job outlook for medical imaging in Wisconsin looks highly favorable over the next five years since job openings for radiologic technologists are expected to grow by 20%, with diagnostic medical imaging jobs expected to grow by 21% and nuclear medicine technology positions expected to grow at a rate of 17%. Since the national average for growth in the U.S. is 15%, this means that Wisconsin has higher demand than most states for medical imaging jobs.

Table 1: Projected Enrollment in the B.S. in Radiologic Science

Year	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year**
New Students Admitted	10	16	20	20	20
Continuing Students*	0	8	20	32	32
Total Enrollment	10	24	40	52	52
Graduating Students	0	0	8	12	16

*Assumes an 80% retention rate (as per historical data) and addition of students from existing majors.

**It is anticipated that enrollments in the major will level off by year five.

Comparable Programs in and outside Wisconsin

UW-Milwaukee's B.S. in Clinical Laboratory Science, with concentrations in Radiologic Technology and Diagnostic Sonography, most resembles the proposed program because of its 2+2 structure, combining general education and clinical training. UW-La Crosse offers related degrees, the B.S. in Nuclear Medicine Technology and a B.S. in Radiation Therapy. In contrast to the above-mentioned UW System sites, UW-Oshkosh's proposed program will serve students and employers in the eastern and central part of the state and will support partnerships with businesses and communities, as laid out the university's strategic plan. Among private universities in Wisconsin, Marian University in Fond du Lac and Concordia University in Milwaukee offer comparable programs, although they do not meet the growing regional need for professionally trained radiologic technologists and therapists. Regionally, St. Cloud State University in Minnesota and Wayne State University in Michigan offer similar programs, each serving a different pipeline of students.

Collaboration

The proposed B.S. in Radiologic Science is collaborative in nature due to the required accredited clinical experience for students offered through a medical facility. UW-Oshkosh plans to expand its current collaborations with other UW institutions in the region pending approval of the program. Initial discussions with faculty at the UW Colleges indicate strong support for future collaborations by sharing teaching, research, and clinical site experiences. Once the program is established, evaluation will be conducted to determine next steps in establishing formal collaborations with the UW Colleges.

Diversity

UW-Oshkosh is committed to finding ways to expand the diversity of its student body and faculty, and this is reflected in the diversity found within the faculty of the Department of Biology and Microbiology. This goal is reflected in its Academic Program and Student Outcomes Assessment Plan and in its commitment to meet the strategic challenges for diversification of the student body and faculty as identified by the UW-Oshkosh leadership. Students, recruited state-and region-wide, will have access to a variety of academic and student support programs, some of which are specifically created for students of color through the Center for Academic Support and Diversity and the Center for Academic Resources.

The proposed B.S. in Radiologic Science is tailored to serve non-traditional students, in particular practicing radio-technologists licensed under the old system (i.e., prior to the change in requirements for entry into the profession) who wish to update their credentials. Faculty will reach out to Wisconsin Technical Colleges and the UW Colleges to create transfer paths and articulation agreements serving more diverse student populations. It is also expected that regional collaborations within Wisconsin will expand relationships with tribal colleges and first nations as well as environmental health agencies. For example, several of the collaborative research/internship arrangements already in place serve counties that have a significant Native American population. Most students will participate in clinical experiences (internships) across

the state, including in larger urban areas or take advantage of UW-Oshkosh's articulation agreement with the Wind River Tribal College in Wyoming.

High Impact Practices

Students will be exposed to high-impact teaching practices via the newly approved UW-Oshkosh University Studies Program. These practices will include: learning communities, first-year experiences, and experiences that promote sustainability, civic engagement, and intercultural knowledge. The proposed program also includes a focus on skills such as oral and written communication, critical thinking, and synthesis. An internship serves as the capstone for the major and is required of all students. The learning outcomes for these high-impact practices will be assessed at the programmatic level.

Evaluation from External Reviewers

In response to external reviewers' evaluations of the program's curriculum, several updates and substitutions of appropriate courses have been incorporated. One reviewer commented that, because admittance to clinical settings is often competitive, UW-Oshkosh may need to enter into exclusive contracts with clinical partners so that students will secure placements as needed. UW-Oshkosh faculty are creating affiliations with regional clinical sites such as Theda Care and will closely advise students as they choose appropriate accredited clinical programs, determined in part by their academic achievement and G.P.A. Responding to one reviewer's suggestion that UW-Oshkosh may want to build its own clinical site, the department reaffirmed its preference for the partner-model because UW-Oshkosh lacks the space, resources, and personnel to sustain clinical training on campus. Regarding another concern about adequate staffing levels, current restrictions in the budget make necessary the use of existing courses and faculty FTE already part of current resources.

Resource Needs

UW-Oshkosh is committed to sustain the proposed program in Radiologic Science during its start-up phase as student and employer need for a four-year degree in Radiologic Science evolves. The budgetary needs of the program will be met using the university's existing GPR funding; thus no additional funding is required. The curriculum will utilize existing courses currently taught by four faculty members (at 4.0 FTE), and teaching academic staff (at 0.8 FTE). UW-Oshkosh has the necessary capacity and resources to offer this program and additional funding will be reviewed when the program has been in operation for a few years. There is no expected revenue from the clinical partner at this time.

RECOMMENDATION

The University of Wisconsin System recommends approval of Resolution I.1.a.(4), authorizing the implementation of the Bachelor of Science in Radiologic Science at the University of Wisconsin-Oshkosh.

RELATED REGENT POLICIES

Regent Policy Document 4-12: Planning and Review Principles for New and Existing Academic Programs and Academic Support Programs

Academic Informational Series #1 (ACIS-1.0, revised April 2010): Statement of the UW System Policy on Academic Planning and Program Review

Budget for the B.S. in Radiologic Science

	FIRST YEAR		SECOND YEAR		THIRD YEAR	
CURRENT COSTS	#FTE	Dollars	#FTE	Dollars	#FTE	Dollars
Personnel						
Faculty/Instructional Staff	4.00	\$217,420	4.00	\$223,941	4.00	\$230,680
Academic Staff	0.8	\$24,631	0.8	\$25,370	0.8	\$26,131
Non-personnel						
Supplies & Expenses		\$3,210		\$3,306		\$3,406
Subtotal		\$245,261		\$252,617		\$260,217
ADDITIONAL COSTS	#FTE	Dollars	#FTE	Dollars	#FTE	Dollars
Personnel		0.00		0.00		0.00
Non-personnel		0.00		0.00		0.00
Subtotal		0.00		0.00		0.00
TOTAL COSTS		\$245,261		\$252,617		\$260,217
CURRENT RESOURCES						
General Purpose Revenue (GPR)		\$245,261		\$252,617		\$260,217
Subtotal		\$245,261		\$252,617		\$260,217
ADDITIONAL RESOURCES						
GPR Reallocation		0.00		0.00		0.00
Subtotal		0.00		0.00		0.00
TOTAL RESOURCES		\$245,261		\$252,617		\$260,217

Program Authorization (Implementation)
M.S. in Clinical Exercise Physiology
UW-River Falls

EDUCATION COMMITTEE

Resolution I.1.a.(5):

That, upon the recommendation of the Chancellor of the University of Wisconsin-River Falls and the President of the University of Wisconsin System, the Chancellor be authorized to implement the Master of Science in Clinical Exercise Physiology.

NEW PROGRAM AUTHORIZATION

Master of Science in Clinical Exercise Physiology University of Wisconsin-River Falls

EXECUTIVE SUMMARY

BACKGROUND

In accordance with the procedures outlined in Academic Planning and Program Review (ACIS-1.0, Revised April 2010), the new program proposal for a Master of Science (M.S.) in Clinical Exercise Physiology at the University of Wisconsin-River Falls (UW-River Falls) is presented to the Board of Regents for consideration. If approved, the program will be subject to a Regent-mandated review to begin approximately five years after its implementation. UW-River Falls and UW System Administration will conduct that review jointly, and the results will be reported to the Board.

The purpose of the proposed program in Clinical Exercise Physiology is to academically and professionally prepare future professionals to work in a variety of areas involving health maintenance, rehabilitative care, and the treatment of an expanding list of chronic diseases and disabling conditions. The graduate-trained clinical exercise physiology professional will be qualified for more advanced career opportunities in university, corporate, commercial, hospital, and community settings than the baccalaureate-prepared graduate who majored in exercise and sport science.

The sustainability of the proposed program is underscored by the existence of a core set of faculty at UW-River Falls and by the strong student interest in pursuing graduate studies in this field. The College of Education and Professional Studies (CEPS) is in an ideal position to provide a unique program suited to the needs of its students and the region. In addition, careers in clinical exercise physiology are growing rapidly, both regionally and nationally, as are enrollments in similar programs at comparable institutions. An added impetus for UW-River Falls' proposed M.S. in Clinical Exercise Physiology is that the field of exercise physiology is in transition from one that was historically research-based, to one that is more clinically based.

REQUESTED ACTION

Approval of Resolution I.1.a.(5), authorizing the implementation of the Master of Science in Clinical Exercise Physiology at the University of Wisconsin-River Falls.

DISCUSSION

Program Description

The M.S. in Clinical Exercise Physiology is intended primarily for individuals seeking employment in cardiac rehabilitation, preventive, and disease management programs. In the next 10 years, exercise is poised to increase as an effective therapy in the prevention and treatment of

many chronic health conditions such as diabetes, cardiovascular disease, obesity, and frailty. Such services will not be delivered by nurses, dietitians, or physical therapists, but by trained and licensed clinical exercise physiologists. The profession of clinical exercise physiology has a unique body of knowledge that includes exercise prescription development and the implementation of both primary and secondary clinical prevention services. The master's level clinical exercise physiologist is trained to identify individual lifestyle-related issues that result in poor health and to design and implement a behavior-based treatment plan aimed at modifying lifestyle factors.

Typically, students with undergraduate preparation in exercise science or its equivalent will be admitted to the program; however, students with baccalaureates in other areas may also be admitted and will complete necessary pre-requisites and courses before enrolling in advanced courses in the program. The M.S. in Clinical Exercise Physiology requires at a minimum the completion of 33 credits (with a 36 maximum) and is designed to provide advanced training in the scientific basis of preventive and clinical exercise physiology. Full-time students can complete the program in two years, part-time students in approximately three. As part of the graduation requirements for the M.S. degree, students will have the option to either complete a thesis or to pursue an alternate paper plan. An oral thesis defense will be required as will the oral defense of the alternate paper. All coursework will be at the 700- (graduate only) level, including thesis and paper plan credits.

All students will be required to complete a 3-5 credit capstone internship. The internship for the program in Clinical Exercise Physiology will place students in a cardiac rehabilitation setting at regional hospitals and rehabilitation centers. Clinical instructors will add to the curriculum real-world application of the concepts gained in the classroom and laboratory. Students may conduct exercise risk stratification and prescription, as well as exercise testing of patients in these settings. The internship is a culminating experience designed to put into practice all aspects of the students' classroom education. This experience will enable them to have on- the-job experience that will enhance their ability to gain employment upon graduation.

Program Courses are:

- EXSS 701 – Advanced Physiology of Exercise (3 credits)
- EXSS 710 – Statistical Methods in Health and Human Performance (3 credits)
- EXSS 730 – Techniques of Research in Health and Human Performance (3 credits)
- EXSS 794 – Alternate Paper Plan (2) or EXSS 799 – Thesis (3 credits)
- BIOL 700 – Cardiovascular Physiology (4 credits)
- BIOL 710 – Principles of Pharmacology (3 credits)
- EXSS 785 – Cardio-Pulmonary Rehabilitation (3 credits)
- EXSS 745 – Physical Activity and Chronic Disease (3 credits)
- EXSS 755 – ECG Interpretation-GXT (3 credits)
- EXSS 705 – Nutrition in Health & Human Performance (3 credits)
- EXSS 798 – Internship: Clinical Internship (3–5 credits)

Accreditation for the Clinical Exercise Physiology program will be sought through the Commission on Accreditation of Allied Health Education Programs (CAAHEP), an agency recognized by the Council for Higher Education Accreditation (CHEA).

Program Goals and Objectives*

Graduates of the Clinical Exercise Physiology program will have the knowledge and skills necessary to:

- Integrate a wide array of exercise programs to enhance clinical health, safety, and wellness, and improve work-life balance.
- Knowledge of cardiovascular and metabolic risk factors or conditions that may require consultation with medical personnel before testing or training.
- Compare and contrast benefits and risks of exercise for individuals with risk factors for established cardiovascular, pulmonary, and/or metabolic diseases.
- Design, implement, and supervise individualized exercise prescriptions for people with chronic disease and disabling conditions, or for people who are young or elderly.
- Understand and apply techniques used to promote healthy behaviors, including physical activity.
- Evaluate contraindications to exercise testing.
- Explain the physiologic adaptations of exercise training that may result in improvement in or maintenance of health, including cardiovascular, pulmonary, metabolic, orthopedic/musculoskeletal, neuromuscular, and immune system health.
- Interpret and apply assessment and evaluation information pertaining to health.
- Work effectively with persons from varied cultural/racial/ethnic backgrounds.

*NOTE: These competencies meet the accreditation standards set forth through American College of Sports Medicine (ACSM) and the Commission on Accreditation of the Exercise Sciences (COAES).

Relation to Institutional Mission

The M. S. in Clinical Exercise Physiology is a degree targeted at adult and nontraditional students and thus broadens access to higher education in the UW System. The proposed program fits the UW-River Falls revised mission and newly approved strategic plan, particularly Goal 1 on Distinctive Academic Excellence, and Goal 3 on Innovation and Partnerships. The degree was conceived as part of the just-completed strategic plan and identified as part of that plan's progress indicators/dashboard for the 2011-2012 academic year. Thus, the M.S. in Clinical Exercise Physiology has been identified by UW-River Falls' leadership team as a key component of the university's future academic program portfolio.

Program Assessment

Operating the program according to the requirements of the Commission on Accreditation of Allied Health Professions (CAAHEP) and the Commission on Accreditation of the Exercise Sciences (COAES), a graduate coordinator and the department's graduate faculty will oversee the delivery and assessment of the M.S. in Clinical Exercise Physiology. The

assessment team will use the following measures to evaluate how well students are meeting the program's learning outcomes:

1. Performance scores on a national credentialing examination (ACSM).
2. Evaluations by Internship site supervisors of students' knowledge and skills using scoring rubrics.
3. Students' self-evaluation of achievement of the program learning outcomes at exit.
4. Survey of employer perceptions of Clinical Exercise Physiology graduates' achievement of program learning outcomes.

The assessment team is responsible for compiling these various sources of data into an annual report which will form the basis for analysis of the program, leading to decisions regarding improvements to the curriculum, structure, or program delivery. The report will be shared with the faculty of the Health & Human Performance Department. Decisions of the assessment team will be reviewed through standard curricular processes at UW-River Falls (i.e., at the department, college and university level).

Need

While employment outlook data for positions for which a master's degree in clinical exercise physiology is required are not readily available, around 10,000 baby boomers (born between 1946 and 1966) are retiring every day in the United States and this trend will continue for the next 19 years. As the 77 million in this group move into their 60s and beyond, population aging will have unprecedented effects on health care, private pensions, housing markets, national social safety nets, and, indeed, the entire economy. The emerging importance of physical activity and health and an increase in both professional and public awareness of the skills of clinical exercise physiologists, have led to increasing employment opportunities in both clinical and non-clinical settings.

Employer Need in Wisconsin:

The online job search engine *indeed.com* was used to determine the current need for clinical exercise physiologists. Employment openings listed were reviewed to determine for which jobs a clinical exercise physiologist would be an appropriate applicant (data retrieved May 8, 2012). At that time, 41 Wisconsin employers sought to fill open positions requiring a degree in Clinical Exercise Physiology or an equivalent preparation. The University of Wisconsin-La Crosse graduates 15 master's students each year in this field, indicating unmet workforce demand for which UW-River Falls graduates in Clinical Exercise Physiology would be available.

Regional Employer Need

According to *indeed.com*, 173 positions, for which a master's degree in Clinical Exercise Physiology or equivalent preparation meets the required skills and education, were listed in the states of Illinois, Iowa, Indiana, Michigan and Wisconsin (retrieved May 8, 2012). With universities in the region such as Illinois Benedictine University, Eastern Illinois University and UW-La Crosse, graduating an estimated total of 45, there would still be 128 jobs not being filled by graduates qualified in Clinical Exercise Physiology or related credentials.

National Employer Need:

According to *indeed.com*, 1,114 jobs, for which graduates with a master's degree in Clinical Exercise Physiology or related fields could apply, were listed across the United States (retrieved May 8, 2012). If, nationwide, all 30 graduate Clinical Exercise Physiology programs graduated an estimated total of 450 students, there would still be 664 jobs not being filled by qualified graduates.

Program interest among UW-River Falls students was gauged by a survey of undergraduate students enrolled in the department of Health and Human Performance programs, 40% of whom expressed an interest in pursuing graduate work in Clinical Exercise Physiology. Many of these students had an interest in staying at UW-River Falls to complete the M.S. in Clinical Exercise Physiology. Seven UW System institutions offer an undergraduate major in kinesiology or exercise science, conferring a total of 452 degrees. These graduates may be potential recruits for a graduate program in Clinical Exercise Physiology at UW-River Falls.

Table 1: Projected Enrollment (5 years) for the M.S. in Clinical Exercise Physiology

Year	Implementation year (Spring 2013)	2nd year	3rd year	4th year	5th year
New students admitted	10	20	15	20	15
Continuing students	0	10	20	15	20
Total enrollment	10	30	35	35	35
Graduating students	0	10	20	15	20

It is anticipated that the attrition rate will be less than 20% based on data from other graduate programs at UW-River Falls.

Comparable Programs

In Wisconsin

Currently, UW-La Crosse offers the only graduate program focusing on clinical exercise physiology in Wisconsin, and it limits admission to 15 new students each year out of approximately 50 applications; this applicant pool represents a good source of students for the proposed program. UW-Madison and UW-Milwaukee have broad-based graduate programs in exercise physiology at the master's level, neither of which is as clinically oriented as the proposed Clinical Exercise Physiology at UW-River Falls. UW-Milwaukee's M.S. in Exercise Physiology is a research-oriented program, multidisciplinary in nature, and encompassing five human movement science disciplines: biomechanics, exercise physiology, motor control, sport and exercise psychology, and sociology of physical activity. At UW-Madison, the M.S. with an emphasis in exercise physiology is designed to provide the fundamental framework for understanding and conducting research in exercise physiology. Neither program confers a large number of M.S. degrees.

Outside Wisconsin

Among programs with similar professional preparations in Clinical Exercise Physiology and Kinesiology in the region, Eastern Illinois University in Charleston and Illinois Benedictine University, located in the Chicago suburb of Lisle, are most comparable in curriculum and clinical focus. Both are small programs, graduating no more than 15 students per year, and one charges substantially higher tuition than the proposed program at UW-River Falls.

Collaboration

Several Minneapolis/St. Paul clinics and hospitals are interested in working with the faculty and graduate students in the proposed Clinical Exercise Physiology program.

Diversity

The proposed Clinical Exercise Physiology program at UW-River Falls will strive to achieve inclusive excellence by enrolling, retaining, and graduating students from underrepresented populations; engaging faculty from underrepresented populations (e.g., faculty exchange or visiting minority scholars); implementing best practices to promote and support inclusive efforts; implementing inclusive pedagogical strategies in teaching and learning (including mentoring and advising); and leveraging resources so that the program is able to respond to evolving and growing needs of a diverse student population. Benchmarks will be established to determine the program's success in achieving inclusive excellence. The majority of the courses in this program deal with diseases found in American society, many of which are race-specific. The curriculum taught in Nutrition in Health & Human Performance, Physical Activity and Chronic Disease, and Cardio-Pulmonary Rehabilitation deals extensively with diversity issues

Potential graduate students will be recruited from minority-serving colleges and universities, and through minority-serving publications and/or newspapers. Avenues by which inclusiveness/diversity will be enhanced in the Clinical Exercise Physiology graduate program are represented by steps UW-River Falls has taken in regard to its Strategic Plan, "Living the Promise." UW-River Falls completed the Equity Scorecard Report and hired a permanent Chief Diversity Officer, deployed an increasingly diverse admissions staff to recruit a higher number of diverse students, and will recruit potential graduate students from diverse backgrounds. The program also will use recruiting strategies employed by faculty in other graduate programs at UW-River Falls, some of which have greater racial/ethnic diversity (i.e., approximately 15%) than the university as a whole. While the proposed program does not project a significant number of new faculty and staff, UW-River Falls will continue to be committed to recruiting a culturally diverse campus community.

High Impact Practices

Both the thesis and alternate paper options will require research. Courses will include collaborative assignments and projects, and significant writing. Additionally, the internship capstone course in clinical exercise physiology will provide practical experiences for the student

in clinical assessments and exercise programming in both health-related fitness and clinical environments.

Evaluation from External Reviewers

Both reviewers commented enthusiastically on the academic value of the program and its alignment with industry and academic best practices. One of the external reviewers recommended upgrading to a more suitable lab space than the currently occupied space. A new, much improved space has undergone renovation and is now occupied.

Resource Needs

Personnel

Tuition revenue will cover the costs of faculty and instructional staff (IAS) teaching in this program. One full-time IAS member with a Ph.D. will be hired to teach in this program in the second year (0.8 full-time equivalent or FTE; \$57,575), as well as to teach undergraduate courses currently being taught by two graduate faculty members (9 credits each semester). Additionally, the new IAS member will coordinate and supervise the clinical internship program. One additional part-time IAS member will be hired in the second year to teach 3 undergraduate credits each semester (0.2 FTE; \$10,462). Combined, these hires will release the Health & Human Performance faculty members to teach in the Clinical Exercise Physiology program (9 credits; 12 credits of workload; 1.0 FTE). The Department of Biology will teach two courses (Pharmacology and Cardiovascular Physiology; 0.29 FTE) and will be compensated from program revenue (\$13,332) to hire replacement IAS. The current academic program associate will have 20% of her time (\$10,462) allocated to the Clinical Exercise Physiology program. The current Health & Human Performance chair, one of the two graduate faculty members referenced above, will serve as the program coordinator without additional re-assignment and undue burden.

Cost

During the first year, which will be a partial year (Spring 2013), total program costs will be \$41,082. The current classified staff member will contribute approximately 0.10 FTE to the program at a cost of \$5,128. Part-time IAS (0.40 FTE and \$22,854) will be hired to cover 12 credits of undergraduate coursework typically taught by the two Health and Human Performance graduate faculty members who will be re-assigned to teach three Clinical Exercise Physiology courses (9 credits; 12 credit workload) and advise in the program. Projected non-personnel costs are \$2,000 in supplies, \$3,000 for marketing, and \$8,100 in overhead costs (18% of tuition revenue). Projected tuition revenue (\$500/credit) generated for the first partial year is \$45,000, yielding a net profit of \$3,918 for Year One.

During the second year, the total program costs will be \$258,819. An instructional academic staff person holding a Ph.D. will be hired in Year Two and require 0.8 FTE at a cost of \$57,575. A part-time IAS to backfill 3 credits of undergraduate Health & Human Performance teaching each semester will require 0.20 FTE and \$10,462. If the projected enrollment of 20 new students holds, capital equipment expenditures will be made to add new laboratory equipment, totaling an estimated

\$63,000. With a 2.5% increase (\$512.50/credit), tuition from 30 students will yield revenue of \$261,375.

During the third year, the total program costs will be \$288,394. If enrollment projections continue to be met, \$90,000 is budgeted for lab equipment acquisition. With a projected 2.5% increase (\$525/credit), tuition revenue will be \$299,250.

Budget

	First Year Spring 2013		Second Year 2013-14		Third Year 2014-15	
CURRENT COSTS	#FTE	Dollars	#FTE	Dollars	#FTE	Dollars
Faculty/Instructional Staff	0.4	\$22,854	0.8	\$57,575	0.8	\$58,727
Non-instructional Academic/Classified Staff	0.1	\$5,128	0.2	\$10,462	0.2	\$10,672
Subtotal	0.5	\$27,982	1.0	\$68,037	1.0	\$69,399
ADDITIONAL COSTS	#FTE	Dollars	#FTE	Dollars	#FTE	Dollars
Faculty/Instructional Staff	0	\$0	0.69	\$69,735	0.69	\$71,130
Supplies & Expenses		\$2,000		\$2,000		\$2,000
Capital Equipment		\$0		\$63,000		\$90,000
Other (University Overhead)		\$8,100		\$47,047		\$53,865
Marketing/ Accreditation		\$3,000		\$9,000		\$2,000
Subtotal	0	\$13,100	0.69	\$190,782	0.69	\$218,995
TOTAL COSTS		\$41,082		\$258,819		\$288,394
RESOURCES						
Tuition)		\$45,000		\$261,375		\$299,250
Subtotal		\$45,000		\$261,375		\$299,250
TOTAL RESOURCES		\$45,000		\$261,375		\$299,250

RECOMMENDATION

The University of Wisconsin System recommends approval of Resolution I.1.a.(5), authorizing the implementation of the Master of Science in Clinical Exercise Physiology at the University of Wisconsin-River Falls.

RELATED REGENT AND UW SYSTEM POLICIES

Regent Policy Document 4-12: Planning and Review Principles for New and Existing Academic Programs and Academic Support Programs

Academic Informational Series #1 (ACIS-1.0, revised April 2010): Statement of the UW System Policy on Academic Planning and Program Review

Program Authorization (Implementation)
Collaborative Online Master of Science in Sustainable Management
UW-Green Bay, UW-Oshkosh, UW-Parkside, UW-Stout, and UW-Superior

EDUCATION COMMITTEE

Resolution I.1.a.(6):

That, upon the recommendation of the Chancellors of the University of Wisconsin-Green Bay, the University of Wisconsin-Oshkosh, the University of Wisconsin-Parkside, the University of Wisconsin-Stout, and the University of Wisconsin-Superior, and the President of the University of Wisconsin System, the Chancellors be authorized to implement the Collaborative Online Master of Science in Sustainable Management.

NEW PROGRAM AUTHORIZATION

Collaborative Online Master of Science Degree in Sustainable Management

University of Wisconsin-Green Bay

University of Wisconsin-Oshkosh

University of Wisconsin-Parkside

University of Wisconsin-Stout

University of Wisconsin-Superior

with administrative and financial support from

University of Wisconsin-Extension

EXECUTIVE SUMMARY

BACKGROUND

In accordance with the procedures outlined in Academic Planning and Program Review (ACIS-1.0, Revised April 2010), the new program proposal for a collaborative online Master of Science (M.S.) Degree in Sustainable Management at the University of Wisconsin-Green Bay, University of Wisconsin-Oshkosh, University of Wisconsin-Parkside, University of Wisconsin-Stout, and University of Wisconsin-Superior, with administrative and financial support from the University of Wisconsin-Extension, is presented to the Board of Regents for consideration. If approved, the program will be subject to a Regent-mandated review to begin five years after its implementation. The five partner institutions, UW-Extension, and UW System Administration will conduct that review jointly, and the results will be reported to the Board.

In 2009, UW-Parkside, UW-River Falls, UW-Stout, UW-Superior, and UW-Extension partnered to develop a collaborative online Bachelor of Science Degree in Sustainable Management. Launched in fall 2009, the program initially enrolled 34 students. From 2009 to 2010, enrollment in the program grew to 79 students, and by fall 2011, enrollment in the program amounted to 149 students and 373 course registrations, showing that the program served strong demand.

Nearly one-third of the applicants to the B.S. program already had bachelor's degrees and some noted that they would have applied to an online master's program in sustainable management if it had been available to them at the time of their initial application. Database records from UW-Extension's Learner Record Management System (LRMS) indicate that 240 students have requested to be contacted if the proposed M.S. program is offered and the expected yield is 29 enrolled students.

UW-Green Bay, UW-Oshkosh, UW-Parkside, UW-Stout, and UW-Superior self-selected to work together to develop a collaborative online master's degree program based on strong faculty expertise in the discipline of sustainable management and shared expertise in online delivery of graduate degrees. At the beginning of the program planning process, adult and nontraditional students were consulted and asked about their preferences for course and

curriculum formats. They expressed a strong preference for courses offered online in both traditional, semester-length formats and in accelerated formats. Students also expressed a preference for a streamlined list of courses with few or no electives. Finally, students asked for minimal repetition or redundancy in the curriculum. In response to students' requests, the partner campus faculty representatives drafted the curriculum and focused the scope of courses offered. During 2010–11, faculty from the partner institutions convened in several retreats to develop the program outcomes, competencies, and curriculum. Industry representatives were invited to share their views on the value of the proposed program.

UW-Green Bay is serving as the lead institution for the M.S. in Sustainable Management program and has coordinated the degree-approval process in conjunction with UW System guidelines. UW-Green Bay will also lead the accreditation process with the Higher Learning Commission. A memorandum of understanding, signed in July 2011, outlines the collaborative entity and the roles and responsibilities of each participating institution.

Following implementation, program administrators and an academic director from each collaborating institution will meet at least semiannually to evaluate the progress of the program and to adjust it to changing needs and circumstances. Faculty approved by their institutions as graduate instructors/faculty teaching in the proposed collaborative program will meet annually to discuss online course development, make adjustments to courses, and ensure that the curriculum is aligned with the learning outcomes for the program. Each partner institution has worked to ensure that staffing assignments follow applicable standards and guidelines set forth by their respective campuses. The faculty assigned will then collaborate across the partner institutions to ensure that the program maintains continuity.

REQUESTED ACTION

Approval of Resolution I.1.a.(6), authorizing the implementation of the collaborative online Master of Science Degree in Sustainable Management at the University of Wisconsin-Green Bay, University of Wisconsin-Oshkosh, University of Wisconsin-Parkside, University of Wisconsin-Stout, and University of Wisconsin-Superior, with administrative and financial support from University of Wisconsin-Extension.

DISCUSSION

Program Description

The online M.S. in Sustainable Management will focus primarily on adult and nontraditional students who hold an undergraduate degree and have the desire to continue their education toward a graduate degree for the purpose of engaging in this developing field and increasing their professional prospects. Particular attention will be given to ensuring that students have a basic understanding of scientific perspectives and will function well in leadership positions in businesses and organizations. Students holding a wide variety of bachelor's degree programs will have interest in this degree because of its interdisciplinary nature. The interdisciplinary focus encourages students to examine sustainability from different perspectives. The curriculum will also ensure that students

gain a comprehensive understanding of the ways in which changing human activities affect the inseparable natural, social, and economic environments.

The M.S. in Sustainable Management is an online 34-credit graduate program offered jointly by faculty from UW-Superior, UW-Stout, UW-Parkside, UW-Oshkosh, and UW-Green Bay. Each institution will supply up to 10 credits in areas of expertise. Students will apply to one of the five partner institutions, and (upon admittance) that institution will become the student's administrative home for the degree. The program will have an academic director at each institution who is responsible for academic oversight and assessment coordination with the collaborative partners. Students will receive academic advising regarding admission, graduation requirements and financial aid, as well as online library access through their home institution. Faculty and academic advisors at each institution will offer virtual office hours and online chat capabilities, as well as access by telephone and email.

A program manager will be housed at UW-Extension and will work in concert with student services staff and the academic program directors at the five partner institutions to provide general program information, problem resolution, and career advising online, by phone, or in person for students near Madison. Students enrolled in this program will have access to an extensive array of online student services including an online writing lab, learning readiness assessments, and career advising offered by UW-Extension.

Program Curriculum

The curriculum consists of eight core courses (24 credits) that all students must complete, two courses in specialty electives (6 credits), and a capstone preparation course (1 credit) taken the semester before students enroll in a capstone project (3 credits). In total, students will be required to complete 12 courses to satisfy the requirements of the online M.S. in Sustainable Management Degree (34 credits). The courses have been developed for this program with specific master's level outcomes relevant to the required graduation competencies. These courses provide a natural progression, adding depth and level of difficulty as compared with the undergraduate curriculum.

The full roster of courses will be developed over a period of two years. The first four courses will be offered online in spring 2013 if the program is approved. An additional four courses will be developed for their first offering in fall 2013. The balance of the courses (six) required for the delivery of the degree will be ready for spring 2014. Students may begin the M.S. in Sustainable Management program in the fall, spring, or summer semester.

PROGRAM COURSE LIST

Institution

CORE CURRICULUM

SMGT 700 Cultural and Historical Foundations of Sustainability	Oshkosh
SMGT 710 The Natural Environment	Parkside
SMGT 720 Applied Research and the Triple Bottom Line	Superior
SMGT 730 Policy, Law, and the Ethics of Sustainability	Stout
SMGT 740 Economics of Sustainability	Superior

SMGT 750	The Built Environment	Oshkosh
SMGT 760	Geopolitical Systems: Decision Making for Sustainability on the Local, State, and National Levels	Green Bay
SMGT 770	Leading Sustainable Organizations	Green Bay

SPECIALTY ELECTIVES (students choose 6 credits)

SMGT 780	Corporate Social Responsibility	Superior
SMGT 782	Supply Chain Management	Stout
SMGT 784	Sustainable Water Management	Parkside
SMGT 785	Waste Management and Resource Recovery	Green Bay

CAPSTONE EXPERIENCE (students complete the following 4 credits)

SMGT 790	Capstone Preparation Course	(1 credit)	Oshkosh
SMGT 792	Capstone Project	(3 credits)	Oshkosh

When fully implemented, students will be able to take courses in any order, with the exception of the capstone preparation and the capstone course. The capstone preparation course must be taken the semester before the capstone and the capstone must be taken in the final semester. A signature feature of the program is that students can work with their academic advisor to plan and formalize a unique capstone experience that could involve an internship/preceptorship, faculty-student research project, etc. The proposed project would have to be approved by the campus consistent with local requirements. The student must satisfy all graduation policies and requirements of their home institution.

Program Learning Outcomes

Upon completion of the M.S. in Sustainable Management, graduates will be able to:

- Effectively communicate complex issues related to sustainability;
- Analyze the relationship between human activity and the natural, social, and economic environments;
- Apply performance metrics utilizing natural and social capital to drive organizational decision-making;
- Understand and synthesize the role and impact of the built environment;
- Evaluate the social and political impact of sustainability in political systems and their obligations to future generations;
- Examine how organizational leaders develop and enable sustainable organizations; and
- Apply sustainable management principles to impact the design of products, processes, energy production and use, waste minimization, and pollution prevention

Relation to Institutional Missions

The proposed M.S. in Sustainable Management is congruent with the missions of all participating partners who seek to serve the state and students by developing degrees that are in

demand and supported by Wisconsin businesses and organizations. The signature strength of this collaborative program is that it supports each university's mission to develop competencies that enable graduates to help Wisconsin employers meet the "triple bottom line" (strong profitability, healthy environment, and vital communities).

The online M.S. in Sustainable Management further supports the institutional missions of the five partner universities through its focus on developing core liberal education outcomes in communication, critical thinking, problem-solving, and analytical skills, as well as leadership, teamwork, and collaboration skills. Furthermore, the proposed M.S. will be an interdisciplinary degree that helps build bridges among disciplines and develops students' abilities to think in terms of systems and interrelationships. It will engage students at a deeper level of critical thinking, analysis, and application of sustainability practices and systems.

At UW-Parkside, the M.S. in Sustainable Management aligns well with its mission to build high-quality educational programs, creative and scholarly activities, and services responsive to its diverse student population. This degree supports this university's local, national, and global communities mission, and it strengthens its goals to utilize technology creatively and effectively in courses, programs, and services. This degree increases the graduate program offerings at UW-Parkside and provides further educational opportunities aligned with the undergraduate degree in Sustainable Management.

UW-Superior's select mission as a focused liberal arts institution is a strong fit for interdisciplinary programs. The interdisciplinary M.S. in Sustainable Management will draw on the university's academic resources in business, science, and economics. The select mission also directs the university to extend its undergraduate and graduate resources beyond the boundaries of the campus through distance learning programs. Building on the success of the undergraduate Sustainable Management degree, UW-Superior will now similarly partner to carry out this mission at the graduate level.

The M.S. in Sustainable Management is well aligned with UW-Stout's mission and vision. It is a career-focused degree that will be congruent with the polytechnic identity of the university. Consistent with UW-Stout's mission, the goal of this program is to integrate applied learning, scientific theory, humanistic understanding, creativity, and research to solve real-world problems in sustainable management, help grow the economy, and serve a global society.

At UW-Oshkosh the M.S. in Sustainable Management aligns well with its mission to provide a wide array of quality educational opportunities to the people of northeastern Wisconsin and beyond through the discovery, synthesis, preservation, and dissemination of knowledge. This degree enables educators and students to explore and engage with the challenges that confront regional, national, and global communities, using their intellectual and creative capabilities to understand, investigate, and solve problems. The social awareness component of the degree will allow students to respond to domestic and international needs for equitable and sustainable societies. The M.S. in Sustainable Management also supports UW-Oshkosh's university-wide learning outcomes of sustainability, leadership, and social and personal responsibility.

The UW-Green Bay mission stresses interdisciplinary studies and problem-solving as well as maintaining its historical support for environmental sustainability. The M.S. in Sustainable Management fits well with these crucial elements of UW-Green Bay's institutional mission and will build upon its dedication to engaged citizenship and advance its commitment to serving as an intellectual, cultural, and economic resource.

The ability to provide educational outreach through online learning opportunities, while expanding relationships with the University of Wisconsin System comprehensive institutions, makes partnership in offering the M.S. in Sustainable Management program a perfect fit for the mission of UW-Extension.

Program Assessment

The assessment of student learning outcomes for the M.S. in Sustainable Management will be managed by an assessment team comprising the five academic program directors from each partner campus. This team will also serve as the oversight and decision-making body for the program. The term of service for each of the faculty members will be determined by the home campus they are representing. The team will meet semiannually in person; however, teleconferences may be used to meet more regularly if need arises. The assessment team will identify data needs, define measures, and establish a rubric for evaluating how well students meet the program's seven learning outcomes. The rubric will focus on processes and data to measure direct student learning through, for example, the compilation of student portfolios that represent examples of student work obtained from different courses. Program graduates will be surveyed to determine success in securing employment related to the major, and regarding the types of roles and careers that graduates have entered.

Each semester the assessment team will also receive from UW-Extension data on new enrollments, and retention and graduation rates. Since this program is part of the UW System Adult Student Initiative, pertinent student demographics will also be collected to determine whether the degree is reaching adult students and whether students in the program are part of a traditionally underserved demographic (as defined by the UW System). The assessment team will compile these various sources of data and complete an annual report with a summary of the data, an assessment of the data, and decisions regarding improvements to the curriculum, structure, and program delivery. The report will be shared with the faculty teaching in the program and other stakeholders. The assessment team is responsible for ensuring that recommendations for improvement are implemented.

Student services, instructional, and business office personnel from each institution will also meet annually to review processes and concerns, and to make adjustments as necessary. Program evaluation regarding the collaborative nature of the model will help assess processes critical to the success of the collaboration, such as the financial model, student recruitment and advising, admission and enrollment processes and trends, and curriculum design.

Need

The need for sustainability, combined with the knowledge economy, creates the need for well-educated leaders who can address some of the more pressing concerns of the 21st century. This is particularly pertinent in Wisconsin where extensive natural resources are managed, the manufacturing base is changing rapidly, and per capita income is \$4,500 lower than that of neighboring Minnesota (Bureau of Census numbers: <http://www.infoplease.com/ipa/A0104652.html>). By helping to increase educational attainment in Wisconsin, this master’s degree will help address this income differential.

According to the U.S. Bureau of Labor Statistics handbook, jobs in environmental sustainability or “green technology” careers are becoming big business, especially as the global market expands and more companies increase their commitment to environmental sustainability. Indeed, careers in green technology are expected to grow much faster than the average job market as a whole, translating to a roughly 20 percent increase per year, at least until 2018. A strong market for this degree already exists with 23 percent of the 345 applicants for the online Bachelor of Science in Sustainable Management already possessing a bachelor’s degree. In addition, 215 students have inquired specifically about a master’s degree in sustainable management.

Projected Enrollment (Five Years)

Based, in part, on the positive actual year-to-date performance and projected growth in the online Bachelor of Science in Sustainable Management program, strong enrollments in the master’s program are expected. The five-year program enrollment projection patterns shown in the following table are consistent with those of adult students in other University of Wisconsin System online programs. For the purpose of this model, it is anticipated that the annual attrition will be at a moderate 15 percent.

Table 1 – Projected Enrollment for Master of Science in Sustainable Management

Students/Year	Year 1	Year 2	Year 3	Year 4	Year 5
New	29	26	52	49	87
Continuing		25	38	67	59
Total	29	51	90	116	146
Graduating		5	10	40	40

The projections in this chart are conservative, assuming that most students will enroll part-time and take an average of five courses per year. The projections further assume that all students who remain in the program after their first year will graduate—that is, 90 percent within four years, 100 percent within five years, and 76 percent and 85 percent, respectively, of the students entering the program.

Comparable Programs

According to research conducted by the higher education research firm *Eduventures*, 43 institutions in Wisconsin confer master’s degrees, but only one offers a master’s degree relevant

to sustainability. The proposed online M.S. in Sustainable Management is a unique interdisciplinary degree. It has applicability across disciplines and blends science, theory, and application. Therefore, it is hard to find a comparable program across the System. There are a handful of programs nationally that are offered, but few in the Midwest. Within the UW System, UW-Madison offers the Master of Science in Conservation Biology and Sustainable Development. However, the proposed collaborative online M.S. in Sustainable Management degree is very different from the degree offered by UW-Madison. It differs in curriculum, delivery format/structure, content, target audience and price, hence providing an online alternative for nontraditional students.

Nationally, there are a large number of graduate degree programs in sustainability studies; however, it is less clear how many, if any, focus on sustainable management. Further, the field is dominated by in-person programs, while the online degree options are smaller in number.

Collaboration

The M.S. in Sustainable Management is a collaborative degree. Five UW System partner institutions (UW-Stout, UW-Superior, UW-Parkside, UW-Oshkosh, and UW-Green Bay) assisted in developing the curriculum and setting the competencies necessary for completing the program. The degree and all 14 courses have been approved by all required governance levels at each of the partner institutions.

UW-Extension will provide administrative support, financial investment, marketing, and student services for the program. All partners will share equally in the net revenues from the program. Although students choose a home institution from which they receive the degree, all of the courses are developed and maintained through the course management system *Desire2Learn* (D2L) at UW-Extension. This cohesive development and offering of courses will ensure that students have a consistent experience even with faculty residing at the different partner institutions. All courses will be listed in the respective campus registration systems.

Diversity

This proposed program is designed to serve adult and nontraditional student populations. Many students of color, first-generation Americans, first-generation college students, and low-income students often have family or work responsibilities that prevent them from attending graduate school after college or completing an undergraduate degree, particularly those offered in traditional formats. The online delivery method provides access for individuals who live at a distance from residential institutions, or who have various home responsibilities that prevent them from attending classes during traditional day programs. Many adult, nontraditional, and minority students work in the sustainability- and management-related fields, and this degree allows them to complete a relevant program in a format that enables them to continue to work and attend to other responsibilities.

Recruitment and marketing efforts for this degree will incorporate a focus on underrepresented populations. UW-Extension will advertise this program in minority-focused newspapers, periodicals, e-lists, and websites. UW-Extension will coordinate a targeted

marketing campaign to increase the pool of minority candidates for the graduate program. Some strategies may be related to communities and regions in the U.S. in which waste management has had a major impact on impoverished areas. UW-Extension will work with a professional marketing agency to create campaigns specialized to this student population, with a goal to have 25 percent of students of color enrolled in the program by the end of the fifth year.

Additionally, student recruiters will work with employers to encourage them to support the education of their employees, especially underrepresented minorities. The partner institutions will follow individual campus diversity and recruitment strategies (diversity plans) to recruit for diversity among their faculty. As diverse teachers and students engage in learning, diverse perspectives and curricular approaches will be created and cultivated.

Since the field of sustainability is applicable across a broad spectrum of business and public service, the program will establish a Sustainable Management Advisory Board to work closely with employers, including minority-owned businesses interested in professional development for their employees.

Evaluation by External Reviewers

Two external reviewers, both educators well regarded for their work in the field of sustainability, provided input into the program. Both reviewers found the program to be well-designed and geared toward meeting the needs of emerging professionals. In evaluating the effectiveness of the career training aspect of the program, one reviewer affirmed that the proposed program fully addresses the “need for sustainability management specialists who have a broad understanding of sustainability theory, triple bottom line strategy, and the practical aspects of implementing sustainability thinking within organizations [...]” Further, both reviewers noted that the program “does a wonderful job of integrating the diversity of knowledge necessary for a student to gain expertise in both sustainability and business management [...] and they saw “considerable evidence that the program will contribute knowledge and skills related to creating profitable enterprises, vibrant communities, and healthy ecosystems.” One reviewer also encouraged the curriculum planners to deliver information about the role of equity in sustainability.

Resource Needs

The initial development and implementation of the program will be funded by 2007–2009 GPR funding from the UW-Extension Adult Student Initiative. These funds will provide start-up resources until the program can be self-supporting. Once the program begins to generate net revenue, UW-Extension will reinvest its share of residual revenues into new program development. The proposed budget is built on the program being self-supporting within five years of implementation. UW-Extension is underwriting the investment to work with faculty and academic staff to develop the program’s 14 online courses that have already been approved through campus governance processes and to fund other program support needs until the program begins to generate revenues in excess of expenses. Thus, current and additional costs will be funded through a combination of GPR and program revenues.

In the budget chart below, “additional costs” will be covered by resources and additional FTE allocations from UW-Extension to either buy out current faculty time or provide resources to allow faculty to teach overloads. The final determination of how the FTEs are allocated will be at the discretion of the partner institutions. Therefore, the budget chart identifies the potential for faculty or academic staff positions. Revenue surpluses will be shared equally among the participating partners.

Program tuition for the M.S. in Sustainable Management will be set at \$675/credit for 2012–2013 and will be identical at all five partner institutions. This tuition rate is based on market demand estimates as well as comparisons with other online programs in the UW System and nationally. For the purpose of budgeting, it has been estimated that tuition will increase at a rate of 5.5 percent per year.

The tuition revenue estimate is based upon an estimated average enrollment of 29 students \times 15 credits/year \times \$675/credit in the first year; 51 students \times 15 credits/year \times \$712/credit in the second year; and 90 students \times 15 credits/year \times \$751/credit in the third year. If the program does not generate the expected enrollments, the marketing effort will be re-evaluated and adjusted to better reach the intended students. Students will not be charged any additional fees as part of the program, except for the costs of their books. If students live near their home campus and wish to pay segregated fees for the use of recreational and other facilities, they may do so. However, they will not be required to pay these fees if they do not take advantage of those resources.

Faculty FTEs to teach in this program will be reallocated from each institution and no new faculty positions are required. Each institution will manage this piece based on local campus policies regarding staffing of graduate courses. The partner institutions expect that initial funding from UW-Extension will cover the costs of faculty teaching in this program until such time as program revenues can satisfy this expense. As the program grows and additional faculty positions are needed, their salary costs, including fringe benefits, will be covered by program revenues to ensure full cost recovery. Some costs—such as costs to convert classes to online formats—will decrease over time as the online conversion and development process is completed. Other costs—such as faculty instruction—will increase over time as more courses are taught or as new sections are added.

Program costs include compensation for an academic director at each institution and for the approved graduate school faculty who teach the courses each term; for staff providing outreach support at each institution; for one program manager at UW-Extension to manage the administrative aspects of the collaboration; for one student services coordinator to provide coordination of student recruitment, student support, and program materials management; and for instructional designers to work with faculty to design, develop, update, and maintain these courses within the UW-Extension D2L platform and add many of the interactive elements that enhance the learning experience. Non-personnel costs include funds for supplies and expense dollars to support each course section, funds to each institution for regional marketing, and funds at UW-Extension for state and national marketing.

Budget

	FY 2012–13		FY 2013–14		FY 2014–15	
CURRENT COSTS	#FTE	Dollars	#FTE	Dollars	#FTE	Dollars
Faculty/Instructional Staff	1.250	\$175,000	1.250	\$175,000	1.250	\$175,000
Academic/Classified Staff	2.00	\$198,038	2.750	\$324,758	1.50	\$138,198
Subtotal	3.250	\$373,038	4.00	\$499,758	2.750	\$313,198
ADDITIONAL COSTS						
Faculty/Instructional Staff	0.50	\$28,000	2.50	\$207,200	5.75	\$291,200
Academic/Classified Staff	0	0	0.875	\$103,160	1.00	\$161,720
Other (S&E)		\$2,000		\$141,000		\$146,000
Subtotal	0.50	\$30,000	3.375	\$451,360	6.75	\$598,920
TOTAL COSTS	3.750	\$403,038	7.375	\$951,118	9.5	\$912,118
CURRENT RESOURCES						
Adult Student Initiative		\$403,038		\$659,518		\$207,238
Subtotal		\$403,038		\$659,518		\$207,238
ADDIT. RESOURCES						
Program Revenue—tuition		0		\$291,600		\$704,880
Subtotal		0		\$291,600		\$704,880
TOTAL RESOURCES		\$403,038		\$951,118		\$912,118

In summary, then, in phase 1 of the funding, the initial or start-up funding for the M.S. in Sustainable Management degree program is provided by the Growth Agenda GPR funding for the UW-Extension Adult Student Initiative. In phase 2, as the degree attracts more students, the degree will be generating program revenue, which will be applied toward program costs. Any deficits during phase 2 will be absorbed by UW-Extension. In the third phase, program revenues generated will exceed program costs. In this phase the excess of revenues over costs will be shared equally among the partner institutions and UW-Extension. This return of capital to UW-Extension will be used to fund additional new programs.

RECOMMENDATION

The University of Wisconsin System recommends approval of Resolution I.1.a.(6), authorizing the implementation of the collaborative online Master of Science Degree in Sustainable Management at the University of Wisconsin-Green Bay, University of Wisconsin-Oshkosh, University of Wisconsin-Parkside, University of Wisconsin-Stout, and University of Wisconsin-Superior, with administrative and financial support from University of Wisconsin-Extension.

RELATED REGENT AND UW SYSTEM POLICIES

Regent Policy Document 4-12: Planning and Review Principles for New and Existing Academic Programs and Academic Support Programs

Academic Informational Series #1 (ACIS-1.0, revised April 2010): Statement of the UW System Policy on Academic Planning and Program Review

Program Dissolution of Consortial Doctor of Physical Therapy
Program Authorizations of Independent Doctor of Physical Therapy Programs
UW-La Crosse and UW-Milwaukee

EDUCATION COMMITTEE

Resolution I.1.b.:

That, upon the recommendation of the Chancellors of the University of Wisconsin-La Crosse and the University of Wisconsin-Milwaukee, and the President of the University of Wisconsin System:

1. The Chancellors of UW-La Crosse and UW-Milwaukee be authorized to dissolve the Consortial Doctor of Physical Therapy;
2. The Chancellor of UW-La Crosse be authorized to implement the Doctor of Physical Therapy at UW-La Crosse; and
3. The Chancellor of UW-Milwaukee be authorized to implement the Doctor of Physical Therapy at UW-Milwaukee.

**DISSOLUTION OF THE
CONSORTIAL DOCTOR OF PHYSICAL THERAPY AND AUTHORIZATIONS OF
INDEPENDENT DOCTOR OF PHYSICAL THERAPY PROGRAMS AT UW-LA
CROSSE AND UW-MILWAUKEE
(APPROVAL)**

EXECUTIVE SUMMARY

BACKGROUND

In accordance with the procedures outlined in the UW System Academic Planning and Program Review policy (ACIS-1.0, Revised April 2010), the University of Wisconsin-La Crosse and the University of Wisconsin-Milwaukee request approval to dissolve the Consortial Doctor of Physical Therapy (DPT) degree and to each be authorized to offer independent DPT degrees at their respective institutions.

The Consortial Doctor of Physical Therapy at UW-La Crosse and UW-Milwaukee was jointly authorized by the Board of Regents in September 2005 to prepare physical therapists for entry into practice after successfully completing a national licensure examination. The new doctoral program represented a transition from the existing Master of Science in Physical Therapy at UW-La Crosse and the initiation of a new professional doctoral degree in Physical Therapy at UW-Milwaukee. The rationale for a consortial doctoral degree delivered jointly at the two institutions constituted a response to changes in professional standards and minimum requirements for physical therapists by accrediting organizations and leaders in the field. The consortial model allowed UW-La Crosse to offer a professional doctoral degree at a time when the UW System's comprehensive universities were generally not authorized to have doctoral degrees in their program array. The consortium further allowed UW-Milwaukee to start up a new doctoral program through shared use of resources and expertise.

Since the consortial program was approved, the original model has undergone changes and, over time, UW-La Crosse and UW-Milwaukee each have grown their capacity to offer the DPT independently, hence the request for separate authorizations. While unusual, this action is brought to the Board of Regents at the recommendation of UW System Administration, in recognition that changing circumstances have rendered the need for the consortial offering of the DPT obsolete, and that UW-La Crosse and UW-Milwaukee each have the necessary resources and capacity in place to offer fully viable and independent Doctor of Physical Therapy programs.

REQUESTED ACTION

Approval of Resolution I.1.b., authorizing the dissolution of the Consortial Doctor of Physical Therapy and the authorizations of independent Doctor of Physical Therapy Programs at UW-La Crosse and UW-Milwaukee.

DISCUSSION

Dissolution

The decision to request approval by the Board of Regents for the dissolution of the Consortial Doctor of Physical Therapy degree at UW-La Crosse and UW-Milwaukee was reached as a result of the program's first, five-year Joint Review (in accordance with ACIS 1.0). UW-La Crosse Chancellor Joe Gow and Provost Heidi Macpherson, and UW-Milwaukee Chancellor Michael Lovell and Provost Johannes Britz, along with their respective governance units, are all in agreement that the goals of the original Consortial DPT have been met and that students, their universities, and the state would be better served by two separate programs. Supporting that decision is the extent to which the Consortial DPT program has developed since its implementation into two fully functional and independently accredited programs at UW-Milwaukee and at UW-La Crosse, in which each institution retains autonomy over campus-related resources (including financial, building and equipment, technology and materials, faculty lines and hiring, retention, promotion and tenure, student services, and support staff), and each institution has responsibility for developing adequate clinical education resources to support its cohort of students.

If the consortium is dissolved and the partners independently authorized, the UW System will offer three DPT degrees, one at UW-La Crosse, one at UW-Milwaukee, and one at UW-Madison. Evidence of employer need and student demand is strong: the Federal Bureau of Labor Statistics predicts that, nationally, the employment of physical therapists is expected to grow by 30 percent until 2018, which is much faster than the average for all occupations. The Wisconsin Hospital Association also predicts a similar growth, particularly in the areas of acute care, long-term care, home health care, and rural practice. The professional workforce shortage in the Physical Therapy profession in Wisconsin, strong entry-level salaries, and the emergence of new practice areas continue to support the need for more graduates in the field. The number of graduates entering the workforce will not be impacted as a result of the proposed dissolution.

Dissolution will also have no impact on the faculty since each institution has a distinct faculty cohort. Collaboration related to teaching, scholarship, and service among faculty at UW-La Crosse and UW-Milwaukee will continue to exist in areas that benefit students, faculty, and the Wisconsin's workforce development.

The first DPT students were enrolled in 2006 at UW-La Crosse and in 2007 at UW-Milwaukee. Since then, both institutions have implemented successful DPT programs that are fully enrolled with four applicants for every spot available in the program. The graduates from these programs have all entered the profession, with 100% placement within the first six months after graduation and most remaining to practice in Wisconsin. Both programs have been independently accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), with UW-La Crosse accredited for a 10-year cycle until 2018 and UW-Milwaukee accredited for a 5-year cycle until 2015. This dissolution will have no impact on their CAPTE accreditations.

Since the consortial degree was approved in 2005, the institutions' Memoranda of Understanding have twice been revised (in 2006 and 2009) to allow for flexibility in curriculum design and instruction in view of the distinct missions of the institutions and the many inter-institutional partnerships that each program had with community and regional agencies. Because of the lab-focused content of the DPT curriculum, the courses in the DPT were never offered collaboratively or by distance education; therefore, the dissolution of the consortium will have no impact on the faculty available to teach in the program at each institution or available facilities. Both faculties are in support of the dissolution of the consortium and expect each program to grow based on the needs of the institution and its region.

UW-La Crosse and UW-Milwaukee have been in an ongoing conversation since 2009 about dissolving the consortium to allow each institution to award an independent DPT degree. In 2011, the Consortial DPT underwent the required five-year Joint Review and the recommendation of the Joint Review Committee, consisting of representatives from both institutions, to UW System was that the consortium be dissolved and the institutions be independently authorized to offer DPT programs.

Authorization of the Doctor in Physical Therapy at UW-La Crosse

Upon approval by the Board of Regents in 2005, UW-La Crosse began transitioning its existing Master of Science in Physical Therapy to the Doctor of Physical Therapy. Due to a shift in the field towards doctoral degrees as the appropriate credential for entry-level professional physical therapists, UW-La Crosse phased out the master's degree and graduated the first DPT cohort in May 2006. Over the years, the volume of scientific evidence, technological advances, and research literature included in physical therapy educational programs exceeded what could be covered in a master's degree program. New professional standards, which made the Doctor of Physical Therapy the preferred degree, were implemented by professional and accrediting organizations beginning in January, 2006.

In 2008, UW-La Crosse's Consortial DPT program was accredited for a 10-year cycle until 2018 by the Commission on Accreditation in Physical Therapy Education (CAPTE). Upon approval to deliver the DPT program independently, UW-La Crosse will file the required change notice with CAPTE. The DPT program at UW-La Crosse will align closely with the university's mission to develop human resources; to discover and disseminate knowledge; to extend knowledge and its application beyond the boundaries of its campuses; and to serve and stimulate society by developing in students heightened intellectual, cultural, and human sensitivities as well as scientific, professional and technological expertise and a sense of purpose. Inherent in this broad mission are methods of instruction, research, extended education, and public service designed to educate people and improve the human condition. UW-La Crosse's proposed Doctor in Physical Therapy will be among the lowest cost programs in the upper Midwest based on comparisons of tuition and cost per credit.

The proposed doctoral program in Physical Therapy will be housed in the Department of Health Professions and will be taught by interdisciplinary faculty and staff who teach courses in UW-La Crosse's other, nationally recognized health professional programs. The DPT curriculum will employ intra-institutional collaboration with other departments and programs

and inter-institutional cooperation with Western Technical College's Physical Therapist Assistant Program. Among the students admitted to the Physical Therapy program each year will be 40 to 50 percent of UW-La Crosse's own pipeline of pre-Physical Therapy majors. In 2011, 45 new students were enrolled from a qualified applicant pool of 256; the same number of applicants and the same enrollment yield are expected for the proposed independent DPT program.

The proposed DPT will graduate highly qualified generalist practitioners who are prepared to assume the roles of clinician, educator, administrator, consultant, and whose practice is shaped by research evidence. All graduates will have patient management experiences as evidenced by clinical education experiences emphasizing patient problems and display the core values of professionalism and abilities consistent with expectations of a doctoring professional. UW-La Crosse is poised to graduate 44 students and in 2013 and 2014, and 45 in 2014, exceeding the target retention of 40 students in the current Consortial DPT. As it has done with the Consortial DPT, UW-La Crosse will continue to use a variety of strategies and activities to recruit and retain students from a variety of cultural backgrounds with the independent DPT program.

In addition, the proposed program will continue to recruit and retain faculty from a variety of professional and educational backgrounds, and exemplify excellence in teaching. Faculty will continue to contribute to evidence-based practice and scholarly activity and facilitate life-long learning within the physical therapy community. Through the implementation of an independent Doctor of Physical Therapy program, UW-La Crosse will serve as an academic and cultural center, providing service and professional expertise and meeting the broader educational and health care needs of the region. UW-La Crosse's DPT program will provide better access to health care for Wisconsin citizens and meet local, regional, and national employer demand.

Among program assessment tools used to assess the quality of the program and student learning outcomes, the program director will continue to record and analyze the first-time pass rate of students in licensing exams, examine student and faculty portfolios, and analyze results from exit surveys and focus groups.

The proposed independent DPT will not require additional resources. UW-La Crosse currently employs 11 full-time core faculty and other associated staff to provide the approved curriculum. Thus, faculty FTE will remain unchanged and revenues from the expected differential tuition and special program and course fees currently in place will be sufficient to meet the cost of delivering the program.

Authorization of the Doctor in Physical Therapy at UW Milwaukee

Since first admitting students to the Consortial DPT in 2007, UW-Milwaukee has surpassed its program goals and successfully produced high-quality graduates into the workforce. Approval of UW-Milwaukee's independent Doctor of Physical Therapy will provide increased and better offerings for professional and post-professional continuing education for Wisconsin, in particular the southeastern region of the state. UW-Milwaukee is poised to offer the Doctor of Physical Therapy independently in support of its distinct mission to provide educational

leadership in meeting future social, cultural, and technological challenges. In 2010, the Commission on Accreditation in Physical Therapy Education accredited the existing Consortial DPT program at UW-Milwaukee for a five-year cycle until 2015.

The doctoral program in Physical Therapy will be housed in the College of Health Sciences and administered by the Department of Human Movement Sciences. The proposed DPT presents a natural expansion of the department's program array and aligns well with the existing Athletic Training Education program and the Bachelor of Science and Master of Science degree programs in Kinesiology by sharing courses and providing interdisciplinary perspectives. The interdisciplinary curriculum will model multi-disciplinary decision-making as a foundation to improving quality of care.

The proposed Doctor of Physical Therapy program will be an important addition to UW-Milwaukee's professional, doctoral-level array, and align well with its research and teaching mission. As a major urban doctoral university, UW-Milwaukee seeks to attract highly qualified students who demonstrate the potential for intellectual development, innovation, and leadership for their communities. Further in alignment with its distinct mission, UW-Milwaukee's DPT program will advance academic and professional opportunities at all levels for women, minority, part-time, and financially or educationally disadvantaged students. Approximately 10% of qualified program applicants are expected to be from under-represented groups. The proposed DPT program will provide adequate academic support so that approximately 95% of students will graduate with their admitted cohort.

Among the tools used to assess program quality and student learning outcomes is a graduation survey, ratings on terminal clinical internships, faculty-approved advancement of students to clinical practice for each of the clinical education courses, and students' first-time pass rate on the Federation of State Boards of Physical Therapy (FSBPT) licensing examination. Current UW-Milwaukee DPT graduates have enjoyed a 100% first-time pass rate, compared to the national first time pass rate of 91.2%. Other assessment tools are a comprehensive cumulative lab exam and the participation of faculty and advanced students in the scholarship of professional practice through peer-reviewed publications and presentations.

Program faculty will continue to establish and maintain productive relationships with appropriate public and private organizations at local, regional, state, national, and international levels. Within five years of graduation, 90% of graduates are expected to participate in the education of entry-level physical therapy students and in other leadership responsibilities. UW-Milwaukee expects that, because of the high demand for physical therapists (as cited above, demand is projected to grow nationally by 30 percent until 2018), 100% of the UW-Milwaukee DPT graduates will have a job upon graduation. Based on past records from the first cohort of Consortial DPT graduates, a large number of these graduates will be licensed and remain in practice in Wisconsin.

The proposed DPT will not require additional resources to meet the current needs of the 24-student entry-level cohort. The nine UW-Milwaukee tenure-track and clinical faculty who deliver the Consortial DPT, along with several adjuncts and guest lecturers, will continue to serve the program, leaving FTE unchanged. Current revenues from differential tuition and

special program and course fees will be sufficient to meet the cost of delivering the program for the next few years, after which additional support and program revenue may be explored. All capital equipment, facilities, and financial resources to sustain the program are in place. Because of current limitations on instructional space and clinical sites, the program is not expected to grow beyond its current enrollment target and core program faculty.

Conclusion

Graduates from UW-Milwaukee's and UW-La Crosse's independent DPT programs will be well-prepared to function as clinician scholars and therapists in the increasingly complex health care system based on their advanced understanding of inter-dependent care, their advanced diagnostic and clinical expertise, and their team building and leadership skills. Strong, highly qualified student applications that considerably exceed the enrollment targets at each institution indicate a sustained student demand. Given the competition for admission into these programs and the success of the graduates in finding employment, the evidence supports that the demand and need is present for three DPT programs within the UW System.

If approved as separate, independently delivered programs, both DPT programs will remain accredited by the Commission on Accreditation in Physical Therapy Education, an external accrediting agency that establishes and maintains standards of entry-level physical therapy instruction. Each of the institutions has met and exceeded the original consortial programmatic goals and learning objectives and each has the institutional capacity and integrity to ensure that the Doctor of Physical Therapy aligns with their distinct missions and possesses the operational, financial, and faculty resources to deliver the doctoral program independently.

Each program will continue to meet the programmatic outcomes originally identified when the program was approved, but asks for the flexibility to do so in ways appropriate and consistent with their local faculty expertise and unique resources. Collaboration will continue between the directors of clinical education at each campus to develop clinical faculty and clinical affiliations to the benefit of both programs

RECOMMENDATION

UW System Administration recommends approval of Resolution I.1.b., authorizing the dissolution of the Consortial Doctor of Physical Therapy and the authorizations of independent Doctor of Physical Therapy Programs at UW-La Crosse and UW-Milwaukee.

RELATED REGENT AND UW SYSTEM POLICIES

Regent Policy Document 4-12: Planning and Review Principles for New and Existing Academic Programs and Academic Support Programs

Academic Informational Series #1 (ACIS-1.0, revised April 2010): Statement of the UW System Policy on Academic Planning and Program Review

Regent Policy Document 4-12
Board of Regents Policy
on Academic Program Planning, Review, and Approval

EDUCATION COMMITTEE

Resolution I.1.d.:

That, upon recommendation of the President of the University of Wisconsin System, the Board of Regents approves the changes to Regent Policy Document RPD 4-12, "*Planning and Review Principles for New and Existing Academic Programs and Academic Support Programs.*"

**PROPOSED REVISIONS TO THE BOARD OF REGENTS POLICY ON
ACADEMIC PROGRAM PLANNING, REVIEW, AND APPROVAL**

EXECUTIVE SUMMARY

BACKGROUND

In summer 2011, the President's Advisory Committee on the Roles of UW System Administration undertook a broad reconsideration of the roles of UW System Administration. In response to the Advisory Committee's report, President Reilly issued a set of recommendations to address the Committee's major findings. President Reilly's response included the recommendation to restructure the process of academic program planning and review, an area highlighted by the Advisory Committee as warranting revision.

In winter 2012, the University of Wisconsin System Program Planning and Review Working Group was convened by Senior Vice President Mark Nook to conduct a comprehensive review and restructuring of UW System program planning and review policies and processes, in accordance with the direction issued by President Reilly in his response to the Advisory Committee's recommendations. The goal of the Working Group was to develop new policies and processes that would reduce the role of UW System Administration in assessing the academic quality of proposed programs and direct its focus towards the maintenance of an appropriate array of degree options across the state.

At its June 7, 2012 meeting, the Board of Regents Education Committee discussed the changes proposed by the working group to the academic program planning, review and approval process, as well as a preliminary proposal on the UW System Administration's academic program array management role. The Committee also reviewed draft revisions to Regent Policy Document (RPD) 4-12: *Planning and Review Principles for New and Existing Academic Programs and Academic Support Programs*.

The June discussion elicited strong Regent support for the proposed changes. At its August meeting, the Board will be asked to formally adopt the revised process by approving revisions to RPD 4-12, retitled as *Academic Program Planning, Review, and Approval in the University of Wisconsin System*. The revised policy clarifies the roles to be played by the Board of Regents, UW institutions, and UW System Administration in the planning, review, and approval of new academic programs.

REQUESTED ACTION

Approval of Resolution I.1.d., adopting the revisions to RPD 4-12 on *Academic Program Planning, Review, and Approval in the University of Wisconsin System*.

DISCUSSION

Need for Review

The comprehensive review conducted by the UW System Program Planning and Review Working Group has resulted in substantive changes to the entire program planning and review process. The changes to the process require, in turn, revisions to ACIS 1.0, the UW System policy on academic programming, and to RPD 4-12, the principal Regent policy addressing academic programs. As currently written, RPD 4-12 is entitled *Planning and Review Principles for New and Existing Academic Programs and Academic Support Programs* (Adopted 5/9/97). Adopted in 1997, the current RPD 4-12 does nothing more than adopt the principles in ACIS 1.0 as policy for how UW System institutions plan, implement, and review new academic programs. It does not meet the principles for what constitutes an RPD; that is to say, it does not establish a fundamental principle, serve as an enduring statement, or communicate the Board's expectations for the UW System and/or UW institutions. The proposed revisions to RPD 4-12 seek to address these deficiencies.

Review Process

The working group convened to revise the UW System's process for program planning, review, and approval included representation from every UW institution, with provosts, deans, faculty, and academic staff among its members. Its charge comprised an assessment of the roles played by UW institutions, the Board of Regents, and the UW System Office of Academic Affairs in program planning and review, and a comprehensive review of the current policies and processes for reviewing and approving new degree programs in the UW System. The working group was further asked to propose to UW System Administration new policies and processes that would: reduce the preparation time needed for institutions to submit new degree program proposals; increase flexibility in the development of new degree programs; reduce UW System Administration's role in assessing the academic quality of proposed programs; and direct the focus of UW System Administration's role in program planning and review towards the maintenance of an appropriate array of degree options across the state.

The Program Planning and Review Working Group held eleven meetings throughout Spring 2012. Members reviewed all relevant requirements and policies, including state statute, Regent policy, and UW System policy, and delved deeply into the roles played by the Board of Regents, UW institutions, and UW System Administration, in particular the Office of Academic Affairs. In addition to developing a revised process for program planning, review, and approval, the Working Group also drafted a preliminary proposal for the academic program array management role for UW System Administration. All draft documents have been reviewed by UW Chancellors, Provosts, and Faculty Reps, and each of these stakeholders have expressed both support for the revised process and agreement that it meets the objectives of the President's Advisory Committee on the Roles of UW System Administration and President Reilly's response to the Committee to restructure the System's academic programming process. The formal report of the Working Group is available at: http://www.uwsa.edu/news/2012/08-2012/UW_System_Academic_Program_Planning_and_Review_Working_Group_Report.pdf.

Summary and Explanation of Policy Revisions

The proposed revisions to RPD 4-12—including a different name—seek to provide clear direction for the set of responsibilities and oversight roles to be played by the Board of Regents, UW institutions, and UW System Administration in the revised process for planning, review, and approval of new academic programs developed by the Working Group. The revised RPD establishes a clear distinction between the Regent policy and the System policy (ACIS 1.0). It articulates broad principles for how academic program planning, review, and approval are conducted throughout the UW System, whereas ACIS 1.0 details the required process to be followed by UW institutions and UW System Administration. If approved, the revised RPD, *Academic Program Planning, Review, and Approval in the University of Wisconsin System*, would replace the previous RPD 4-12 in its entirety.

Effects of Changes

Pending adoption by the Board of Regents, the changes to RPD 4-12 would put into effect the revised process developed by the UW System Program and Planning Working Group. The revised process would constitute, in turn, the revised UW System policy and replace Academic Information Series 1.0 (ACIS 1.0): University of Wisconsin System Academic Program Planning and Review (revised April 2010). ACIS 1.0 has served as the principal UW System policy on academic programs since at least 1984, providing detailed direction for how program planning, review, and approval was to be conducted by UW institutions, the UW System Office of Academic and Student Affairs, and the Board of Regents. In particular, ACIS 1.0 has specified the roles each of these entities were to play in the process of requesting, entitling, authorizing, implementing, and reviewing new academic programs, and is followed by all UW institutions.

While changes and updates have been made over the years to the process detailed in ACIS 1.0, the revisions proposed by the Working Group were more substantive and the result of a comprehensive reevaluation. The key components of the revised process may be summarized as follows:

- Entitlement: the current entitlement process will be replaced with a “pre-authorization” process, in which the institution submits a concise “letter of intent” to plan a new program. The letter of intent is shared with all UW institutions and the Office of Academic and Student Affairs for a brief comment period. The Office of Academic and Student Affairs has the authority to approve or deny the pre-authorization.
- Authorization: changes to the current authorization process will include a reduced role for UW System Administration and a reduced timeline for bringing new programs to the Board of Regents. The Office of Academic and Student Affairs will no longer work collaboratively with the institution in developing a new program proposal, a process that was both time- and labor-intensive. Institutions will submit to the Office of the President a short proposal and a letter of commitment from the Chancellor or Provost. The Office of Academic and Student Affairs will then notify the proposing institution’s Chancellor and Provost of the President’s decision whether or not to recommend the proposed program to the Board for approval. Consistent with current practice, new program

proposals will be brought to the Board at the recommendation of the UW System President.

- **Joint Review:** the involvement of the UW System Office of Academic and Student Affairs in the five-year review of new academic programs will be eliminated. Institutions will follow their own regularly scheduled review processes and continue Higher Learning Commission and other accreditation reviews, as required.

The revised process also contains a section on institutional quality control, outlining what information needs to be available and reported by institutions to the Board of Regents and UW System Administration in fulfillment of their statutory and other policy-defined roles.

The Working Group's preliminary proposal on the UW System Administration's academic program array management role will undergo further consultation in coming months with the Regents, Chancellors, Provosts, Faculty Reps, and others. UW System Administration and UW institutions will evaluate the revised System policy and process throughout their implementation and beyond, not only to assess whether the revised academic programming process accomplishes the original objectives of the President's Advisory Committee on the Roles of UW System Administration and President Reilly's response to the Committee, but also to determine whether it serves the UW System and the state of Wisconsin in the development of new academic programs and the maintenance of a program array that is responsive to students, institutions, the workforce, and the citizens of the state. It is recommended that the revised RPD also be reviewed in coming years to ensure that it, too, fulfills the needs of students, UW institutions, and the state.

RELEVANT REGENT AND UW SYSTEM POLICIES

Regent Policy Document 4-12: Planning and Review Principles for New and Existing Academic Programs and Academic Support Programs (Adopted 5/9/97)

Regent Policy Document 4-5: Principles on Accreditation of Academic Programs (Adopted 3/5/99)

Regent Policy Document 5-1: Academic Quality Program Assessment (Adopted 9/11/92)

Regent Policy Document 15-2: Distance Education Standards (Adopted 6/00)

Academic Information Series 1.0 (ACIS 1.0): University of Wisconsin System Academic Program Planning and Review (revised April 2010)

Academic Information Series on Distance Education Standards for Academic and Student Support Services and Guidelines for Distance Education Credit Program Array and Approval (June 2009)

Academic Planning Statement 1 (ACPS 1.0): University of Wisconsin Planning Principles (February 1975)

Academic Planning Statement 1.1 (ACPS 1.1): Entitlement to Plan Supplement (February 1976)

Academic Planning Statement 2 (ACPS 2): The Application of Job Market and Placement Information to Academic Planning (February 1975)

CURRENT REGENT POLICY DOCUMENT

[UW System Home](#) > [Board of Regents](#) > [Policies](#)

Regent Policy Documents

SECTION 4: ACADEMIC POLICIES AND PROGRAMS

4-12 PLANNING AND REVIEW PRINCIPLES FOR NEW AND EXISTING ACADEMIC PROGRAMS AND ACADEMIC SUPPORT PROGRAMS

(Formerly 91-12)

The Board of Regents adopts the revised Planning and Review Principles for the New and Existing Academic Programs and Academic Support Programs as policy for all University of Wisconsin System Institutions. The full document may be obtained from the University of Wisconsin System Office of Academic Affairs.

History: Res. 5971 adopted 12/6/91. Replaces 73-11, 87-13 and 88-1. Portions of this policy regarding ACIS-1. were revised (Sept. '92) amended by Resolutions 7046 (adopted 11/8/95), 7420 (adopted 4/11/97), and 7440 (adopted 5/9/97).

[Return to the policy index](#)

The Regent Policy Documents were adopted and are maintained pursuant to the policy-making authority vested in the Board of Regents by Wis. Stats. § 36. The Regent Policy Documents manifest significant policies approved by the University of Wisconsin System Board of Regents. This document is a ready reference for those charged with carrying out these policies. Unless noted otherwise, associated documents and reports may be obtained from the Office of the Secretary of the Board of Regents, 1860 Van Hise Hall, 1220 Linden Drive, Madison, WI 53706, ph 608-262-2324. <http://www.uwsa.edu/bor/policies/>

Recommended Policy Document

Regent Policy Document

4-12 – Academic Program Planning, Review, and Approval in the University of Wisconsin System

Scope

The Board of Regents policy on Academic Program Planning, Review, and Approval applies to all UW institutions and the UW System Administration.

Purpose

The purpose of this policy is to establish clear roles for the Board of Regents, UW System Administration, and UW institutions in the planning, review, and approval process for new academic programs.

Policy Statement

As one of the largest systems of public higher education in the country, one of the most critical components of the University of Wisconsin System's mission is to offer a robust array of academic programs that will serve the state of Wisconsin by providing a quality education to all students, strengthening communities, and responding to workforce development and societal needs. In offering and managing the academic program array, the UW System must ensure the responsible use of state and other resources, the availability of programs to meet student and employer demand, and the sustainability of high-quality undergraduate, graduate, and professional educational offerings at UW institutions.

UW System Administration administrators and staff, in their roles as consultants and advocates, work with the UW institutions to ensure the development and implementation of high-quality degree offerings and opportunities for lifelong learning that effectively leverage existing academic strengths within the UW System, support the distinct missions of UW System institutions, and respond to current and emerging workforce and societal needs that require broad-based planning and educational innovation.

In the context of ever-evolving needs of UW students and institutions, the state of Wisconsin, and the nation, the roles outlined in this policy are meant to foster increased efficiency and agility in meeting existing and emerging workforce and societal needs, while also ensuring the quality of the UW System's academic program offerings.

Oversight, Roles & Responsibilities

Chapter 36, Wis. Stats., gives the Board of Regents the authority to “ensure the diversity of quality undergraduate programs.” In fulfilling this statutory role, the Board has oversight over UW System Administration and UW institutions to ensure that these entities meet their respective roles and responsibilities as designated below. As a steward of the UW System's

human and financial resources, the Board is also responsible for balancing access to education with cost-effectiveness in the development and maintenance of academic programs. The Board of Regents requires UW System Administration and UW institutions to follow the specific principles, guidelines, and practices described in the UW System Academic Program Planning, Review, and Approval policy. As part of the System policy, all new academic degree programs must be approved by the Board of Regents prior to implementation. In addition, new academic program proposals must be submitted to the Board of Regents for approval at the recommendation of the President.

UW System Administration is responsible for managing the UW System's academic program array. Management of the academic program array entails: consulting with UW institutions in the planning of new academic programs; monitoring and analyzing the current program array, including degree productivity, distance education offerings, and modes of delivery; working with UW institutions in identifying gaps in the current array to address changing and emerging workforce and societal needs; and supporting the Board of Regents and UW institutions in bringing new programs to the Board for approval.

UW institutions are responsible for: developing and maintaining high-quality academic programs through efficient and effective use of available resources in support of their missions and workforce and societal needs; determining the quality of new and existing programs, including through regular assessment and review, and periodic accreditation, as appropriate. UW institutions present their academic plans to the Board of Regents.

Both UW System Administration and UW institutions assist the Board of Regents in meeting its statutory requirement for ensuring the diversity of high-quality academic programs by making available institutional definitions of and standards for quality, program planning and review processes, and general information on how program evaluation and assessment of student learning are conducted, including, where applicable, through evaluation by external accreditation agencies.

UW System Administration and UW institutions should periodically review both the Regent and the UW System academic program planning, review, and approval policies and the array management role to assess their efficacy and determine whether they are meeting the needs of the UW System (the Board of Regents, System Administration, the institutions, faculty and staff, and students), as well as of the state of Wisconsin. The results of that review will be communicated to the Board.

Related RPDs and Applicable Policies

Regent Policy Document 4-12: Planning and Review Principles for New and Existing Academic Programs and Academic Support Programs (Adopted 5/9/97)

Regent Policy Document 4-5: Principles on Accreditation of Academic Programs (Adopted 3/5/99)

Regent Policy Document 5-1: Academic Quality Program Assessment (Adopted 9/11/92)

Regent Policy Document 15-2: Distance Education Standards (Adopted 6/00)

Academic Information Series 1.0 (ACIS 1.0): University of Wisconsin System Academic Program Planning and Review (revised April 2010)

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Academic Planning Statement 1.1 (ACPS 1.1): Entitlement to Plan Supplement (February 1976)

Academic Planning Statement 2 (ACPS 2): The Application of Job Market and Placement Information to Academic Planning (February 1975)

History

History: Res. 5971 adopted 12/6/91. Replaces 73-11, 87-13 and 88-1. Portions of this policy regarding ACIS-1.0 were revised (Sept. '92) amended by Resolutions 7046 (adopted 11/8/95), 7420 (adopted 4/11/97), and 7440 (adopted 5/9/97).

2012-13 UW SYSTEM GROWTH AGENDA FOR WISCONSIN GRANTS PROGRAM

EXECUTIVE SUMMARY

BACKGROUND

In summer 2011, the President's Advisory Committee on the Roles of UW System Administration undertook a broad reconsideration of the roles of UW System Administration. One of the Committee's recommendations related to how the UW System Office of Academic and Student Affairs administered grant funding available to UW institutions. Specifically, the Committee asked for the consolidation of the "multiple grant programs within Academic Affairs in an effort to reduce or streamline administrative and application processes, identify priorities for use of limited resources, increase flexibility of existing grant programs, and make larger grant awards."

In his response to the Advisory Committee, President Reilly concurred with this recommendation, noting the potential for grants made by UW System to "incentivize new strategic directions and fuel entrepreneurial activity." He charged Senior Vice President Mark Nook with the restructuring of the grant-making process so that it would be more responsive to changing priorities, have a simplified grant application process, and offer grants that could influence measurable institutional change.

Throughout 2011-12, Senior Vice President Nook worked with colleagues across the UW System to restructure the grant program, consolidating what had been ten separate programs into two, known collectively as the *Growth Agenda for Wisconsin* Grants Program.

At the August meeting of the Board of Regents Education Committee, Senior Vice President Mark Nook will present the results of the first competition of the revised *Growth Agenda for Wisconsin* Grants Program.

REQUESTED ACTION

No action requested; for information only.

DISCUSSION

Prior to the work of the President's Advisory Committee on the Roles of UW System Administration, the Office of Academic Affairs operated 12 separate grant programs. In addition to being confusing, this structure made it difficult for UW institutions, colleges, or departments to seek funding for initiatives and programs that had the potential to create large-scale change. The large number of separate funds resulted in most of the grants being awarded in relatively small amounts (i.e., less than \$5,000).

In fulfillment of the President's recommendation to restructure the grant programs, and with input from UW institutions, the Office of Academic and Student Affairs consolidated ten of

these distinct funding streams into two (because of their funding sources, the other two programs were left intact). The revised Academic Affairs Grant Program grant structure has been designed to support UW institutions in meeting their *Growth Agenda for Wisconsin* goals to: increase the number of Wisconsin graduates; help create more well-paying jobs; and build stronger communities. The redesigned program further seeks to provide incentives to institutions to be innovative and take reasonable risks in developing solutions to the challenges of their institution, their local region, and the state.

Proposals in the first iteration of the revised program were asked to focus on projects that advanced one or more of the strategic goals of the Growth Agenda and that modeled Inclusive Excellence, the System's framework for advancing diversity, equity, and inclusion. For 2012-13, a total of \$2 million was made available, with funding designated to support two broad categories of activities: Institutional Change Grants and Conference and Professional Development Grants. The majority of the funding was designated for the Institutional Change Grant program, and proposals were sought for strategies and actions that were innovative, would result in substantive programmatic and/or institution-wide change (single or multiple institutions), and would have the potential for broad impact and systemic transformation. Proposals submitted within the Conference and Professional Development Grants category were to address funding needed to support a national, regional, or statewide meeting or conference focusing on topics aligned with the *Growth Agenda for Wisconsin* and of critical importance to UW institutions. Institutions were further invited to submit proposals seeking funding for up to three years. The complete 2012-13 Call for Proposals, along with the criteria for review, may be found at: <http://www.uwsa.edu/acss/grants/growthagenda/>.

Senior Vice President Nook convened a review team composed of institutional grants administrators to develop the detailed funding criteria and a rubric for scoring the proposals. Two other systemwide review teams, comprised primarily of faculty and staff from UW institutions, were convened to evaluate the proposals, one team for each of the two broad funding categories. Based on the review team evaluations and rubric scoring, final award decisions were made by the Senior Vice President.

A total of 49 proposals requesting approximately \$11.8 million over three years were submitted by UW System Universities, Colleges, and Extension. The program funded ten Institutional Changes Grants totaling \$3,553,872 over three years, and 10 Conference and Professional Development Changes grants totaling \$345,320 over three years. Total dollars committed to the program over three years equals \$3,899,192. Funded grants went to single institutions and multi-institutional proposals, and address retention and success for a variety of underserved student populations (rural, students of color, veterans, transfer, adult), improved STEM education, undergraduate research, entrepreneurship, teacher preparation and K-12 partnerships, assessment of student learning, and a range of other, innovative projects working to advance the Growth Agenda for Wisconsin and effect institutional change. A list of those proposals, with abstracts, selected for funding follows.

Growth Agenda for Wisconsin 2012-13 Award Winners - Institutional Change Grants

Institutional Change Grants			
Proposal Title	Abstract	University/Colleges/Extension	Total Funding
Using Data Analytics to improve Retention: A Joint Proposal from UW-Madison, UW-Platteville and the UW Colleges	Data analytics will be used at three UW institutions to create an early warning system for students exhibiting at-risk academic behavior which will trigger early intervention mechanisms to improve academic success and retention	UW-Madison (partnering with UW-Platteville & UW Colleges)	\$649,238 over three years
Fab Lab - Leveraging Innovation to Grow People, Jobs, and Communities	Seamlessly connect high quality academic programs, a digital fabrication laboratory and small and medium-sized enterprises to improve undergraduate retention rates and increase the number of graduates primed to create and advance into innovative well-paying jobs in Wisconsin communities	UW-Stout	\$523,579 over two years
Educational Opportunity Network for Rural Access to College - UWEC Pilot Project	Develop a collaborative recruitment model for the Continuing Education units and Admissions offices in 7 UW Campuses in rural Wisconsin	UW-Eau Claire (partnering with UW Colleges, UW-Stevens Point, UW-Stout, & UW-Superior)	\$452,969 over two years
Promoting Student Success through Curricular Reform	Increase success for all students through general education curriculum reform resulting in increased student engagement and retention	UW-Oshkosh	\$418,400 over three years
Creating a UW-Superior Center for Adult Nontraditional Students and Veterans	Creation of a center to provide programming and mentoring for adult students and veterans, resulting in increased satisfaction and retention	UW-Superior	\$298,482 over three years
STEM Transfer Students	To increase the number of students persisting to BS-STEM degrees in western Wisconsin, faculty at UW-Eau Claire will work with partner faculty at UW Colleges and Chippewa Valley Technical College to increase the number of STEM majors, particularly in the physical sciences and mathematics, by better informing students about STEM careers and by developing environments that are both socially and academically supportive	UW-Eau Claire (partnering with UW-Baron County, UW Colleges, & Chippewa Valley Technical College)	\$127,886 in FY13
Firm Footing	Implement the Developmental Mathematics Enhancement Program for a cohort of incoming freshmen which will assist in the retention of students in their academic pursuits while providing these freshmen with the academic and student services needed to successfully attain and graduate with a four-year degree	UW-LaCrosse	\$123,393 over three years
STEM Lab Initiative	A hands-on teaching experience for underrepresented Teacher Education students in STEM disciplines	UW-River Falls (partnering with area high schools)	\$55,380 over three years
STEM Innovation Pipeline Project	Precollege students interested in STEM majors will be tutored/mentored by Undergraduate Research Minority (URM) students interested in majoring at UWM in STEM majors, who in turn will be mentored/tutored by URM graduate students who will look to designated faculty who will mentor/tutor them in their STEM areas of concentration	UW-Milwaukee	\$425,040 over three years
Expanding Pathways to Success	Develop and implement an enhanced advising and academic support services model to underserved students at risk for academic failure	UW-Whitewater	\$479,506 over two years
Total Institutional Change Grants			\$3,553,872 over three years

Growth Agenda for Wisconsin 2012-13 Award Winners - Conference and Professional Development Grants

Conference and Professional Development Grants			
Proposal Title	Abstract	University/Colleges/Extension	Total Funding
Recruiting & Retaining Underrepresented Future Teachers: A Student Development Conference	Student development conference for diverse and underrepresented high school students and undergraduate students interested in exploring teaching careers	UW-LaCrosse (partnering with UW-Stout, UW-Platteville, UW-River Falls, and UW System)	\$119,250 over three years
Implementing the Teacher Performance Assessment in UWS Educator Preparation Programs	Professional development conference and follow-up regional workshops for educator preparation faculty and staff to prepare for implementation of the recently state-mandated, summative assessment (Teacher Performance Assessment) to be required of all teacher candidates graduating from WI educator preparation programs	UW-River Falls (partnering with UW-Oshkosh, UW-Eau Claire, UW-Stout, & UW-LaCrosse)	\$58,142 in FY13
Course Redesign in Developmental and Competency-Level Mathematics	Two conferences on redesign of developmental and competency-level mathematics courses targeted toward UW System faculty, staff, and administration	UW Colleges (partnering with UW-Eau Claire, UW-Platteville, UW-LaCrosse, UW-Parkside, & UW-Superior)	\$43,874 over two years
Sharing Successes and Challenges in Underrepresented Minority Achievement conference	Conference to bring together faculty and staff from across the UW System to share best practices and strategies for closing the achievement gap for underrepresented minorities	UW-Madison	\$32,600 in FY13
Institutionalizing Undergraduate Research in the UW System	Statewide conference for the thirteen 4-year and select 2-year campuses who are aiming to institutionalize undergraduate research at the local and system level.	UW-Eau Claire (partnering with 13 UW four year and select two year campuses)	\$22,650 over two years
Wisconsin Scholars Longitudinal Study Summer Conference	Conference on access and affordability in Wisconsin public higher education to continue the active dissemination of knowledge created by the Wisconsin Scholars Longitudinal Study	UW-Madison	\$21,843 in FY13
Literacy for Integration: English language learning of newly arrived low literate refugees in Wisconsin	Literacy for Integration conference is a step towards organizing and aligning the literacy providers and other stakeholders in the field of English Language Learning and literacy for low literate refugees in Wisconsin	UW-Milwaukee	\$20,317 in FY13
A New Business Model for UW-Stevens Point: UWSP Entrepreneurial Summit	Conference to increase entrepreneurship at UWSP and support the UW System Growth Agenda by educating community partners and university personnel on what an entrepreneurial university is, how it operates and what attitudes and policy changes are needed to create an entrepreneurial culture	UW-Stevens Point	\$12,912 in FY13
Networking for Effective Intensive English Programs	Professional development program to develop the capacity of UW regional, comprehensive universities in establishing and sustaining campus programs that effectively serve international students through 1) stronger coordination of efforts among campus units responsible for the education and support of international students, and 2) the integration of intensive English programs into the mainstream of campus life	UW-Whitewater	\$8,086 in FY13
Advancing Assessment of the UW System Shared Learning Goals: A Conference for Student Learning Assessment Leaders in UW Institutions	Annual conferences (2012-15) to provide an opportunity for student learning assessment coordinators in UW institutions to share and develop best practices of assessment of the UW System Shared Learning Goals	UW-Superior (partnering with UW-Eau Claire, UW-Parkside, & UW-Stout)	\$5,646 over three years
Total Conference and Professional Development Grants			\$345,320 over three years
Grand Total			\$3,899,192 over three years

8-7-12

BOARD OF REGENTS OF THE UNIVERSITY OF WISCONSIN SYSTEM

I.2. Business, Finance, and Audit Committee

Thursday, August 23, 2012
Room 1920 Van Hise Hall
1220 Linden Drive
Madison, Wisconsin

2:30 p.m. Business, Finance, and Audit Committee – Room 1920 Van Hise Hall

- a. Committee Business
 1. Approval of the Minutes of the June 7, 2012 Meeting of the Business, Finance, and Audit Committee
 2. Report on Quarterly Gifts, Grants, and Contracts (4th Quarter)
 3. Review and Approval of the UW-Madison Contractual Agreement with Amgen Inc.
[Resolution I.2.a.3.]

- b. Crisis Response and Continuity of Operations Planning in Action: June 2012 UW-Superior Flood

- c. UW System Efforts to Safeguard Minors: Status Update on Recommendations Contained in the Report on Reporting Crimes Against Children and Implementation of Executive Order #54

- d. Operations Review and Audit: Status Update

- e. Report of the Senior Vice President
 1. Status Update on University Personnel Systems
 2. Status Update on UW Travel Program
 3. Discussion and Prioritization of Future Deep Dive Topics

QUARTERLY REPORT OF GIFTS, GRANTS, AND CONTRACTS JULY 1, 2011 THROUGH JUNE 30, 2012

EXECUTIVE SUMMARY

BACKGROUND

Prior to 1993, the Board of Regents had been presented a detailed listing of all gift, grant, and contract awards received in the previous month. This reporting protocol was deemed overly labor intensive and information presented was easily misinterpreted. Very few gifts are given directly to the University; the vast majority of gift items listed in these reports represented a pass-through of funds raised by UW Foundations. In addition, reported grant and contract awards frequently span several years, making the monthly figures reported somewhat misleading to the uninformed reader.

In February 1993, the Board adopted a plan for summary reporting on a monthly basis, delegating to the UW System Vice President for Finance acceptance of contracts with for-profit entities where the consideration involved was less than \$200,000. Contracts in excess of \$200,000 were required to come to the Board prior to execution. This \$200,000 threshold was increased to \$500,000 at the Board's September 4, 1997 meeting.

At this same September 4, 1997 meeting, it was noted that, while the monthly summary reporting from UW institutions will continue, the Vice President for Finance will present the information to the Board on a quarterly, rather than monthly, basis. These quarterly summary reports have been presented to the Business, Finance, and Audit Committee since that time and have generally been accompanied by a brief explanation of significant changes.

REQUESTED ACTION

No action is required; this item is for information only.

DISCUSSION

Attached is a summary report of gifts, grants, and contracts awarded to University of Wisconsin System institutions in the twelve-month period July 1, 2011 through June 30, 2012. Total gifts, grants, and contracts for the period were approximately \$1.5 billion; this is an increase of \$26.5 million over the same period in the prior year. Federal awards decreased \$21.6 million while non-federal awards increased by \$48.1 million.

RELATED REGENT POLICIES

Regent Resolution Number 7548, dated September 4, 1997

UNIVERSITY OF WISCONSIN SYSTEM
 GIFTS, GRANTS, AND CONTRACTS AWARDED
 QUARTERLY REPORT & PRIOR-YEAR COMPARISON
 FISCAL YEAR 2011-2012 (4th Quarter)

FISCAL YEAR 2011-2012	Public Service	Instruction	Libraries	Misc	Physical Plant	Research	Student Aid	Total
Total	116,811,379	62,329,938	3,092,531	109,214,739	46,757,304	964,132,918	205,875,211	1,508,214,021
Federal	72,826,222	36,471,314	0	11,448,702	935,523	646,825,922	187,844,774	956,352,457
Nonfederal	43,985,157	25,858,623	3,092,531	97,766,038	45,821,781	317,306,998	18,030,437	551,861,564
FISCAL YEAR 2010-2011 *								
Total	139,263,175	66,291,987	3,155,336	128,254,657	30,830,600	896,014,486	217,934,735	1,481,744,975
Federal	96,122,678	40,804,878	0	14,764,986	570,191	625,808,290	199,905,793	977,976,815
Nonfederal	43,140,497	25,487,110	3,155,336	113,489,671	30,260,409	270,206,197	18,028,942	503,768,160
INCREASE(DECREASE)								
Total	(22,451,796)	(3,962,049)	(62,805)	(19,039,917)	15,926,705	68,118,432	(12,059,524)	26,469,045
Federal	(23,296,455)	(4,333,564)	0	(3,316,284)	365,332	21,017,632	(12,061,019)	(21,624,358)
Nonfederal	844,660	371,515	(62,805)	(15,723,634)	15,561,373	47,100,800	1,496	48,093,404

* Award figures for FY 2010-11 have been restated to remove inter-institution awards which should not have been included in prior reports and add certain gifts funds which were not included by some UW institutions. The net effect of these changes is a reduction of \$2.8M in total FY2010-11 awards shown in prior reports.

UNIVERSITY OF WISCONSIN SYSTEM
 GIFTS, GRANTS, AND CONTRACTS AWARDED - BY INSTITUTION
 QUARTERLY REPORT & PRIOR-YEAR COMPARISON
 FISCAL YEAR 2011-2012 (4th Quarter)

	Public Service	Instruction	Libraries	Misc	Physical Plant	Research	Student Aid	Total
FISCAL YEAR 2011-2012								
Madison	37,384,819	41,510,573	3,032,175	89,548,763	43,569,009	917,154,338	41,671,152	1,173,870,829
Milwaukee	11,021,990	6,788,980	45,561	5,618,583	0	31,362,882	39,364,362	94,202,357
Eau Claire	2,274,733	2,471,631	0	0	20,000	1,096,322	13,262,424	19,125,110
Green Bay	4,100	1,019,415	4,159	1,418,880	1,000	1,563,998	10,091,607	14,103,159
La Crosse	380,007	144,847	0	2,430,571	3,075,644	2,129,816	9,035,501	17,196,386
Oshkosh	1,583,461	7,559,322	0	0	0	2,869,092	14,264,988	26,276,863
Parkside	345,445	334,661	0	117,433	0	604,198	291,614	1,693,351
Platteville	318,994	94,806	0	366,105	0	912,178	9,430,205	11,122,288
River Falls	862,746	6,080	9,637	1,607,835	31,499	136,676	3,939,116	6,593,589
Stevens Point	2,717,643	643,308	0	1,082,323	0	2,697,145	13,933,435	21,073,854
Stout	2,321,910	470,338	0	1,788,159	17,300	1,197,028	11,791,768	17,586,502
Superior	30,469	0	0	896,198	0	1,749,420	2,558,647	5,234,734
Whitewater	2,672,873	220,260	0	2,228,828	42,852	510,385	14,768,853	20,444,051
Colleges	9,476	13,256	1,000	1,997,958	0	44,216	21,471,539	23,537,445
Extension	54,882,713	0	0	0	0	6,500	0	54,889,213
System-Wide	0	1,052,463	0	113,103	0	98,724	0	1,264,290
Totals	116,811,379	62,329,938	3,092,531	109,214,739	46,757,304	964,132,918	205,875,211	1,508,214,021
Madison	32,665,773	20,337,667	0	1,684,093	915,523	609,901,048	27,715,376	693,219,479
Milwaukee	7,472,414	5,199,821	0	2,064,563	0	26,429,392	39,293,661	80,459,851
Eau Claire	745,002	1,318,385	0	0	20,000	758,943	12,757,792	15,600,122
Green Bay	2,000	694,933	0	756,489	0	1,021,998	9,599,528	12,074,948
La Crosse	165,576	103,794	0	968,161	0	975,613	8,981,585	11,194,729
Oshkosh	907,908	7,293,368	0	0	0	2,552,841	14,264,988	25,019,105
Parkside	15,000	0	0	0	0	414,189	0	429,189
Platteville	302,815	0	0	366,105	0	648,963	9,430,205	10,748,088
River Falls	547,544	0	0	878,173	0	99,947	3,913,870	5,439,534
Stevens Point	32,065	110,540	0	429,568	0	1,515,041	13,933,435	16,020,649
Stout	1,913,921	348,032	0	1,078,736	0	1,105,482	11,230,747	15,676,918
Superior	30,469	0	0	752,615	0	939,565	2,558,647	4,281,296
Whitewater	2,551,089	27,310	0	1,246,947	0	408,781	13,490,818	17,724,945
Colleges	0	0	0	1,223,253	0	336	20,674,122	21,897,712
Extension	25,474,647	0	0	0	0	0	0	25,474,647
System-Wide	0	1,037,463	0	0	0	53,782	0	1,091,245
Federal Totals	72,826,222	36,471,314	0	11,448,702	935,523	646,825,922	187,844,774	956,352,457
Madison	4,719,047	21,172,905	3,032,175	87,864,671	42,653,486	307,253,290	13,955,776	480,651,350
Milwaukee	3,549,576	1,589,159	45,561	3,554,020	0	4,933,490	70,701	13,742,506
Eau Claire	1,529,731	1,153,246	0	0	0	337,379	504,632	3,524,988
Green Bay	2,100	324,482	4,159	662,391	1,000	542,000	492,079	2,028,211
La Crosse	214,431	41,053	0	1,462,410	3,075,644	1,154,203	53,916	6,001,657
Oshkosh	675,553	265,954	0	0	0	316,251	0	1,257,757
Parkside	330,445	334,661	0	117,433	0	190,009	291,614	1,264,162
Platteville	16,179	94,806	0	0	0	263,215	0	374,200
River Falls	315,202	6,080	9,637	729,662	31,499	36,729	25,246	1,154,055
Stevens Point	2,685,578	532,768	0	652,755	0	1,182,104	0	5,053,205
Stout	407,989	122,306	0	709,423	17,300	91,546	561,021	1,909,584
Superior	0	0	0	143,583	0	809,855	0	953,438
Whitewater	121,784	192,950	0	981,882	42,852	101,604	1,278,035	2,719,106
Colleges	9,476	13,256	1,000	774,704	0	43,880	797,417	1,639,733
Extension	29,408,066	0	0	0	0	6,500	0	29,414,566
System-Wide	0	15,000	0	113,103	0	44,942	0	173,045
Nonfederal Totals	43,985,157	25,858,624	3,092,531	97,766,037	45,821,781	317,306,997	18,030,437	551,861,564

UNIVERSITY OF WISCONSIN SYSTEM
 GIFTS, GRANTS, AND CONTRACTS AWARDED - BY INSTITUTION
 QUARTERLY REPORT & PRIOR-YEAR COMPARISON
 FISCAL YEAR 2011-2012 (4th Quarter)

FISCAL YEAR 2010-2011 *	Public Service	Instruction	Libraries	Misc	Physical Plant	Research	Student Aid	Total
Madison	30,561,230	41,961,895	3,079,336	105,809,051	30,287,742	847,558,271	39,172,307	1,098,429,832
Milwaukee	11,475,367	9,385,882	58,000	5,921,543	0	33,406,020	39,853,254	100,100,065
Eau Claire	2,686,710	2,852,581	0	0	0	1,222,177	14,395,339	21,156,807
Green Bay	173,656	2,802,265	18,000	604,502	0	775,426	9,985,046	14,358,895
La Crosse	472,514	163,639	0	1,206,118	0	2,401,703	10,431,411	14,675,385
Oshkosh	2,647,791	5,541,346	0	411,631	0	1,428,150	15,681,407	25,710,324
Parkside	859,718	677,641	0	216,675	200,000	192,423	163,716	2,310,173
Platteville	380,922	10,633	0	93,773	0	542,179	10,640,123	11,667,629
River Falls	88,739	13,530	0	2,210,719	130,529	136,760	9,502,934	12,083,211
Stevens Point	1,718,673	638,332	0	231,187	0	3,575,012	15,595,364	21,758,568
Stout	4,358,234	307,576	0	2,452,316	96,537	160,843	13,005,861	20,381,368
Superior	32,491	0	0	810,026	0	2,880,049	2,888,904	6,551,470
Whitewater	2,650,382	55,542	0	2,530,847	115,792	565,555	15,337,871	21,255,989
Colleges	11,719	662,233	0	4,803,077	0	77,890	21,281,198	26,836,116
Extension	81,145,028	0	0	0	0	(5,000)	0	81,140,028
System-Wide	0	1,218,892	0	953,193	0	1,157,030	0	3,329,115
Totals	139,263,175	66,291,987	3,155,336	128,254,657	30,830,600	896,014,486	217,934,735	1,481,744,975
Madison	22,838,987	21,852,763	0	3,513,846	500,000	588,294,544	24,778,200	661,778,339
Milwaukee	8,802,863	7,864,530	0	795,494	0	27,981,026	39,620,343	85,064,256
Eau Claire	1,837,125	1,316,150	0	0	0	730,334	13,962,139	17,845,748
Green Bay	104,883	2,077,859	0	75	0	590,682	9,704,977	12,478,476
La Crosse	36,700	103,896	0	946,294	0	1,364,746	10,431,411	12,883,047
Oshkosh	1,499,282	5,026,687	0	410,131	0	922,451	15,681,407	23,539,958
Parkside	537,651	372,038	0	45,250	0	67,623	0	1,022,562
Platteville	194,446	0	0	0	0	434,175	10,501,873	11,130,494
River Falls	19,902	0	0	1,392,084	70,191	71,129	9,461,369	11,014,675
Stevens Point	263,260	110,013	0	0	0	1,420,737	15,595,364	17,389,374
Stout	3,872,897	221,624	0	1,367,952	0	0	12,425,893	17,888,366
Superior	32,491	0	0	776,692	0	2,356,411	2,888,904	6,054,498
Whitewater	2,610,542	0	0	1,443,993	0	410,102	14,230,133	18,694,770
Colleges	0	655,426	0	4,073,176	0	7,300	20,623,780	25,359,682
Extension	53,471,650	0	0	0	0	0	0	53,471,650
System-Wide	0	1,203,892	0	0	0	1,157,030	0	2,360,922
Federal Totals	96,122,678	40,804,878	0	14,764,986	570,191	625,808,290	199,905,793	977,976,815
Madison	7,722,244	20,109,132	3,079,336	102,295,205	29,787,742	259,263,727	14,394,107	436,651,493
Milwaukee	2,672,504	1,521,352	58,000	5,126,049	0	5,424,994	232,911	15,035,809
Eau Claire	849,585	1,536,431	0	0	0	491,843	433,200	3,311,059
Green Bay	68,774	724,406	18,000	604,427	0	184,744	280,069	1,880,419
La Crosse	435,814	59,743	0	259,824	0	1,036,957	0	1,792,338
Oshkosh	1,148,509	514,659	0	1,500	0	505,699	0	2,170,367
Parkside	322,067	305,603	0	171,425	200,000	124,800	163,716	1,287,611
Platteville	186,476	10,633	0	93,773	0	108,004	138,250	537,135
River Falls	68,837	13,530	0	818,635	60,338	65,631	41,565	1,068,536
Stevens Point	1,455,413	528,319	0	231,187	0	2,154,275	0	4,369,194
Stout	485,338	85,952	0	1,084,364	96,537	160,843	579,968	2,493,002
Superior	0	0	0	33,334	0	463,638	0	496,972
Whitewater	39,840	55,542	0	1,086,854	115,792	155,453	1,107,738	2,561,220
Colleges	11,719	6,807	0	729,901	0	70,590	657,418	1,476,435
Extension	27,673,378	0	0	0	0	(5,000)	0	27,668,378
System-Wide	0	15,000	0	953,193	0	0	0	968,193
Nonfederal Totals	43,140,497	25,487,110	3,155,336	113,489,671	30,260,409	270,206,197	18,028,942	503,768,160

* Award figures for FY 2010-11 have been restated to remove inter-institution awards which should not have been included in prior reports and add certain gifts funds which were not included by some UW institutions. The net effect of these changes is a reduction of \$2.8M in total FY2010-11 awards shown in prior reports.

UNIVERSITY OF WISCONSIN SYSTEM
 GIFTS, GRANTS, AND CONTRACTS AWARDED - BY INSTITUTION
 QUARTERLY REPORT & PRIOR-YEAR COMPARISON
 FISCAL YEAR 2011-2012 (4th Quarter)

INCREASE (DECREASE)	Public Service	Instruction	Libraries	Misc	Physical Plant	Research	Student Aid	Total
Madison	6,823,589	(451,322)	(47,161)	(16,260,287)	13,281,268	69,596,067	2,498,844	75,440,997
Milwaukee	(453,377)	(2,596,903)	(12,440)	(302,959)	0	(2,043,137)	(488,892)	(5,897,708)
Eau Claire	(411,977)	(380,950)	0	0	20,000	(125,855)	(1,132,915)	(2,031,697)
Green Bay	(169,556)	(1,782,849)	(13,842)	814,378	1,000	788,572	106,561	(255,736)
La Crosse	(92,507)	(18,792)	0	1,224,453	3,075,644	(271,887)	(1,395,909)	2,521,002
Oshkosh	(1,064,330)	2,017,976	0	(411,631)	0	1,440,942	(1,416,419)	566,538
Parkside	(514,274)	(342,980)	0	(99,242)	(200,000)	411,775	127,898	(616,822)
Platteville	(61,928)	84,173	0	272,332	0	369,999	(1,209,918)	(545,341)
River Falls	774,007	(7,450)	9,637	(602,884)	(99,030)	(84)	(5,563,818)	(5,489,622)
Stevens Point	998,970	4,976	0	851,135	0	(877,867)	(1,661,929)	(684,714)
Stout	(2,036,325)	162,762	0	(664,157)	(79,237)	1,036,184	(1,214,093)	(2,794,866)
Superior	(2,022)	0	0	86,172	0	(1,070,629)	(330,257)	(1,316,736)
Whitewater	22,491	164,717	0	(302,019)	(72,940)	(55,170)	(569,019)	(811,939)
Colleges	(2,243)	(648,977)	1,000	(2,805,119)	0	(33,673)	190,341	(3,298,671)
Extension	(26,262,315)	0	0	0	0	11,500	0	(26,250,815)
System-Wide	0	(166,429)	0	(840,090)	0	(1,058,306)	0	(2,064,825)
Totals	(22,451,796)	(3,962,049)	(62,805)	(19,039,917)	15,926,705	68,118,432	(12,059,524)	26,469,045
Madison	9,826,786	(1,515,096)	0	(1,829,753)	415,523	21,606,504	2,937,175	31,441,140
Milwaukee	(1,330,449)	(2,664,709)	0	1,269,069	0	(1,551,633)	(326,682)	(4,604,404)
Eau Claire	(1,092,123)	2,235	0	0	20,000	28,609	(1,204,347)	(2,245,626)
Green Bay	(102,883)	(1,382,926)	0	756,414	0	431,316	(105,449)	(403,528)
La Crosse	128,876	(102)	0	21,867	0	(389,133)	(1,449,825)	(1,688,317)
Oshkosh	(591,374)	2,266,681	0	(410,131)	0	1,630,390	(1,416,419)	1,479,148
Parkside	(522,651)	(372,038)	0	(45,250)	0	346,566	0	(593,373)
Platteville	108,369	0	0	366,105	0	214,788	(1,071,668)	(382,406)
River Falls	527,642	0	0	(513,911)	(70,191)	28,818	(5,547,499)	(5,575,141)
Stevens Point	(231,195)	527	0	429,568	0	94,304	(1,661,929)	(1,368,725)
Stout	(1,958,976)	126,408	0	(289,216)	0	1,105,482	(1,195,146)	(2,211,448)
Superior	(2,022)	0	0	(24,077)	0	(1,416,846)	(330,257)	(1,773,202)
Whitewater	(59,453)	27,310	0	(197,047)	0	(1,321)	(739,315)	(969,825)
Colleges	0	(655,426)	0	(2,849,922)	0	(6,964)	50,342	(3,461,970)
Extension	(27,997,003)	0	0	0	0	0	0	(27,997,003)
System-Wide	0	(166,429)	0	0	0	(1,103,248)	0	(1,269,677)
Federal Totals	(23,296,455)	(4,333,564)	0	(3,316,284)	365,332	21,017,632	(12,061,019)	(21,624,358)
Madison	(3,003,197)	1,063,773	(47,161)	(14,430,534)	12,865,745	47,989,563	(438,331)	43,999,857
Milwaukee	877,072	67,806	(12,440)	(1,572,028)	0	(491,504)	(162,210)	(1,293,304)
Eau Claire	680,146	(383,185)	0	0	0	(154,464)	71,432	213,929
Green Bay	(66,674)	(399,923)	(13,842)	57,964	1,000	357,256	212,010	147,792
La Crosse	(221,383)	(18,690)	0	1,202,586	3,075,644	117,246	53,916	4,209,319
Oshkosh	(472,956)	(248,706)	0	(1,500)	0	(189,448)	0	(912,609)
Parkside	8,377	29,058	0	(53,992)	(200,000)	65,209	127,898	(23,449)
Platteville	(170,297)	84,173	0	(93,773)	0	155,211	(138,250)	(162,935)
River Falls	246,365	(7,450)	9,637	(88,973)	(28,839)	(28,902)	(16,319)	85,519
Stevens Point	1,230,165	4,449	0	421,567	0	(972,171)	0	684,011
Stout	(77,349)	36,354	0	(374,941)	(79,237)	(69,298)	(18,947)	(583,418)
Superior	0	0	0	110,249	0	346,217	0	456,466
Whitewater	81,944	137,407	0	(104,972)	(72,940)	(53,849)	170,296	157,887
Colleges	(2,243)	6,448	1,000	44,803	0	(26,710)	140,000	163,299
Extension	1,734,688	0	0	0	0	11,500	0	1,746,188
System-Wide	0	0	0	(840,090)	0	44,942	0	(795,148)
Nonfederal Totals	844,660	371,515	(62,805)	(15,723,634)	15,561,373	47,100,800	1,495	48,093,403

UW-Madison Contractual Agreement
with Amgen Inc.

BUSINESS, FINANCE, AND AUDIT COMMITTEE

Resolution:

That, upon the recommendation of the Chancellor of the University of Wisconsin-Madison and the President of the University of Wisconsin System, the Board of Regents approves the contractual agreement between the University of Wisconsin-Madison and Amgen Inc.

UW-MADISON CONTRACTUAL AGREEMENT WITH AMGEN INC.

EXECUTIVE SUMMARY

BACKGROUND

UW Board of Regents policy requires any grant or contract with private profit-making organizations in excess of \$500,000 be presented to the Board for formal acceptance prior to execution.

REQUESTED ACTION

Approval of Resolution I.2.a.3.

That, upon the recommendation of the Chancellor of the University of Wisconsin-Madison and the President of the University of Wisconsin System, the Board of Regents approves the contractual agreement between the University of Wisconsin-Madison and Amgen Inc.

DISCUSSION AND RECOMMENDATIONS

The Office of Research and Sponsored Programs at the University of Wisconsin-Madison has negotiated a Data Analysis Research Agreement with Amgen Inc. In consideration for providing Research Services, Amgen Inc. shall pay UW-Madison an estimated total amount of \$1,034,720. This Data Analysis Research Agreement will be effective upon signature and have a period of performance from that date through April 30, 2016. The research will be conducted by the Statistical Data Analysis Center (SDAC) in the Department of Biostatistics and Medical Informatics within the University of Wisconsin School of Medicine and Public Health under the direction of Dr. Kevin A. Buhr.

The Department of Biostatistics and Medical Informatics shall provide the analysis plan and detailed confidential interim analyses for the Data Monitoring Committee (IDMC). The Statistical Data Analysis Center (SDAC) agrees to be the statistical data analysis center for the Data Monitoring Committee as described in Amgen protocols AMG 78520070337 and AMG 78520110142.

The Agreement covers data analysis services related to Phase 3 clinical trials sponsored by Amgen, Inc. These trials relate to the efficacy and safety of certain drugs in the treatment of postmenopausal women with osteoporosis. Additional details of these services and related terms of the Agreement are included in the Agreement itself.

RELATED REGENT POLICIES

Regent Policy Document 13-1, General Contract Signature Authority, Approval, and Reporting

OFFICE OF OPERATIONS REVIEW AND AUDIT STATUS UPDATE

EXECUTIVE SUMMARY

BACKGROUND

The Office of Operations Review and Audit provides objective review and analysis services in order to add value to, protect, and strengthen the University of Wisconsin System.

REQUESTED ACTION

This item is for information only.

DISCUSSION

The enclosed report provides an overview of activities of the Office of Operations Review and Audit since June 7, 2012. Specifically, this report provides information on the following:

- (1) 2012 major project activity;
- (2) recently issued systemwide engagement report results;
- (3) active engagements;
- (4) other significant projects; and
- (5) an update on Legislative Audit Bureau projects in the UW System.

RELATED REGENT POLICIES

None.

STATUS UPDATE OF THE OFFICE OF OPERATIONS REVIEW AND AUDIT

August 23, 2012

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Legislative Audit Bureau Update	12-13

Snapshot – 2012 Major Project Activity

Title	#	Status
NCAA Division III Athletics – Eau Claire	2011-10	Report Date July 17, 2012
Undergraduate Academic Advising (System)	2011-12	Report Date August 3, 2012
UW Policies Related to the Reporting of Crimes Against Children (System)	2012-01	Report Date May 29, 2012
NCAA Division III Athletics – Stevens Point	2012-02	Report Date August 3, 2012
Compliance with UW System Travel Regulations		
• Parkside	2012-03	Active
• River Falls	2012-05	Active
• Stout	2012-07	Active
• Milwaukee	2012-09	Active
• Whitewater	2012-11	Active
• Oshkosh	2012-13	Active
Compliance with §16.417 Wis. Stats. Related to Dual Employment		
• Parkside	2012-04	Active
• River Falls	2012-06	Active
• Stout	2012-08	Active
• Milwaukee	2012-10	Active
• Whitewater	2012-12	Active
• Oshkosh	2012-14	Active
International Admissions		
• Madison	2012-15	Active
• Milwaukee	2012-16	Active
• La Crosse	2012-17	Active
• Parkside	2012-18	Active
• Whitewater	2012-19	Active
Employee Payroll Information		
• Superior	2012-20	Active

RECENTLY ISSUED SYSTEMWIDE ENGAGEMENT REPORT RESULTS

Undergraduate Academic Advising (Report 2011-12)

Objectives:

- Examine how undergraduate academic advising services are organized.
- Evaluate whether policies and procedures that guide undergraduate academic advising provide adequate guidance on the goals and expectations of advising.
- Examine student utilization of undergraduate academic advising services.

Results:

- Comment 1: Monitor advising loads to ensure adequate access.
- Comment 2: Expand use of advising technology.
- Comment 3: Apply mandatory advising policies to students most in need of advising.
- Comment 4: Enhance training for faculty advisors.
- Comment 5: Routinely assess advising services.

OVERVIEW OF ACTIVE ENGAGEMENTS

Compliance with UW System Travel Regulations

- ❑ Audits will be conducted at all UW institutions and UW System Administration.
- ❑ Scope includes travel expense reports of key administrators and financial personnel.
- ❑ Period of coverage is July 1, 2010 through June 30, 2012.
- ❑ Fieldwork is actively underway for six institutions (UW-Parkside, River Falls, Stout, Milwaukee, Whitewater, and Oshkosh).
- ❑ Results for these institutions are expected to be finalized during the next three months.

Compliance with §16.417 Wis. Stats. Related to Dual Employment (Overload Payments)

- Audits will be conducted at all UW institutions and UW System Administration.
- Scope includes selecting a sample of individuals that received overload payments and evaluating whether institutions complied with the approval and statutory requirements/limitations associated with overload payments.
- Period of coverage is January 1, 2011 through June 30, 2012.
- Fieldwork is actively underway for six institutions (UW-Parkside, River Falls, Stout, Milwaukee, Whitewater, and Oshkosh).
- Results for these institutions are expected to be finalized during the next three months.

International Admissions

- ❑ Audits will be conducted at UW-Madison, Milwaukee, La Crosse, Parkside, and Whitewater.
- ❑ Scope:
 - ❑ Assessing whether UW institutions are complying with documentation requirements established within University of Wisconsin System Academic Information Series Policy 7.3 and U.S. Code of Federal Regulations Policy 8 CFR 214.3.
 - ❑ Inspecting institutional contracts for international student recruitment to determine whether anti-bribery provisions of the Foreign Corrupt Practices Act are addressed.
 - ❑ Analyzing international admissions requirements and data to determine whether these requirements have diluted UW admission standards.
- ❑ Period of enrollment considered is undergraduate freshmen enrollment during fall 2011.
- ❑ Entrance memorandum issued in July 2012, and entrance conferences held with selected institutions.

Employee Payroll Information

- Audits will be conducted at all UW institutions and UW System Administration.
- Scope includes systematically identifying conditions or trends that warrant further review or investigation. Examples of items to be systematically identified include social security numbers assigned to multiple individuals, invalid social security numbers, payments made to terminated employees, and other unusual trends.
- Select pay periods will be reviewed between July 1, 2011 through June 30, 2012.
- Fieldwork is underway for UW-Superior, and will soon commence for other UW institutions.

OTHER SIGNIFICANT PROJECTS

Other Significant Projects

Audit Plan Development Process:

- ❑ Multi-phased collaborative approach.
- ❑ Emphasis on financial, compliance, and IT risks.

Enterprise Risk Management (ERM) Project:

- ❑ Defined as a structured, consistent, and continuous process for identifying, accessing, deciding on responses to, and reporting on opportunities and threats that affect the achievement of organization objectives.
- ❑ Supported by UW System Administration offices of Academic Affairs, Administrative Services, Financial Administration, General Counsel, and Operations Review and Audit.
- ❑ ERM workshops planned for UW-Milwaukee during fall 2012.

LEGISLATIVE AUDIT BUREAU UPDATE

Legislative Audit Bureau Projects

- ❑ Annual financial statement audit for fiscal year 2011-12.
- ❑ Annual compliance audit of federal grants and expenditures, including student financial aid, for fiscal year 2011-12.
- ❑ Analysis of issues related to the rehiring of annuitants by employers participating in the Wisconsin Retirement System.
- ❑ Evaluation of WiscNet and UW System's use of broadband services.

BOARD OF REGENTS OF THE UNIVERSITY OF WISCONSIN SYSTEM

I.3. Capital Planning and Budget Committee

Thursday, August 23, 2012
Room 1920
1220 Linden Drive
Madison, Wisconsin

1:00 p.m. Capital Planning and Budget Committee – Room 1920

- a. UW System Presentation: 2013-15 Capital Budget Recommendation
- b. UW System Presentation: Residence Hall Study
- c. Approval of the Minutes of the June 7, 2012 Meeting of the Capital Planning and Budget Committee
- d. UW-La Crosse: Authority to Adjust the Scope and Budget of the Parking Ramp and Police Building Project
[Resolution I.3.d.]
- e. UW-Madison: Authority to Adjust the Budget of the Memorial Union Renovation–Phase I Project
[Resolution I.3.e.]
- f. UW-Whitewater: Authority to Adjust the Budget of the Multi-Sport Facility - Phase III Project
[Resolution I.3.f.]
- g. UW-System: Authority to Construct All Agency Maintenance and Repair Projects
[Resolution I.3.g.]
- h. UW System: Authority to Request the Release of Funds to Prepare Campus Master Plans for UW-Parkside, UW-Superior, and UW-Whitewater
[Resolution I.3.h.]
- i. Report of the Associate Vice President Building Commission Actions

Authority to Adjust the Scope and Budget
of the Parking Ramp and Police Building
Project, UW-La Crosse

CAPITAL PLANNING AND BUDGET COMMITTEE

Resolution:

That, upon the recommendation of the UW-La Crosse Chancellor and the President of the University of Wisconsin System, authority be granted to increase the project scope and budget of the Parking Ramp and Police Services Building project by \$936,000 Program Revenue-Cash for a total project cost of \$14,774,000 (\$6,838,000 Program Revenue Supported Borrowing and 7,936,000 Program Revenue-Cash).

THE UNIVERSITY OF WISCONSIN SYSTEM

Request for Board of Regents Action August 2012

1. Institution: The University of Wisconsin-La Crosse
2. Request: Authority to increase the project scope and budget of the Parking Ramp and Police Services Building project by \$936,000 Program Revenue-Cash for a total project cost of \$14,774,000 (\$6,838,000 Program Revenue Supported Borrowing and \$7,936,000 Program Revenue-Cash).
3. Description and Scope of Project: This project was approved to design and construct a 600 +/- stall above-ground concrete parking ramp structure and an 8,740 GSF building for police and parking services. The project site is located within the campus boundary on university-owned land on the north edge of campus along La Crosse Street (State Highway 16). The site was recommended in the 2005 UW-La Crosse Campus Master Plan and is currently an unimproved gravel parking lot.

The original scope of the project consisted of a ramp with one level at ground elevation plus three full elevated levels. The project originally included a four-stop elevator, stairways at each corner of the structure, and a securable area for the storage of university maintenance and/or police vehicles and equipment. The parking structure was designed to accommodate the construction of two additional levels (approximately 400 +/- additional stalls) in the future.

4. Justification of the Request: The project was approved for construction as a 600 +/- stall parking structure with the capacity for future expansion. The bids were opened May 17, 2012, and the lowest bid amount was 16% below the construction budget. The campus wishes to utilize this favorable bidding climate to build one additional level that would net 200 +/- stalls and include an additional elevator stop.
5. Budget and Schedule:

Budget	%	
Construction		\$12,742,000
Contingency	5%	637,000
A/E Design Fee & Other Fees	6.7	860,000
DSF Management Fee	4%	535,000
Total Project Cost		\$14,774,000

Construction Start	July 2012
Substantial Completion – Ramp	July 2013
Substantial Completion – Building	June 2013

6. Previous Action:

- August 19, 2010
Resolution 9801
- Recommended that the Parking Ramp and Police Services Building project be submitted to Department of Administration and the State Building Commission as part of the UW System 2011-13 Capital Budget at an estimated total project cost of \$12,131,000 (\$7,131,000 Program Revenue Supported Borrowing and \$5,000,000 Program Revenue-Cash). The project was subsequently enumerated at amount and funding source.
- February 11, 2012
- Recommended approval of the Design Report of the Parking Ramp and Police Services Building project and authority to (1) increase the project scope and budget by \$1,707,000 Program Revenue-Cash, and (2) construct the project for a for a total project cost of \$13,838,000 (\$6,838,000 Program Revenue Supported Borrowing and 7,000,000 Program Revenue-Cash).

Authority to Adjust the Budget of the
Memorial Union Renovation–Phase I
Project, UW-Madison

CAPITAL PLANNING AND BUDGET COMMITTEE

Resolution:

That, upon the recommendation of the UW-Madison Interim Chancellor and the President of the University of Wisconsin System, authority be granted to increase the budget of the Memorial Union Renovation-Phase I project by \$1,200,000 Gift Funds for a revised project budget of \$53,200,000 (\$40,500,000 Program Revenue Supported Borrowing and \$12,700,000 Gift Funds).

THE UNIVERSITY OF WISCONSIN SYSTEM

Request for Board of Regents Action August 2012

1. Institution: The University of Wisconsin-Madison
2. Request: Authority to increase the budget of the Memorial Union Renovation-Phase I project by \$1,200,000 Gift Funds for a revised project budget of \$53,200,000 (\$40,500,000 Program Revenue Supported Borrowing and \$12,700,000 Gift Funds).
3. Description and Scope of Project: The Memorial Union Renovation-Phase I project is the second in a series of projects to improve and update all the Wisconsin Union facilities. The Phase I project restores and renovates the entire west wing of Memorial Union as well as spaces immediately adjacent to the west wing. The project also renovates the entire fifth floor of the existing Memorial Union into offices for the Wisconsin Union and the Wisconsin Union Directorate.

The requested budget increase will expand the existing orchestra pit, provide a new pit lift, a new orchestra shell, and rigging for suspended storage of the shell within the theater fly space.

The existing Wisconsin Union Theater orchestra pit consists of 269 GSF of space including a circa 1939 pit lift. Work will expand the pit size to 670 GSF which will affect approximately 1,800 GSF of space below the stage. The project will replace the outdated pit lift with a new code-compliant lift. The planned modifications require select demolition and structural changes to the stage support and reconstruction for Americans with Disabilities Act (ADA) compliance and access. The project will update grating, lighting, electrical, HVAC, Fire Protection, and acoustics within and surrounding the pit.

Work will also replace the dysfunctional orchestra shell. When not in use, space constraints within the Union Theater dictate that the orchestra shell be stored in fly space above the stage. This requires modification to the west side of the existing fly structure and the installation of a motorized rigging system to raise and lower the orchestra shell. Structural, mechanical, electrical, and fire protection systems will be also modified.

4. Justification of the Request: The Union Theater is undergoing major renovation to improve both the auditorium and the stage. Expanding the orchestra pit will better serve the space and create a more versatile and accommodating venue for multiple programs. It will also enhance the development of proper voice/instrument loudness balance during musicals or opera-like performances. The design will provide ADA compliant entrances and exits, which currently do not exist. A new lift will replace the existing orchestra pit lift which is operational but lacks the current controls and safety devices that are necessary.

Within a multi-purpose hall such as the Union Theater, an orchestra shell is an essential element which allows the stage to adapt and accommodate symphony orchestra, choral, and other similar events. The new orchestra shell will replace the current orchestra shell which has served its useful life from a safety and functional standpoint. The present shell offers difficult on-stage hearing conditions, excessive on-stage loudness, and poor sound projection to the audience. The new orchestra shell will have the ability to be raised and stored above the stage when not in use.

The orchestra pit expansion work was included as an add alternate in the project's Design Report. Since that time, the campus has received a gift commitment of \$1,200,000 that allows this work to be restored to the project and the orchestra shell to be added.

5. Adjusted Budget and Schedule:

Budget Item	%	Cost
Construction		\$39,886,000
Demolition and Abatement		204,000
A/E Design Fees	7.0%	2,830,240
Other Fees		1,088,000
DSF Management Fees	4.0%	1,754,760
Project Contingency	8.5%	3,410,000
Moveable & Special Equipment		3,897,000
Percent for Art	0.25%	130,000
Estimated Total Project Cost		\$53,200,000

Bid Construction	July 2012
Start Abatement/Demolition	August 2012
Start Construction	September 2012
Construction/Substantial Completion	May 2014
Occupancy	July 2014

6. Previous Action:

August 18, 2006
Resolution 9225

Granted authority to seek enumeration of the Union South Replacement and Memorial Union Theater Wing Renovation/Addition project as part of the 2007-09 Capital Budget at a total estimated cost of \$139,700,000 (\$126,300,000 Program Revenue Supported Borrowing and \$13,500,000 Gift Funds).

July 15, 2011
Resolution 9955

Granted authority to seek a waiver of Wis. Stats. § 16.855 under the provisions of Wis. Stats. §13.48 (19) to allow selection, through a Request for Proposal process, of a Construction Manager-at-Risk (CMAR) for construction of the Memorial Union Theater Wing Renovation-Phase I project at a preliminary estimated budget of \$52,000,000 (\$40,500,000 Program Revenue Supported Borrowing

and \$11,500,000 Gift Funds). Authority to construct the project will be sought at the 35% design phase.

December 8, 2011
Resolution 9998

Approved the Design Report and granted authority to construct the Memorial Union Renovation-Phase I project at a preliminary estimated budget of \$52,000,000 (\$40,500,000 Program Revenue Supported Borrowing and \$11,500,000 Gifts).

Authority to Adjust the Budget of the Multi-Sport Facility-Phase III Project,
UW-Whitewater

CAPITAL PLANNING AND BUDGET COMMITTEE

Resolution:

That, upon the recommendation of the UW-Whitewater Chancellor and the President of the University of Wisconsin System, authority be granted to increase the project budget of the Softball Building portion of the Multi-Sport Facility-Phase III project by \$350,000 Program Revenue-Cash for a total project cost of \$1,000,000 (\$700,000 Program Revenue Supported Borrowing, \$60,000 Gift Funds, and \$240,000 Program Revenue-Cash).

THE UNIVERSITY OF WISCONSIN SYSTEM

Request for Board of Regents Action August 2012

1. Institution: The University of Wisconsin-Whitewater
2. Request: Authority to increase the project budget of the Softball Building portion of the Multi-Sport Facility-Phase III project by \$350,000 Program Revenue-Cash for a total project cost of \$1,000,000 (\$700,000 Program Revenue Supported Borrowing, \$60,000 Gift Funds, and \$240,000 Program Revenue-Cash).
3. Description and Scope of Project: This project will construct 2,145 GSF of space to support the university's softball program. The new building will be located at the existing van Steenderen Softball Complex within the university's Multi-Sport Facility. The building will contain a press-box, a team locker and shower room, a coach's office and locker room, and public restrooms. Site work will include a new paved entrance plaza, a paved ramp, new concrete and landscape block retaining walls, and site fencing. The building and surrounding site is designed to connect with and provide access to the upper and lower levels of the existing softball grandstand seating structure. The plaza is designed to allow access to the new public restrooms from Coulthart Pavilion during non-softball events. The building will be used primarily during the university's softball season, but will be used year-round for office functions, meetings, recruiting, and other related functions. The building's heating systems will be zoned to allow separate controls of occupied and unoccupied spaces during the winter months.

The building will be a two-story structure which is constructed of cast-in-place concrete, concrete masonry, and wood framing. The upper level will be accessed from the new entrance plaza and will be adjacent to the top tier of grandstand seating. The lower level will be partially below the grade of the sloping site and the exposed west facade will be accessed by a secondary circulation path below the grandstand. The exterior design will complement existing campus architecture and will incorporate dark gray cement board siding, burnished concrete block veneer, clad wood windows, and a standing seam metal roof.

4. Justification of the Request: This project was bid in fall of 2011. Unfortunately, the project bids came in over the approved budget amount. The campus investigated several avenues to reduce the cost of the project including value engineering and scope reductions. The campus has determined that scope reduction would result in an unusable facility and would not benefit the campus or the athletics programs using the facility. Because of the time elapsed between original bid and now, the project must be rebid before construction can begin.

The van Steenderen Softball Complex, which includes the Women's Softball practice and varsity softball fields, was originally constructed in 1976. There is a need for public restroom facilities in the West Campus Athletic Fields Complex. The closest restrooms are located in the Williams Center which is approximately 1,700 feet (one-third of a mile) away. This project will construct ADA compliant public restroom facilities located within the new Softball Support Building. Spectator services are currently non-existent within the west campus athletic area, although large crowds are often attracted to athletic events that are held there. There are no restrooms, concession facilities, sanitary sewer, or potable water services to that area. There are no support locker facilities for athletes, coaches, officials, or the press. This project will resolve some of those deficiencies by providing a small support building for softball, which will include concession areas, public restrooms, locker facilities, press boxes, and coaches' offices.

This project was enumerated in the 2007-09 Capital Budget to construct a new Track/Soccer building and a new softball building with gift funds, however the campus was only able to raise \$60,000 for the softball building.

5. Budget and Schedule:

Budget	%	
Construction		\$850,000
Contingency	4%	34,000
A/E Fee	12%	75,000
DSF Management Fee	4.0%	35,000
Equipment		6,000
Total Project Cost		\$1,000,000

Bid Opening	September 2012
Start of Construction	November 2012
Substantial Completion	March 2013
Occupancy	April 2013

6. Previous Action:

August 17, 2006
Resolution 9225

Recommended enumeration of the Multi-Sport Facility-Phase III project as part of the 2007-09 Capital Budget at an estimated total cost of \$5,886,000 (\$2,450,000 Program Revenue Supported Borrowing and \$3,436,000 Gift Funds). The project was subsequently enumerated in the 2007-09 Capital Budget at \$3,474,000 Gift Funds.

October 3, 2008
Resolution 9554

Granted authority to revise the funding for the Multi-Sport Facility-Phase III project by an increase of \$172,000 Program Revenue Supported Borrowing and a decrease of \$172,000 Gifts Funds and construct the bleacher portion of the project for

\$172,000 Program Revenue Supported Borrowing. The total project cost is revised to \$3,474,000 (\$172,000 Program Revenue Supported Borrowing and \$3,302,000 Gift Funds).

February 10, 2011
Resolution 9874

Approved the Design Report for the Multi-Sport Facility-Phase III project and granted authority to construct the softball building portion of the project for \$650,000 by substituting \$350,000 of Program Revenue Supported Borrowing for gifts, for a total project cost of \$650,000 (\$350,000 Program Revenue Supported Borrowing, \$60,000 Gift Funds, and \$240,000 Program Revenue-Cash).

Authority to Construct All Agency
Maintenance and Repair Projects,
UW System

CAPITAL PLANNING AND BUDGET COMMITTEE

Resolution:

That, upon the recommendation of the President of the University of Wisconsin System, authority be granted to construct various maintenance and repair projects at an estimated total cost of \$14,545,900 (\$898,200 General Fund Supported Borrowing; \$13,355,700 Program Revenue Supported Borrowing; and \$292,000 Program Revenue-Cash).

THE UNIVERSITY OF WISCONSIN SYSTEM

Request for Board of Regents Action August 2012

1. **Institution:** The University of Wisconsin System
2. **Request:** Authority to construct various maintenance and repair projects at an estimated total cost of \$14,545,900 (\$898,200 General Fund Supported Borrowing; \$13,355,700 Program Revenue Supported Borrowing; and \$292,000 Program Revenue-Cash).

ENERGY CONSERVATION

INST	PROJ. NO.	PROJECT TITLE	GFSB	PRSB	CASH	GIFT/GRANT	BTF	TOTAL
MSN	12F1K	Multi-Bldg Energy Conservation, Ph. 4	\$ -	\$ 12,032,400	\$ -	\$ -	\$ -	\$ 12,032,400
EC SUBTOTALS			\$ -	\$ 12,032,400	\$ -	\$ -	\$ -	\$ 12,032,400

FACILITIES MAINTENANCE & REPAIR

INST	PROJ. NO.	PROJECT TITLE	GFSB	PRSB	CASH	GIFT/GRANT	BTF	TOTAL
PKS	12G4A	Univ Apts Ext Envelope Maint	\$ -	\$ 1,063,000	\$ -	\$ -	\$ -	\$ 1,063,000
FM&R SUBTOTALS			\$ -	\$ 1,063,000	\$ -	\$ -	\$ -	\$ 1,063,000

PROGRAMMATIC REMODELING & RENOVATION

INST	PROJ. NO.	PROJECT TITLE	GFSB	PRSB	CASH	GIFT/GRANT	BTF	TOTAL
WTW	11C2I	Campus Vehicle Storage Building (Increase)	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ 30,000
PR&R SUBTOTALS			\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ 30,000

UTILITIES REPAIR & RENOVATION

INST	PROJ. NO.	PROJECT TITLE	GFSB	PRSB	CASH	GIFT/GRANT	BTF	TOTAL
LAX	10J1R	South Campus Ext Lighting Repl (Increase)	\$ 374,700	\$ 260,300	\$ -	\$ -	\$ -	\$ 635,000
MSN	12A1D	Highland Ave Reconstruction	\$ 523,500	\$ -	\$ 174,500	\$ -	\$ -	\$ 698,000
OSH	12A1L	Elmwood Avenue Mall Development (Increase)	\$ -	\$ -	\$ 87,500	\$ -	\$ -	\$ 87,500
UR&R SUBTOTALS			\$ 898,200	\$ 260,300	\$ 262,000	\$ -	\$ -	\$ 1,420,500

	GFSB	PRSB	CASH	GIFT/GRANT	BTF	TOTAL
AUGUST 2012 TOTALS	\$ 898,200	\$ 13,355,700	\$ 292,000	\$ -	\$ -	\$ 14,545,900

3. **Description and Scope of Project:** This request provides maintenance, repair, renovation, and upgrades through the All Agency Projects Program.

Energy Conservation

MSN - Multi-Building Energy Conservation, Phase 4 (\$12,032,400): This project implements energy conservation measures in over 322,600 GSF between two academic buildings (Bock Laboratories and Veterinary Medicine Building), lighting retrofits in seven buildings across campus and select parking lots and exterior locations, and re-insulating ~1,900 LF of central utility tunnel piping based on a recently completed comprehensive energy study.

Building work includes performance of a wide range of energy conservation measures throughout the campus. Electrical work includes selective lighting and ballast replacements

and installation of new occupancy sensors. Mechanical work includes HVAC system variable frequency drive installations and controls replacement, converting constant volume HVAC systems into variable air volume systems, reduction of the outside air intake and supply airflow, rebalancing the HVAC system, and retrofitting fumehoods with occupancy sensors.

Utility tunnels work includes asbestos abatement, replacing pipe insulation and protective jacketing, installing new protective jacketing on piping where none currently exists, replacing expansion joint and valve insulation blankets, and replacing deteriorated and sub-standard expansion joints, piping supports, and valves.

The Department of Administration and the University of Wisconsin System embrace high-performance green building standards and energy conservation for state facilities and operations. 2005 Wisconsin Act 141 requires each agency to develop energy cost reduction plans. Plans must include all system and equipment upgrades that will pay for themselves in energy cost reductions over their useful life. The energy savings performance contracting program provides a process for UW System to effect energy cost reductions in existing buildings and utility systems.

This project will assist UW-Madison in complying with these energy reduction goals. The implementation of the energy conservation measures (ECMs) identified in this request will result in an anticipated annual energy cost savings of approximately \$968,083 with a simple payback of 12.4 years. This is below the state energy fund simple payback requirement of 16 years or 20-year payback with repayment at a 5.25% bond rate and a 3% inflation rate.

Facilities Maintenance and Repair

PKS - University Apartments Exterior Envelope Maintenance and Repair (\$1,063,000):

This project repairs or replaces various components (decorative paneling, doors, roofing, siding, windows) of the exterior envelope that have failed or are near the end of their useful life. Project work includes replacing 96 exterior doors; 212 exterior windows (2'0" x 4'0"); ~70,000 SF of asphalt shingle roofing; ~30,000 SF of wood siding at gables and stairwells with new steel siding; and ~2,000 LF of gutters and downspouts across all seven student residence buildings and one common building. The design consultants will inspect and assess thirteen stairwells, all balconies and railings, and make recommendations for repair or replacement of the various assemblies and components. The damaged components identified will be repaired or replaced.

Approximately 10,000 SF of aggregate/exterior insulation finishing system (EIFS) panels will be removed and disposed. The masonry behind the EIFS panels will be repaired and the plywood backing will be replaced with new steel siding to match the steel siding used throughout the complex. All soffits and fascia will be repaired or replaced. All masonry surfaces will be tuck pointed and recaulked as required. All roof vents will be replaced with new maintenance free units. All balconies, railings, and stairwells will be repainted. All through-wall unit air conditioner sleeves will be replaced. The campus will supply the sleeves and the contractor will install as per manufacturer specifications, reinsulate, recaulk,

and replace exterior and interior trim pieces to match new fascia, gutters and downspouts, siding, and soffits.

The University Apartments (72,107 GSF) were built in 1986 as the first on-campus housing. The buildings are wood framed with asphalt shingle, brick, wood and aggregate panel exterior finishes, and were constructed by a developer to quality standards significantly inferior to typical state projects. The aggregate panels were later skim coated with EIFS when the panels began to fail. Due to poor initial construction quality and the age of the complex, the facility requires significant exterior envelope maintenance to extend its useful life and marketability. The complex consists of seven residential buildings with 53 total living units and a common core building that houses the mechanical services and support facilities. Each residential unit consists of four bedrooms, two baths, and a shared living room/kitchen area. Each unit houses approximately seven residents.

Programmatic Remodeling and Renovation

WTW - Campus Vehicle Storage Building (\$30,000 increase for a total project cost of \$248,200): This request increases the project budget to match recent bid results. The budget increase is needed to complete the originally approved project scope and intent.

Utilities Repair and Renovation Requests

LAX - South Campus Ext Lighting Replacement (\$635,000 increase for a total project cost of \$1,825,000): This request increases the project scope and budget through a change order to include the replacement of an additional 130 exterior light fixtures and poles on the northern campus. New energy efficient fixtures containing 50-watt LED light sources will replace 100-watt high pressure sodium fixtures. All direct buried wiring will be replaced with new wire in underground PVC conduit.

The campus exterior lighting replacement was originally conceived as a two phased project due to estimated project cost. Since favorable bid unit costs for additional poles have been received, it is prudent to replace the remainder of the fixtures and poles under this project.

MSN - Highland Avenue Reconstruction (\$698,000): This project reconstructs the southern end of the eastern most portion of Highland Avenue, replacing the asphalt pavement and constructing a new pedestrian walkway on the east side of Highland Avenue. Project work includes reconstructing 1,150 LF of Highland Avenue from the railroad tracks just north of Campus Drive to the entrance of Lot 79. All asphalt and concrete pavements will be removed, along with associated curb and gutter. The new roadway will be constructed with asphalt pavement and the intersection at the Veterans Administration Hospital will be paved with concrete. New tinted concrete crosswalks will be included as designated by campus. The project also constructs a new pedestrian walkway along the east side of Highland Avenue and adjusts the roadway alignment as necessary to accommodate this new walkway. All inlets, hydrants, signs, pedestrian ramps, and utility access pits will be adjusted and modified as necessary. An electrical vault within the roadway will also require retrofitting and modifications to accommodate the new road surface.

The condition of the roadway and pedestrian walkways is poor and they are unable to be repaired through routine maintenance procedures. The pavements have exceeded their useful lives and should be replaced. This project will provide safe and serviceable vehicular and pedestrian pavements and improve pedestrian circulation. The new concrete intersection at the Veterans Administration Hospital will provide a more stable and robust platform for the municipal bus stop located in this area.

OSH - Elmwood Avenue Mall Development (\$87,500 increase for a total project cost of \$272,500): This request increases the project budget to match recent bid results for the project scope approved under the Small Projects Program. The budget increase is needed to complete the originally approved project scope and intent.

This project develops a recently closed one-block section of Elmwood Avenue into a pedestrian mall and is located adjacent to a block of student residence halls and the student union. New lighting, pedestrian furniture, planters, and landscaping will be installed and conform to campus standards. Pavers or stamped and tinted concrete will be installed for the pedestrian pavements. Emergency vehicle access and the adjacent bicycle paths have been integrated into the mall development design.

Pedestrian mall development is an important component of the campus master plan. This section of Elmwood Avenue was recently closed to allow the relocation and replacement of underground storm water piping. The university requested and received approval from the City of Oshkosh to close this section of Elmwood Avenue to enhance the safety for the students living nearby.

4. Justification of the Request: UW System Administration and the Division of State Facilities continue to work with each institution to develop a comprehensive campus physical development plan, including infrastructure maintenance planning. After a thorough review and consideration of approximately 450 All Agency Project proposals and over 4,500 infrastructure planning issues submitted, and the UW All Agency Projects Program funding targets set by the Division of State Facilities (DSF), this request represents high priority University of Wisconsin System infrastructure maintenance, repair, renovation, and upgrade needs. This request focuses on existing facilities and utilities, targets the known maintenance needs, and addresses outstanding health and safety issues. Where possible, similar work throughout a single facility or across multiple facilities has been combined into a single request to provide more efficient project management and project execution.

5. Budget:

General Fund Supported Borrowing	\$ 898,200
Program Revenue Supported Borrowing	\$ 13,355,700
Program Revenue Cash	<u>292,000</u>
Total Requested Budget ..	\$ 14,545,900

6. Previous Action:

November 4, 2010
Resolution 9841

The Board of Regents previously approved LAX - South Campus Exterior Lighting Replacement at an estimated total cost of \$1,190,000 (\$702,100 General Fund Supported Borrowing and \$487,900 Program Revenue Supported Borrowing).

April 8, 2011
Resolution 9913

The Board of Regents previously approved WTW - Campus Vehicle Storage Building at an estimated total cost of \$218,200 Program Revenue Cash.

Authority to Request the Release of Funds to
Prepare Campus Master Plans for
UW-Parkside, UW-Superior, and
UW-Whitewater, UW System

CAPITAL PLANNING AND BUDGET COMMITTEE

Resolution:

That, upon the recommendation of the President of the University of Wisconsin System, authority be granted to request the release of \$645,000 Building Trust Funds-Planning and the use of \$215,000 Program Revenue-Cash for the purpose of hiring master planning consultants to prepare a campus master plan for each UW-Parkside, UW-Superior, and UW-Whitewater.

THE UNIVERSITY OF WISCONSIN SYSTEM

Request for Board of Regents Action September 2012

1. Institution: The University of Wisconsin System
2. Request: Authority to request the release of \$645,000 Building Trust Funds-Planning and the use of \$215,000 Program Revenue-Cash for the purpose of hiring master planning consultants to prepare a campus master plan for each UW-Parkside, UW-Superior, and UW-Whitewater.
3. Project Description and Scope: For each of the three campuses, projects will provide a comprehensive analysis of existing physical conditions and existing and projected physical needs, and develop recommendations for meeting those physical needs within a framework that accommodates the next twenty years. The master plan will integrate academic and financial planning of the campus with physical development planning. The master planning processes will include input from each university's administration, faculty, staff, and students; UW System and Division of Facilities Development stakeholders; representatives of local governments; and stakeholders from adjacent neighborhoods and institutions.

Recommendations will address land use, space use, image and identity, access and circulation, parking, open space, athletic and recreation facilities, utilities, sustainability, and potential acquisition. Emphasis on each component will vary to accommodate each university's specific needs. Existing buildings will be evaluated and recommended either for continued use, renovation, adaptive reuse, or limited reinvestment and eventual removal. In instances where the recommendation is to renovate or reuse an existing facility, the specific use(s) and purpose will be identified. General cost parameters and phasing options will be provided. Campus site and architectural design guidelines will be developed unless previously prepared.

4. Justification of the Request: Campus master plans are intended to support academic planning and serve as the physical means for implementing strategic plans. The master plan will assess the condition and suitability of current facilities; identify appropriate physical solutions in conjunction with operational improvements; evaluate costs of solutions; identify funding sources to streamline implementation; and assign roles and responsibilities for achieving the master plan recommendations.

UW-Parkside is located between Kenosha and Racine in a park-like natural setting with a visually distinctive set of modern-style buildings carefully sited on 720-acres. Established in 1968, the institution has grown into a comprehensive university in the liberal arts tradition with a strong appreciation of collaboration. The approximately 3,900 students

who attend UW-Parkside represent the greatest diversity in the UW System. This project will undertake a space needs assessment and update the 2006 Master Plan.

UW-Superior has a mix of historic and modern architecture located on a main campus of 124 acres in the heart of this northern community at the western tip of Lake Superior. Established in 1868 to train teachers and evolving over time to accommodate changing needs, UW-Superior is a comprehensive liberal arts university that now serves over 2,300 students. This campus is in the process of recovering from serious flooding which affected a majority of facilities with the central heating plant receiving the most significant impacts. This project will address space planning and site development in addition to updating the 1999 Master Plan.

The 400-acre UW-Whitewater campus is comprised of a southern part that contains mostly academic, administrative, and student life functions, and a northern part that contains athletic and recreation functions and a majority of the residence halls. Established in 1927, UW-Whitewater, which now serves over 10,500 students, has expanded into a comprehensive university with a nationally-ranked business program. Since 1973, the university has had a particular mission of serving students with disabilities. This project will assess space needs and update the 1996 Master Plan.

5. Budget: \$860,000 (\$645,000 Building Trust Funds-Planning and \$645,000 Program Revenue-Cash).

University	BTF-Planning	PR-Cash	Total
UW-Parkside	\$225,000	\$75,000	\$300,000
UW-Superior	\$120,000	\$40,000	\$160,000
UW-Whitewater	\$300,000	\$100,000	\$400,000

6. Previous Action: None.

8-14-12

BOARD OF REGENTS OF THE UNIVERSITY OF WISCONSIN SYSTEM

I.4. Research, Economic Development
and Innovation Committee

Thursday, August 23, 2012
Room 1820 Van Hise Hall
1220 Linden Drive
Madison, Wisconsin

1:00 p.m. Research, Economic Development & Innovation Committee – Room 1820 Van Hise Hall

- a. Overview of REDI Committee Purpose
- b. UW-Milwaukee and UW-Parkside Corporate Engagement and Regional Development
- c. Wisconsin Small Company Advancement Program (WiSCAP) 2011 Annual Report
- d. The Role and Impact of Undergraduate Research at UW Institutions

UW-MILWAUKEE AND UW-PARKSIDE CORPORATE ENGAGEMENT AND REGIONAL DEVELOPMENT

BACKGROUND

Both the University of Wisconsin-Milwaukee (UWM) and University of Wisconsin-Parkside (UW-P) play a key role in the economic prosperity of Milwaukee, Kenosha, and Racine Counties and the entire southeastern Wisconsin region. Research has significantly increased at UWM, and the campus is recognized as one of the leading universities for research in the Tri-State Region (21-county region from southeast Wisconsin through Chicagoland to northwest Indiana)¹. UW-P is committed to providing talent for the region and excels in community engagement. UW-P was again recognized for its ongoing commitment to serving southeastern Wisconsin and northern Illinois with the President's Higher Education Community Service Award.

REQUESTED ACTION

For information and discussion only; no action is required at this time.

DISCUSSION

UWM and UW-P look to align their strengths and resources with the needs of regional companies and partners. Both institutions support cluster industries in water, energy, and healthcare. In addition, both universities are key partners in the Economic Development Administration-funded University Center: Wisconsin Center for Commercialization Resources (WCCR). Only 22 University Centers are found across the nation, and their primary role is to support economic development within the region. The WCCR is the University Center for the entire state of Wisconsin, serving to enhance economic development, partnerships, and commercialization efforts.

Dr. Carmel Ruffolo, Director of Corporate Engagement and Regional Development at UWM and UW-P, will provide an overview of how assets and strengths at each campus are linked and leveraged with the needs and resources of regional companies and key stakeholders that drive regional development. She will discuss the initiatives undertaken within the M7 region and within the tri-state (Wisconsin, Illinois, and Indiana) region. Dr. Ruffolo will also provide an overview of the newly-launched WCCR.

RELATED REGENT POLICIES

No applicable Regent Policy Documents

¹ Territorial Review: The Chicago Tri-State Metropolitan Area, United States. 2012, Organization of Economic Cooperation and Development (OECD). OECD publishing.

WISCONSIN SMALL COMPANY ADVANCEMENT PROGRAM (WiSCAP) 2011 ANNUAL REPORT

BACKGROUND

The Wisconsin Small Company Advancement Program (WiSCAP) was created by 2009 Wisconsin Act 265. The Act authorized WiSys Technology Foundation to conduct the program and appropriated funds under s. 20.285(1)(cd), Wis. Stats.

WiSCAP was formulated to utilize the considerable technical expertise residing in the UW comprehensive campuses to serve the innovation needs of small companies lacking research and development resources. Thus, WiSCAP connects small companies throughout the state to faculty at the UW comprehensive campuses in a combined effort to solve the following challenges in high-tech research, development, education, and job creation:

- Small companies represent a powerful engine for job growth in the country. Many have ideas for next generation products; however, they lack the funds, research facilities and technical expertise to develop and test new products.
- UW System comprehensive campuses have approximately 400 faculty members with technical expertise and resources currently not engaged in product-oriented research.
- A majority of the approximately 90,000 students in the comprehensive campuses do not have opportunities for training in product oriented, high-tech research--a necessity to compete for high-paying jobs in new knowledge-based businesses.

WiSCAP was expected to lead to the development of joint intellectual property, marketable products, new job creation, and long-term revenue for the campuses. The state allocated \$2 million to WiSCAP to be spent by June 2012 to support research and development projects important for Wisconsin small companies.

WiSys launched WiSCAP in January, 2010. The 2010 Annual Report was presented to the Board of Regents at its June 2011 meeting. A total of seven projects were initiated in 2010 with an allocation of \$717,329. These projects involved seven small companies and seven UW campuses.

REQUESTED ACTION

This item is for information only.

DISCUSSION

2011 was a successful year for the Wisconsin Small Company Advancement Program, as indicated by the following statistics:

- Eleven high-tech projects were initiated, involving nine small companies and seven UW comprehensive campuses.
 - Four of the projects were designed to develop high-performing and cost-effective products for the energy sector, whereas four projects targeted the healthcare sector.
 - Three remaining projects targeted high-growth E-learning, safer traffic signals, and the emerging nanotechnology industry, respectively.
 - The total allocation for the 11 projects was \$1,018,840, and the combined matching value from industry (\$1,439,030), associated campuses and WiSys was \$1,790,268, or \$1.76 for each WiSCAP dollar.
- Ten high-paying research jobs were created at the campuses.
- ~7,000 hours of student internship and release time for 10 faculty were provided to undertake product development.
- Four WiSCAP-related patent applications were filed.
- The University of Wisconsin System and WiSys Technology Foundation also undertook steps to sustain WiSCAP over the long-term by creating a fund supported by reimbursement from licensing revenue based on WiSCAP projects.
- The WiSCAP program was managed with the assistance of two student interns.

The 2011 project goals were to develop the following products useful for Wisconsin businesses:

- 1) **Hydrogen Fuel Cell:** Development and testing of a multi-stack pressure-balanced fuel cell with better efficiency (Cool Science, LLC of UW-Stout Business Incubator, Menomonie, and UW-Stout). This innovative technology could increase the power density by a factor of four. The assembly of the fuel cell involves multiple Wisconsin companies, and the final fuel cell will be field tested in golf carts.
- 2) **Content Architecture:** Development of an information technology instructional class in the emerging discipline of Content Architecture (Ictect, Inc. of Sturtevant and UW-Parkside). Ictect has a patented technology in Content Architecture and will package this technology with others in the field to offer a training course in Content Architecture.
- 3) **21st Century Wheelchair:** Development of a wheelchair with improved efficiency through the Capstan Drive mechanism (Procubed, LLC of Kenosha and UW-Parkside). This wheelchair will be lighter weight and easier to use and, once built, will undergo ergonomic assessment to make it even more marketable and user-friendly. Once it has reached the manufacturing stage, it will enable Procubed to hire up to 245 employees to manufacture and market the product.

- 4) **Nanowires:** A multipurpose, Ultrananocrystalline Diamond (UNCD) substrate developed as a template for synthesis of nanowires and as a Transmission Electron Microscopy (TEM) grid (Fused Innovation of Neenah and UW-Stevens Point). This technology will develop applications of nanowires in electronic devices. Fused Innovation will participate in facilitating manufacturing of TEM grids or TEM grid-assisted manufacturing of nanodevices.
- 5) **LED De-icer:** A de-icing device for Light Emitting Diode (LED) traffic lights (Abstract Engineering, LLC of Madison and UW-Platteville). When LED traffic lights replace incandescent bulbs, the heat produced by the light decreases and snow and ice stick to and block the light in northern climates. This heating element will prevent cold weather from hindering the visibility of traffic signals.
- 6) **Improved Li-ion Batteries:** Design and testing of improved Li-ion batteries with facile manufacturing methods using nanomaterials (Xolve, Inc. of Middleton and UW-Platteville). Xolve, Inc. is a startup company based on a UW-Platteville technology. The WiSCAP project will apply solubilized nanoparticles in Li-ion batteries with a metal oxide and graphene combination. The new batteries are expected to be cheaper and easier to manufacture with improved performance.
- 7) **Photocatalytic Fuel Cell:** Development of platinum-free catalysts for photocatalytic fuel cell applications (Cool Science, LLC of UW-Stout Business Incubator, Menonomie, and UW-Green Bay). These collaborators aim to develop a platinum-free catalyst which is more practical and less expensive to use in fuel cells.
- 8) **Safer Warfarin:** Development of a new class of anticoagulants based on warfarin (McDel-Topology, LLC of Milladore and UW-Eau Claire). McDel-Topology is a startup company based on a UW-Eau Claire technology. Warfarin therapy, which is prescribed 2 million times per year in the United States, is fatal to ~3,000 patients. The WiSCAP project aims to develop a molecule that is safer, but as effective as warfarin.
- 9) **Stroke Rehab System:** Development of the software for a home-based virtual reality system for rehabilitation of stroke patients (Fused Innovation of Neenah and UW-Oshkosh and UW-Madison). The project will develop a rehabilitation system that will allow stroke patients to undertake rehabilitation at home and allow physical therapists to monitor them remotely. WiSCAP funds were allocated only to UW-Oshkosh.
- 10) **Ultracapacitor:** Development of the prototype for an integrated Battery-Ultracapacitor Source (iBUS) drive system (Shamrock Energy Corporation of Saukville and UW-Oshkosh). Shamrock is a start-up company based on a UW-Oshkosh technology. This project will use and scale up the high-energy ultracapacitors developed in Shamrock's first WiSCAP project. The iBUS system will be integrated into a low-speed vehicle to demonstrate improved performance.

- 11) **Interactive Patient Registration System:** Development of an interactive patient registration system for healthcare services (mZeal, Inc. of Milwaukee and UW-Stevens Point). The product will allow self-registration through tablets, or smart phones, with avatar and voice modes, reducing time and costs for registration personnel during patients' initial registration and subsequent visits. It will simultaneously run audits to increase data accuracy and reduce claim rejection.

Additional Funding Support for Existing Projects

Two WiSCAP projects that were initiated in 2010 received additional funding to complete the research in 2011:

- \$5,000 was provided to UW-Whitewater to work with Creative Culinary Solutions LLC to conduct a market study on the removal of methyl mercury from fish tissue. The project has progressed enough that the company is contemplating marketing during 2012-13 and the additional funding would accelerate the transition of the technology to market.
- \$37,230 was awarded to UW-Stout to work with VibeTech LLC to continue refinement of the prototype and testing of the passive load vibration therapy device.

Total WiSCAP Spending

ACT 265 allowed a total of \$75,000 for WiSys administrative costs, which was divided equally for 2010 and 2011 (\$37,500 each year). Thus, the total spending in 2011 was \$1,098,570. Combined spending of 2010 and 2011 was \$1,815,899.

Immediate Measureable Outcomes of WiSCAP

The timeframe to develop marketable products based on WiSCAP projects is estimated to be two to four years. However, there are immediate measureable outcomes; WiSCAP currently supports:

- Approximately 7,000 hours of student internship
- Ten high-paying jobs at the comprehensive campuses
- Release time for 10 faculty to conduct research

Value Addition by WiSys

- Selection of technologies with significant potential for business growth and benefits to Wisconsin.
- Judicious cost containment, without affecting quality and project outcomes. The initial budget request for the 11 projects totaled \$1,441,402. After extensive discussions and consultation WiSys was able to reduce the R&D project cost to \$920,840 without sacrificing project outcomes.
- The WiSys team contributes, on average, 115 hours per project to draft the application (including multiple company meetings). This relieves the faculty and company from using their time and resources on the draft process.
- A technology, patent, market and risk analysis is completed for each project.

- A phased approach to funding projects allows WiSys to monitor progress before funding the next phase.
- New discoveries are protected through WiSys, ensuring a competitive advantage for the Wisconsin company.
- Proactive interactions with the partner company ensure continued funding to develop and market the product through extramural funding opportunities.

Table 1 summarizes the projects and their potential economic benefits.

Table 1: Projects Funded in 2011

	Company and Campus	Project Description	Potential Economic Benefits
1	Cool Science, LLC (UW-Stout Business Incubator, Menomonie), UW-Stout	A pressure-balanced fuel cell will provide four times the power density. Installment of fuel cell into a golf cart for demonstration purposes.	Worldwide fuel cell market projected at \$1.22 billion in 2014. Potential to work with several Wisconsin companies. Potential to create five to six company jobs.
2	Ictect, Inc. (Sturtevant), UW-Parkside	Creation of an information technology class in the area of Content Architecture to develop professionals in this emerging discipline.	Global market for E learning solutions is fast growing. Content Management Software is a \$4.2 billion market. Potential to create two company jobs.
3	Procubed, LLC (Kenosha), UW-Parkside	Development of a wheelchair with improved efficiency due to the Capstan Drive mechanism for locomotion.	There are about 2 million wheelchair users in the U.S. and the U.S. market for wheelchairs was \$309 million in 2010. Potential to create up to 245 company jobs.
4	Fused Innovation (Neeah), a division of WJW, Inc., UW-Stevens Point	An ultrananocrystalline diamond (UNCD) substrate for synthesis of nanowires and for use as a Transmission Electron Microscopy (TEM) grid in order to better characterize the nanowires.	Nanowires could be applied to nearly all areas of electronics. The market for solar cells (one of these applications) is \$1.8 billion.
5	Abstract Engineering, LLC (Madison), UW-Platteville	Development of a traffic control system deicer for Light Emitting Diode (LED) signals which do not emit enough heat to melt off snow and ice.	10% penetration in the “snow belt” of North America would amount to \$84 million. Potential to create four to eight company jobs in first year of production.
6	Xolve, Inc (Middleton), UW-Platteville	Development of hybrid metal oxide-graphene Li-ion batteries which are easier to manufacture and provide improved performance	Li-ion batteries were a \$1.3 billion market in 2009. Li-ion batteries will have a large impact on hybrid or electric vehicles. Potential to create three to five company jobs.

7	Cool Science, LLC (UW-Stout Business Incubator Menomonie), UW-Green Bay	Development of a method by which fuel cell performance can be enhanced and cost reduced by a platinum-free photocatalyst.	Platinum photocatalysts have been shown to be effective, but platinum is expensive. A platinum-free catalyst would reduce the cost barrier for market entry. Potential to create three to five company jobs.
8	McDel-Topology, LLC (Milladore), UW-Eau Claire	Exploration of how warfarin binds to vitamin K epoxide reductase and subsequent development of safer warfarin analogues.	The US anticoagulant market was \$6.2 billion in 2008. Warfarin, the most popular oral anticoagulant, needs to be improved to maintain its status. Potential to create five to ten company jobs.
9	Fused Innovation (Neenah), a division of WJW, Inc., UW-Oshkosh	Development of the software component of a home-based virtual reality system for manual rehabilitation after a stroke.	The neurological physiotherapy rehabilitation market is \$1.4 billion annually. The software /hardware system will benefit patients to continue and improve their physical rehabilitation in a cost effective manner.
10	Shamrock Energy Corporation (Saukville), UW-Oshkosh	Development of an integrated Battery-Ultracapacitor Source (iBUS) drive system for implementation in low speed vehicles.	The ultracapacitor market is expected to reach \$242 million in the transportation segment by 2015. Shamrock will work with Columbia ParCar to develop the vehicle. Potential to create one job.
11	mZeal, Inc. (Chippewa Falls), UW-Stevens Point	Development of an interactive patient registration system for healthcare services.	There are about 3,000 hospitals in the U.S. This product will reduce or eliminate the repetitive tasks for registration personnel during patients' initial registration and subsequent visits.

Budget allocation details are shown in Table 2.

Table 2: Total Budgets Allocated to UW Campuses for Each Project in 2011

Campus (Partner Company)	Phase I	Phase II	Total	In-Kind from Company
UW-Stout (Cool Science, LLC)	\$77,314	-	\$77,314	\$90,000
UW-Parkside (Ictect, Inc.)	\$78,050	-	\$78,050	\$79,800
UW-Parkside (Procubed, LLC)	\$95,055	\$85,000	\$180,055	\$194,265
UW-Stevens Point (Fused Innovation)	\$98,743	-	\$98,743	\$132,754
UW-Platteville (Abstract Engineering, LLC)	\$33,480	-	\$33,480	\$41,461
UW-Platteville (Xolve, Inc.)	\$74,375	-	\$74,375	\$125,500
UW-Stout UW-Green Bay (Cool Science, LLC)	\$62,612	-	\$62,612	\$68,750
UW-Eau Claire (McDel-Topology, LLC)	\$72,621	\$70,137	\$142,758	\$177,500
UW-Oshkosh (Fused Innovation)	\$29,032	-	\$29,032	\$59,000
UW-Oshkosh (Shamrock Energy Corporation)	\$59,587	\$20,763	\$80,350	\$220,000
UW-Stevens Point (mZeal, Inc.)	\$64,071	-	\$64,071	\$250,000
Subtotal	\$744,940	\$175,900	\$920,840	\$1,439,030
Patenting cost budgeted for 11 projects	-	-	\$98,000	-
Total			\$1,018,840	\$1,439,030

Breakdowns of project spending for Phase I is shown in Table 3.

Table 3: Phase I Cost Allocation for Projects

Campus (Partner Company)	Faculty Salary	Res. Assistant Salary	Student Intern Salary	Materials/ Supplies	Travel	Prototypes/ Contracts/ Equipment	Totals
UW-Stout (Cool Science, LLC)	-	-	\$7,189	\$22,000	-	\$48,125	\$77,314
UW-Parkside (Ictect, Inc.)	\$2,380.50	\$61,669.50	-	\$14,000	-	-	\$78,050
UW-Parkside (Procubed, LLC)	-	\$68,585	\$5,135	\$21,335	-	-	\$95,055
UW-Stevens Point (Fused Innovation)	\$9,435	\$84,173	\$5,135	-	-	-	\$98,743
UW-Platteville (Abstract Engineering, LLC)	\$26,977	-	\$1,243	-	-	\$5,260	\$33,480
UW-Platteville (Xolve, Inc.)	\$13,176	\$49,880	\$11,319	-	-	-	\$74,375
UW-Green Bay UW-Stout (Cool Science, LLC)	\$34,609	-	\$15,003	\$6,000	\$1,000	\$6,000	\$62,612
UW-Eau Claire (McDel-Topology, LLC)	13,689	\$55,845	\$3,087	-	-	-	\$72,621
UW-Oshkosh (Fused Innovation)	-	-	\$5,032	-	-	\$24,000	\$29,032
UW-Oshkosh (Shamrock Energy Corporation)	-	\$41,587	-	\$18,000	-	-	\$59,587
UW-Stevens Point (mZeal, Inc.)	\$35,136	-	\$21,611	-	\$1,824	\$5,500	\$64,071
Totals:	\$135,402.50	\$361,739.50	\$74,754	\$81,335	\$2,824	\$88,885	\$744,940

Table 4 below summarizes the value match WiSys brings to WiSCAP by leveraging contributions from companies, participating campuses and WiSys.

Table 4: Value Match

Total WiSCAP dollars allocated	Total Company in-kind contributions	Total UW campus in-kind contributions ^(1, 2)	Total WiSys in-kind contribution ^(3, 4, 5)	Total matching value for WiSCAP funding	Value match for each WiSCAP dollar
\$1,018,840	\$1,439,030	\$280,908	\$70,330 ⁽⁶⁾	\$1,790,268	1: 1.76

¹ Faculty salary, student internships = \$96,740. (Does not include equipment use or space or other fees.)

Largest contribution of \$70,912 comes from UW-Stout for hydrogen fuel cell project.

² Overhead charges = \$184,168. Calculated at 20% of WiSCAP budget (not including patenting expenses). Note - Overhead charges are not included in WiSCAP project budgets.

³ WiSys travel charges = \$23,645. Includes 19 company/campus visits (includes .51 cents per mile and travel time estimated at \$145/hr.). No travel charges for WiSys personnel are included in WiSCAP project budgets.

⁴ Oversight and management time by Managing Director (\$145/hr.) = \$34,800. Tasks include project discussions with faculty, company and campus, review of project plans, budget, milestones and market, IP, competition etc.

⁵ Student internships (Jack Collins and Nigel Becknell) = \$11,885. Includes drafting applications, conducting risk analysis, drafting market reports and technology landscapes, monitoring progress reports and budgets.

⁶ Of WiSys's total in-kind contribution of \$70,330, a \$37,500 charge was made to the WiSCAP budget as the 2011 portion of WiSys administrative charges. Thus the total WiSys in-kind contribution to WiSCAP in 2011 is \$32,830

WiSCAP Outcomes

To date, three WiSCAP projects have made intellectual property advancements, enabling WiSys to apply for patents (see Table 5 below).

Table 5: Patent Applications Resulting from WiSCAP Funding

Project	Patent Title	Date Filed	Status
UW-Parkside (Procubed, LLC)	<i>Mechanism for Converting Reciprocating Lever Action to Unidirectional Rotary Motion</i>	5/4/2011	Provisional
UW-Oshkosh (Shamrock Energy Corporation)	<i>Electrical Energy Storage Device Containing an Electroactive Separator</i>	3/8/2011	PCT
UW-Oshkosh (Fused Innovation)	<i>Hand-Function Therapy System with Sensory Isolation</i>	7/29/2011	Provisional
UW-Stout (Cool Science)	<i>Fuel Cell with Rapid Pressure Balancing</i>	9/20/2011	Utility Patent

Sustaining the WiSCAP Program

While ACT 265 did not stipulate sustaining a WiSCAP fund, the UW System and WiSys wish to create a mechanism to continue this program. We have reached an agreement among UW System, WiSys, and participating campuses to reimburse the grant amount from the licensing revenue of successful WiSCAP projects. The reimbursement will come from the revenue shares of the UW System, WiSys, and associated UW campuses.

Additionally, any project budget remaining unspent at the end of a given project will be reimbursed to WiSys by the associated UW campus and will be added to the WiSCAP fund. To date, WiSys has received \$8,000 in unspent funds from the UW-Oshkosh/Semba Biosciences/Botanic Oil Innovations project. Additional reimbursements are expected in 2012. Although there is no expectation of an evergreen fund, we estimate that revenue reimbursements and unspent funds will enable the Wisconsin Small Company Advancement Program to continue for several years to advance existing projects and initiate new projects.

Strengthening Wisconsin's Economy

As demonstrated by the examples provided throughout this report, the Wisconsin Small Company Advancement Program has already made a positive impact on the economy of the state by advancing technology and creating jobs through UW System campus and small company partnerships. As the projects progress to the market, this impact is expected to multiply.

CONTACT INFORMATION

WiSys Technology Foundation

Maliyakal John
WiSys Technology Foundation
608-316-4033
Maliyakal@wisys.org

WiSCAP Partner Companies (2011 Projects)

John Gillies
Abstract Engineering, LLC
608-320-1606
lordgillies@hotmail.com

Rajini Anachi
mZeal, Inc.
978-665-0281
arajini@mZeal.com

Kenny Smith
Cool Science, LLC
715-232-4092
smithke@uwstout.edu

Jim Maerzke
Procubed, LLC
262-654-5602
jim.maerzke@procubedllc.com

Daniel Neumann
Creative Culinary Solutions, Inc
262-369-9450
creativeculinarysolutions@gmail.com

Paul Lemens
Shamrock Energy Corporation
602-9128-0528
plemens@shamrockenergycorp.com

David Kettner
Fused Innovation, a division of WJW, Inc.
920-486-5147
dkettner@fi-3d.com

Jeff Leismer
VibeTech, Inc
920-287-1930
jeff@VibeTechGlobal.com

Pradeep Jain
Ictect, Inc.
262-898-7568
Pradeep.Jain@ictect.com

John Biondi
Xolve, Inc
608-217-6217
biondi@xolve.com

David Lewis
McDel-Topology, LLC
715-836-4744
mcdeltology@gmail.com

THE ROLE AND IMPACT OF UNDERGRADUATE RESEARCH AT UW INSTITUTIONS

BACKGROUND

Engaging undergraduate students in research, often with the mentorship of faculty, is recognized as a “high impact educational practice” that leads to higher retention rates, gains in critical thinking and problem solving skills, and increases in other measures of student success.

REQUESTED ACTION

For information and discussion only; no action is required at this time.

DISCUSSION

Nationally, colleges and universities are increasingly integrating research and scholarship into the undergraduate experience. Such experiences provide graduates with a competitive advantage when seeking employment or admission to graduate or professional schools. Some undergraduate research projects can also provide opportunity for collaboration with businesses, non-profit organizations, and other entities beyond higher education.

Dean Van Galen, Chancellor of the University of Wisconsin-River Falls, will provide an overview of best practices and educational research that demonstrates the impact of undergraduate research, and will share some undergraduate research initiatives occurring within the UW System.

Tim Lyden, UW-River Falls professor of biology and director of the Tissue and Cellular Innovation Center (TCIC) will describe the role of undergraduate research within the TCIC and discuss partnerships that can lead to regional economic development.

RELATED REGENT POLICIES

No applicable Regent Policy Documents

8/15/2012

BOARD OF REGENTS OF THE UNIVERSITY OF WISCONSIN SYSTEM
Room 1820 Van Hise Hall, 1220 Linden Drive,
Madison, Wisconsin 53706
August 23 and 24, 2012

II.

Friday, August 24, 2012

7:45 a.m. All Regents – Closed Session – Room 1820

Move into closed session to confer with legal counsel regarding pending or potential litigation, as permitted by s. 19.85(1)(g), *Wis. Stats.*; and to consider annual personnel evaluations, as permitted by *Wis. Stats.* §19.85(1)(c).

8:45 a.m. Annual Regent Photo – Room 1920

9:00 a.m. All Regents – Room 1820

1. Calling of the roll
2. Approval of the minutes of the April and June meetings
3. Presentation of 2012 Teaching Excellence Awards
 - a. Individual: Prof. Donald Hanlon, UW-Milwaukee
 - b. Individual: Dr. Jennifer Kosiak, UW-La Crosse
 - c. Program: First-Year Interest Groups, UW-Madison
4. Report of the President of the Board
 - a. Educational Communications Board, Higher Educational Aids Board, Hospital Authority Board, and Wisconsin Technical College System Board reports
 - b. Additional items that the President may report to the Board
5. Report of the President of the System
 - a. Update on recent events
 - b. WIAC centennial
 - c. Other news from around the UW System
6. Report and approval of actions taken by the Business, Finance, and Audit Committee
7. Report and approval of actions taken by the Capital Planning and Budget Committee
8. Report and approval of actions taken by the Education Committee

9. Report of the Research, Economic Development, and Innovation Committee
10. Update on Legislative Task Force on UW Restructuring and Operational Flexibilities
11. Communications, petitions, and memorials
12. Closed Session

Move into closed session to confer with legal counsel regarding pending or potential litigation, as permitted by s. 19.85(1)(g), *Wis. Stats.*; and to consider annual personnel evaluations, as permitted by s. 19.85(1)(c), *Wis. Stats.*

The closed session may be moved up for consideration during any recess in the regular meeting agenda. The regular meeting will reconvene in open session following completion of the closed session.

UNIVERSITY OF WISCONSIN SYSTEM BOARD OF REGENTS COMMITTEES

President: Brent Smith
Vice President: Michael Falbo

STANDING COMMITTEES*

Executive Committee

Brent Smith (Chair)
Michael Falbo (Vice Chair)
Jeffrey Bartell
Mark Bradley
Tim Higgins
Regina Millner
Charles Pruitt
José Vásquez
Gerald Whitburn

Research, Economic Development, and Innovation Committee

Mark Bradley (Chair)
Tim Higgins (Vice Chair)
John Drew
Tracy Hribar
Charles Pruitt
Mark Tyler
David Walsh
Gerald Whitburn

Business, Finance, and Audit Committee

Gerald Whitburn (Chair)
John Behling (Vice Chair/Audit Liaison)
Mark Bradley
Tracy Hribar
Katherine Pointer
Charles Pruitt
Gary Roberts
David Walsh

Personnel Matters Review Committee

Edmund Manydeeds (Chair)
John Behling
Mark Bradley
John Drew
Gary Roberts
Gerald Whitburn

Capital Planning and Budget Committee

Jeffrey Bartell (Chair)
Edmund Manydeeds (Vice Chair)
John Behling
Tony Evers
Regina Millner
Katherine Pointer
Gary Roberts
José Vásquez

Committee on Student Discipline and Other Student Appeals

John Behling (Chair)
Jeffrey Bartell
Tony Evers
Tim Higgins
Regina Millner
Katherine Pointer

Education Committee

José Vásquez (Chair)
Regina Millner (Vice Chair)
Jeffrey Bartell
John Drew
Tony Evers
Tim Higgins
Edmund Manydeeds
Mark Tyler

Committee on Faculty and Academic Staff Collective Bargaining

NA

*The Regent President and Vice President serve as ex-officio voting members of all committees.

**OTHER COMMITTEES*
& APPOINTMENTS**

**Academic Staff Excellence Awards
Committee**

Mark Tyler (Chair)
Tim Higgins
Tracy Hribar
Gerald Whitburn

Wisconsin Partnership Program
TBD

**Liaison to Association of Governing
Boards**

Charles Pruitt

Diversity Awards Committee

John Drew (Chair)
Tracy Hribar
Edmund Manydeeds
José Vásquez

Teaching Excellence Awards Committee

Charles Pruitt (Chair)
Katherine Pointer
Gary Roberts
Mark Tyler

**Higher Educational Aids Board – Regent
Member**

Jeffrey Bartell

**Hospital Authority Board – Regent
Members**

Jeffrey Bartell
Michael Falbo
David Walsh

**Research Park Board – Regent
Member**

David Walsh

**Wisconsin Educational Communications
Board – Regent Member**

Regina Millner

**Wisconsin Technical College System
Board – Regent Member**

José Vásquez

*The Regent President and Vice President serve as ex-officio voting members of all committees.

**UW SYSTEM BOARD OF REGENTS
REGULAR MEETING SCHEDULE – 2012**

February 9-10, 2012 – In Madison

March 8, 2012 – In Madison

April 12-13, 2012 – Hosted by UW-Superior

June 7-8, 2012 – Hosted by UW-Milwaukee

August 23-24, 2012 – In Madison

October 4-5, 2012 – Hosted by UW-Stout

November 8, 2012 – In Madison

December 6-7, 2012 – Hosted by UW-Madison

**UW SYSTEM BOARD OF REGENTS
REGULAR MEETING SCHEDULE – 2013**

February 7-8, 2013 – In Madison

March 7, 2013 – In Madison

April 4-5, 2013 – Hosted by UW-La Crosse

June 6-7, 2013 – Hosted by UW-Milwaukee

July 11-12, 2013 – In Madison

September 5, 2013 – In Madison

October 10-11, 2013 – Hosted by UW-Parkside

December 5-6, 2013 – In Madison

(Tentative: hosted by UW-Madison)