BOARD OF REGENTS OF THE UNIVERSITY OF WISCONSIN SYSTEM

- I.1. Education Committee
- 2:30 p.m. Education Committee

Thursday, July 11, 2013 Van Hise Hall, Rm 1820 Madison, WI

- a. Consent Agenda:
 - 1. Approval of the Minutes of the June 6, 2012, Meeting of the Education Committee;
 - UW-Oshkosh and UW-Green Bay: Collaborative Bachelor of Science in Environmental Engineering Technology; [Resolution I.1.a.(2)]
 - UW-Oshkosh and UW-Green Bay: Collaborative Bachelor of Science in Mechanical Engineering Technology; and [Resolution I.1.a.(3)]
 - UW-Oshkosh and UW-Green Bay: Collaborative Bachelor of Science in Electrical Engineering Technology. [Resolution I.1.a.(4)
- b. UW-Whitewater: Doctor of Business Administration [Resolution I.1.b]
- c. Discussion of Board of Regents Planning Process and Goals
- d. Report of the UW System Associate Degree Standards Working Group
- e. Report of the Senior Vice President:
 - 1. Update on Academic and Student Affairs Issues
 - 2. Growth Agenda Grants

Program Authorization (Implementation) Bachelor of Science in Environmental Engineering Technology UW-Oshkosh and UW-Green Bay

EDUCATION COMMITTEE

Resolution I.1.a.(2):

That, upon the recommendation of the Chancellor of the University of Wisconsin-Oshkosh and the Chancellor of the University of Wisconsin-Green Bay, as well as the President of the University of Wisconsin System, the Chancellors be authorized to implement the Bachelor of Science in Environmental Engineering Technology.

NEW PROGRAM AUTHORIZATION COLLABORATIVE BACHELOR OF SCIENCE IN ENVIRONMENTAL ENGINEERING TECHNOLOGY UW-OSHKOSH UW-GREEN BAY

EXECUTIVE SUMMARY

BACKGROUND

In accordance with the procedures outlined in Academic Planning and Program Review (ACIS 1.0, Revised August 2012, available at <u>http://www.uwsa.edu/acss/planning/</u>), the new program proposal for a Collaborative Bachelor of Science in Environmental Engineering Technology at the University of Wisconsin-Green Bay and the University of Wisconsin-Oshkosh is presented to the Board of Regents for consideration. The institution has submitted the authorization document, a financial statement, and a letter of institutional commitment from the universities' Provosts.

REQUESTED ACTION

Approval of Resolution I.1.a.(2), authorizing the implementation of a Collaborative Bachelor of Science in Environmental Engineering Technology at the University of Wisconsin-Green Bay and at the University of Wisconsin-Oshkosh.

DISCUSSION

The University of Wisconsin-Green Bay and the University of Wisconsin-Oshkosh propose to establish a Collaborative Bachelor of Science (B.S.) in Environmental Engineering Technology. The collaboration involves shared faculty, curriculum, facilities, oversight committee, and advisory groups. The B.S. in Environmental Engineering Technology is one of three proposed degree-completion majors within a suite of collaborative engineering technology degrees at UW-Green Bay and UW-Oshkosh, which are submitted for consideration by the BOR at the same time. Proposals for a Collaborative Bachelor of Science in Electrical Engineering Technology and in Mechanical Engineering Technology are also on the July 2013 Education Committee agenda.

The proposed new program reflects a distinctive, collaborative degree between NEW North, Inc. institutions and business. The higher education partnerships will consist of articulation agreements with five University of Wisconsin Colleges; (UW-Fond du Lac, UW-Fox Valley, UW-Manitowoc, UW-Marinette, and UW-Sheboygan); four Wisconsin Technical College System institutions (Fox Valley Technical College, Lakeshore Technical College, Moraine Park Technical College, and Northeast Wisconsin Technical College); and at the College of Menominee Nation. Program completion will occur at UW-Green Bay or at UW-Oshkosh, depending on the student's choice. Additional partners in this program include industry partnerships. The creation of a B.S. in Environmental Engineering Technology responds to the workforce needs articulated by manufacturers and municipalities in northeastern Wisconsin, as well as 2010-2020 Bureau of Labor Statistics projections that estimate a 14% increase in Environmental engineering technology positions. The program will fill this need by producing a highly competent and technically knowledgeable workforce with expertise related to Environmental Engineering Technology. Graduates with a B.S. in Environmental Engineering Technology will be prepared to work in a number of industries outside of manufacturing, such as in water and wastewater management, agribusiness, and biotechnology sectors.

The coursework for the Environmental Engineering Technology program provides students with a solid foundation through the completion of supporting and fundamental courses in biology, chemistry, geosciences, mathematics, physics, and introductory courses in air, solid waste, water, and wastewater. Through the upper-level fundamentals courses, students will also learn about environmental economics, environmental systems, GIS, hydrology, and soil science. The advanced study courses include a required course in project management, a required capstone project or internship/co-op experience, and a number of other electives in which students can focus on a particular area of Environmental Engineering Technology. These areas include air, hazardous waste, solid waste, water, or wastewater, and could also include courses in environmental data analysis, environmental law, industrial safety and hygiene, pollution prevention, or renewable energy.

RECOMMENDATION

The University of Wisconsin System recommends approval of Resolution I.1.a.(2), authorizing the implementation of a Collaborative Bachelor of Science in Environmental Engineering Technology at the University of Wisconsin-Green Bay and at the University of Wisconsin-Oshkosh.

RELATED REGENT AND UW SYSTEM POLICIES

Regent Policy 4-12: Academic Program Planning, Review, and Approval in the University of Wisconsin System.

Academic Information Series #1 (ACIS-1.0; revised August 2012): Statement of the UW System Policy on Academic Planning and Program Review.

REQUEST FOR AUTHORIZATION TO IMPLEMENT A COLLABORATIVE BACHELOR OF SCIENCE DEGREE IN ENVIRONMENTAL ENGINEERING TECHNOLOGY AT UW-GREEN BAY AND UW-OSHKOSH

PREPARED BY UW-GREEN BAY AND UW-OSHKOSH

ABSTRACT

The University of Wisconsin-Green Bay and the University of Wisconsin-Oshkosh propose to establish a Bachelor of Science (B.S.) in Environmental Engineering Technology. The B.S. in Environmental Engineering Technology is one of three majors within a suite of three proposed collaborative engineering technology degrees at UW-Green Bay and UW-Oshkosh. Students may begin their studies at one of five campuses of the UW Colleges; UW-Fond du Lac, UW-Fox Valley, UW-Manitowoc, UW-Marinette, and UW-Sheboygan; one of four Wisconsin Technical College System institutions; Fox Valley Technical College, Lakeshore Technical College, Moraine Park Technical College, and Northeast Wisconsin Technical College; at the College of Menominee Nation; or at UW-Green Bay or UW-Oshkosh. Program completion will occur at either UW-Green Bay or UW-Oshkosh with the conferral of a B.S. in Environmental Engineering Technology.

UW-Oshkosh and UW-Green Bay already offer pre-engineering programs. The development of this program responds to Bureau of Labor Statistics that project a 24% increase nationally in occupations in the field of Environmental Engineering between 2010 and 2020, as well as to the regional economic needs of manufacturers and municipalities in northeastern Wisconsin. The program will provide students with applications-based environmental engineering technology expertise. Graduates will be better equipped to work in a number of environmental positions in which they can apply their knowledge of biology, chemistry, mathematics, and physics to solve contemporary environmental problems.

PROGRAM IDENTIFICATION

Institution Names University of Wisconsin-Green Bay University of Wisconsin-Oshkosh

Title of Proposed Program Environmental Engineering Technology

Degree/Major Designations Bachelor of Science

Mode of Delivery

Instruction will be delivered face-to-face at UW-Green Bay, UW-Oshkosh or at partnering campus facilities. Degrees will be conferred by UW-Green Bay and UW-Oshkosh.

Projected Enrollments by Year Five

Table 1 represents enrollment and graduation projections for students entering the program over the next five years. By the end of year five, it is expected that 170 students will have enrolled in the program (85 students each for UW-Green Bay and UW-Oshkosh) and 80 students will have graduated from the program.

Year	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
New Students Admitted	50	25	25	25	25
Continuing Students	0	47	68	68	63
Total Enrollment	50	72	93	93	88
Graduating Students	0	0	25	30	25

Table 1: Projected Enrollment

Tuition Structure

The B.S. in Environmental Engineering Technology will consist of a range from 129 to 132 credits. The variance in total credits required for graduation is attributable to the different General Education Requirements at each institution. Coursework is separated into three categories: support courses, fundamental courses, and advanced courses. The support courses consist of 41 credits and are built on the foundation of the General Education Programs and Bachelor of Science Degree requirements at each institution. Within the fundamental and advanced course categories, there are a set of core non-Engineering Technology prerequisite courses, such as mathematics or laboratory science courses. Courses that fall in the support category and those that are prerequisites to the fundamental and advanced courses are currently offered at both UW-Green Bay and UW-Oshkosh. The delivery of these courses is funded from the general purpose revenue (GPR) budget.

During the semesters students are enrolled in support and non-Engineering Technology prerequisite courses, they will pay the regular undergraduate tuition and fees relative to each institution. Students must enroll at a single institution; they cannot be enrolled at both universities. For the current academic year at UW Oshkosh, the residential tuition and segregated fees total \$3,678.58 per semester for full-time students who are enrolled in 12 to18 credits per term. Of this amount, \$467.50 is attributable to segregated fees and \$3,211.08 is attributable to course tuition. At UW-Green Bay, the residential tuition and segregated fees total \$3,824.16 per semester for full-time students who are enrolled in 12 to18 credits per term. \$675.00 is attributable to segregated fees and \$3,149.16 is attributable to course tuition. The tuition differences between the two institutions are related to specific services that are supported by tuition at each institution.

At the time students formally declare an engineering technology major and are admitted to courses in the fundamental and advanced categories, a full-time student will pay on average \$700 per semester in engineering technology special course fees in addition to the tuition and fees listed above. Part-time students will pay fewer special course fees per semester. Tuition will be paid to the institution where the student will be enrolled. A full-time student should be able to complete the required fundamental and advanced courses in four to five semesters. A discussion regarding anticipated program revenues and costs may be found on page 8 of this document in the "Delivery" section.

Department or Functional Equivalent

Department of Natural and Applied Sciences at UW-Green Bay Department of Physics at UW-Oshkosh UW-Green Bay will serve as the lead institution for purposes of accreditation by the Higher Learning Commission.

College, School, or Functional Equivalent

College of Liberal Arts and Sciences at UW-Green Bay College of Letters and Sciences at UW-Oshkosh

Proposed Date of Implementation

Fall, 2013, or the next semester after HLC approval is confirmed.

INTRODUCTION

Rationale and Relation to Mission

The proposed program reflects a distinctive collaboration among institutions and businesses within the NEW North, Inc. economic development region. Once approved by the UW System Board of Regents, students will be able to begin their studies at any of the area's four technical colleges, five UW Colleges, the College of Menominee Nation or at UW-Green Bay, and UW-Oshkosh. Program completion will occur at UW-Green Bay or UW-Oshkosh with the conferral of a Bachelor of Science in Environmental Engineering Technology. Participating institutions will sign a Memorandum of Understanding.

The proposed B.S. in Environmental Engineering Technology was created in response to the workforce needs articulated by manufacturers and municipalities in northeastern Wisconsin, as well as Bureau of Labor Statistics projections that estimate a 24% increase in environmental engineering technology positions nationally between 2010 and 2020. The program will fill this need by producing a highly competent and technically knowledgeable workforce with expertise related to environmental engineering technology. The graduates will fill positions in regional industries, manufacturing, and engineering service firms.

This program will help address a primary goal of the UW System Growth Agenda for Wisconsin by increasing the number of graduates through programs that target student populations not currently served by UW-Oshkosh or UW-Green Bay. The program furthers the UW System mission's to develop human resources and technological expertise across the state. Further, the program supports the UW System Core Mission of the University Cluster and the UW System's strategic interests by providing collaborative degree programs and activities designed to promote economic development to meet the unique needs of particular regions. The program will advance these interests through its curriculum by partnering with a highly-engaged regional industrial sector to offer capstone projects, internships, and employment opportunities.

The objectives for the B.S. in Environmental Engineering Technology program are consistent with the select missions of the degree-granting institutions of UW-Green Bay and UW-Oshkosh. Specifically, the B.S. in Environmental Engineering Technology serves the mission of UW-Green Bay by emphasizing interdisciplinary problem-focused learning, ecological sustainability, and engaged citizenship, and to the mission of UW Oshkosh by providing a quality educational opportunity to the people of northeastern Wisconsin and beyond through the discovery, synthesis, and the preservation and dissemination of knowledge. Both institutions are committed to increasing the number of college-educated persons in their service areas. (For more information about the institutions' strategic enrollment plan statements, see: http://www.uwosh.edu/home/strategic-plan-archive/2010-2011-strategic-plan/governing-ideas/mission-statement-1 and http://www.uwgb.edu/chancellor/strategic-planning/themes_2011.asp.)

UW-Oshkosh and UW-Green Bay are committed to offering programs in high-demand areas, especially as they relate to STEM fields. The academic plan of UW-Oshkosh stresses engaged learning, student excellence, globalization, diversity, sustainability, and community engagement. This degree will draw a more diverse student population, and will fulfill a major priority of the academic program plan at UW-Oshkosh. Furthermore, UW-Green Bay is committed to offering high-quality, interdisciplinary, and problem-focused programs that have real world applications, especially in the areas of ecology and sustainability. This degree fits well within the institution's primary mission and broadens its reach into the community by advancing the capacity of the region to build economic infrastructure.

The proposed program also strongly supports major themes within each institution's strategic plan. Central to these plans are institutional commitments to increase the number of college-educated persons in their service areas. This program will help address a primary goal of the UW System Growth Agenda for Wisconsin and institutional strategic plans by increasing the number of graduates through development and implementation of academic programs that target student populations not currently served by UW-Oshkosh or UW-Green Bay. The demand articulated by local businesses in the NEW North economic development region suggests that the B.S. in Environmental Engineering Technology has the potential to be a popular major at both institutions and that graduates will find employment in the region.

Need as Suggested by Current Student Demand

Student application data indicate UW-Oshkosh and UW-Green Bay have currently enrolled students who may be interested in engineering technology degree programs. According to 2006-2012 application data, a total of 317 applicants specified an interest in engineering fields on their admissions applications. Of this group, 43% (136) enrolled at UW-Oshkosh. During the same period at UW-Green Bay, 366 applicants specified interest in engineering. Of this group, 40% (146) enrolled at UW-Green Bay. Students who complete the pre-engineering program offered at UW-Oshkosh and UW-Green Bay are prepared to transfer to another UW System institution at which engineering is offered. The addition of the engineering technology programs at UW-Oshkosh and UW-Green Bay will enable current pre-engineering students to continue their studies and complete a Bachelor of Science in one of three proposed engineering technology collaborative degree programs, Environmental Engineering Technology, Electrical Engineering Technology, or Mechanical Engineering Technology. The provision of this degree program may also serve to meet current Wisconsin Technical College System (WTCS) student demand for a bachelor's degree completion program in engineering technology. Findings of a 2012 WTCS survey indicated 534 pre-engineering students transferred from a WTCS institution into UW System engineering or engineering technology degree programs.

Need as Suggested by Market Demand

Environmental engineering is a rapidly growing field. Bureau of Labor Statistics Job Outlook data projects that between 2010 and 2020, the national demand for Environmental Engineers will increase by 24% and the demand for Environmental Engineering Technicians by 24%.¹ Similarly, Wisconsin Department of Workforce Development's 2010-20 occupational projections indicate a 14% growth in the demand for Environmental Engineers. Within the Fox Valley and Bay regions, job growth in this area is estimated to be at 10% and 11%, respectively.² Employers within these regions are specifically seeking engineering technologists with bachelor's degrees. In a May 2010 survey of NEW North, Inc. manufacturers, 34% of respondents reported they had current openings or were planning to hire engineering technologists with bachelor's degrees. In the same survey, 15 of the companies recommended that their existing employees complete a baccalaureate in engineering technology. These findings not only demonstrate the current workforce demand for individuals with a bachelor's degree in engineering technology; but they show employees' skills toward the attainment of a bachelor's degree.

The longstanding existence of significant manufacturing in northeastern Wisconsin and projected capital growth provides a relevant context in which to develop and to offer this degree. Nearly one-quarter (24%) of the jobs within this region are in manufacturing, exceeding overall percentages for both the state of Wisconsin (19%) and the U.S. (11%). The NEW North, Inc. and members of the Northeast Manufacturing Alliance, in November 2010, administered a survey of manufacturers that had \$3 million or more in revenue and 25 or more employees, with 179 of the 378 companies surveyed completing the survey. Of the respondents, 41% were planning some form of capital expansion in the following 12-24 months; with a median investment of \$250,000. Almost half (48%) of the firms reported that they planned to invest in some form of capital expansion and modernization that would support job growth in the area of engineering technology.

Graduates with a B.S. in Environmental Engineering Technology will be prepared to work in a number of industries outside of manufacturing. The most popular industries for environmental engineering technologists are water and wastewater, agribusiness, and biotechnology. There are numerous opportunities for employment of program graduates within Wisconsin's dairy industry. Almost 30% of the state's dairy economic activity is generated in the NEW North, Inc. economic development region, representing more than \$6.3 billion in 2004. Initiatives are already underway for this region to take a leadership role in new agri-businesses such as biofuels and biogas generation. Graduates with a B.S. in Environmental Engineering Technology will also be able to work for state and local governments to develop solutions to

¹ Bureau of Labor Statistics (2012) Occupational Handbook. Retrieved from http://www.bls.gov/ooh/architectureand-engineering/environmental-engineers.htm#tab-7

² Wisconsin Workforce Development, Office of Economic Advisors. 2010-20 Occupational Projections. Retrieved from http://worknet.wisconsin.gov/worknet/downloads.aspx?menuselection=da&pgm=occprj

manage efficient water use and wastewater treatment, which is a significant concern in many areas. The increasing demands of mandates by Congress and the Environmental Protection Agency will sustain employment prospects for these graduates.

Emerging Knowledge and Advancing New Directions

The field of Environmental Engineering Technology is very broad, ranging from laboratory and field measurements to system design and operations. An accredited B.S. in Environmental Engineering Technology will prepare graduates to apply their knowledge in a number of industry settings. Environmental Engineering Technology graduates will be prepared to apply their knowledge of biology, chemistry, mathematics and physics, to solve modern environmental challenges faced by industry and government, such as waste disposal, recycling, public health, and water and air pollution. Graduates will also understand the concepts of professional practice, and the roles and responsibilities of public institutions and private organizations pertaining to environmental engineering technology from local, state, national, and global perspectives.

DESCRIPTION OF PROGRAM

General Structure

Students will be able to begin their studies at any of the area's four technical colleges, five campuses of the UW Colleges, the College of Menominee Nation, or at UW-Green Bay and UW-Oshkosh. Program completion will occur at UW-Green Bay or UW-Oshkosh with the conferral of a Bachelor of Science in Environmental Engineering Technology.

Institutional Program Array

UW-Green Bay and UW-Oshkosh currently operate joint undergraduate programs in Engineering with other UW institutions. UW-Green Bay participates in a cooperative engineering program with UW-Milwaukee that offers degrees in civil, electrical, industrial and manufacturing, materials, and mechanical engineering. UW-Green Bay also has a partnership agreement with Northwest Wisconsin Technical College to offer a B.S. in Manufacturing Engineering degree in collaboration with UW-Stout. UW-Oshkosh participates in a dual degree program with UW-Madison and the University of Minnesota in which students earn a B.S. in Physics at UW-Oshkosh and a degree in a selected engineering field from one of the other Schools of Engineering.

UW-Green Bay and UW-Oshkosh also provide pre-professional courses for transfer into existing engineering programs at UW-Milwaukee, UW-Madison, UW-Platteville, and UW-Stout. Typically, students take at least two years of courses at UW-Green Bay or UW-Oshkosh and then transfer to a School of Engineering or equivalent to complete their final two years of study. Required pre-engineering coursework is drawn from mathematics, physics, chemistry, computer science, engineering drawing, engineering mechanics, and other related disciplines.

Other Programs in the University of Wisconsin System

There currently is one other engineering technology program offered in the State of Wisconsin at UW-Stout. While offering strong programs for north-central Wisconsin residents, the existing degree programs do not meet the needs of many students in northeastern Wisconsin who graduate from two-year programs and who are geographically bound. UW-Stout also offers a B.S. in Mechanical Engineering in collaboration with Northeast Wisconsin Technical College in Green Bay, but not a B.S. in Environmental Engineering Technology. In addition, as noted in the data presented above, the need for engineering technologists in Wisconsin exceeds the resource capabilities of a single institution.

Collaborative Nature of the Program

The B.S. in Environmental Engineering Technology will be a collaborative degree program offered by UW-Green Bay and UW-Oshkosh. The collaboration will involve shared faculty, curriculum, facilities, an oversight committee, and advisory groups. Additional partners in this program include industry partnerships and other institutions of higher education in the NEW ERA (Northeast Wisconsin Educational Resource Alliance). Partnerships across business and industry will be in the form of internships, expert guest speakers, research collaborations, touring of facilities, advisement on programs, and student placements. The higher education partnerships will consist of articulation agreements among five University of Wisconsin Colleges (UW- Fond du Lac, UW-Fox Valley, UW-Manitowoc, UW-Marinette, and UW-Sheboygan); four Wisconsin Technical College System institutions (Fox Valley Technical College, Lakeshore Technical College, Moraine Park Technical College, and Northeast Wisconsin Technical College), and the College of Menominee Nation. Students from these institutions will be eligible to transfer into this program. Additionally, faculty from the transfer partner institutions may provide instructional support, research assistance, or advising for transfer students depending on program needs and faculty expertise.

Qualified faculty from UW-Green Bay and UW-Oshkosh will teach courses in their areas of expertise at one or more campus locations. Other NEW ERA qualified and appropriatelycredentialed institutional faculty may teach in the collaborative program at UW-Green Bay or UW-Oshkosh or at a shared lab facility on the grounds of a partner institution located between UW-Green Bay and UW-Oshkosh. Faculty members will serve on the program oversight committee and will have the responsibility to advise program students. Additionally, faculty from each campus will be eligible to engage in collaborative research projects, supervise interns, and collaborate with advisory committees.

The curriculum for the engineering technology programs represents another collaborative aspect of this program. For each engineering technology program, courses are developed, evaluated, and taught by faculty members that have the appropriate academic and professional qualifications from both institutions. Matters related to curriculum will be a part of the responsibility of the oversight committee. Whenever appropriate, qualified faculty from NEW ERA institutions will also teach or develop curriculum related to their areas of expertise. Each of the three engineering technology programs will have a designated curriculum committee

which will approve new courses or program changes. Curriculum changes will be reviewed at each institution, including the partnering institutions, through the existing governance processes.

Delivery

The majority of coursework will be taught in a traditional face-to-face format at each of the collaborating campuses. When curricular goals require specific equipment that is not owned by the universities or would be too costly to purchase, UW-Oshkosh and UW-Green Bay will collaborate to teach lab courses at an off-campus facility at a NEW ERA transfer partner institution located between UW-Oshkosh and UW-Green Bay. This will enable the students to take lab courses in state-of-the-art-locations that are best equipped to meet curricular goals. Both faculty and students will drive to the shared lab facility for select courses regardless of their home campus designations.

Faculty members and program directors from each collaborating campus will serve on the oversight committee for the B.S. in Environmental Engineering Technology. Faculty members and program directors from UW-Green Bay and UW-Oshkosh will be involved in setting academic standards, creating and reviewing the curriculum, implementing and interpreting the assessment of student learning, and the advising of students. The oversight committee will participate in the recruitment and assignment of teaching assignments based on expertise and qualifications. The oversight committee will carry out the program assessment plan and interpret assessment results to make program recommendations. This group will collaborate on recruitment and advising, as well as admission criteria.

A second operational committee comprised of representatives from all institutions, including transfer partners, will provide guidance with the administrative functions related to the collaboration, such as financial aid, admissions, registration, transfer, student support services, and library services. This group will review the Memorandum of Understanding (MOU) for each program on a cyclical basis, and provide feedback and recommendations to the academic oversight committee.

Furthermore, an advisory board consisting exclusively of representatives of NEW ERA, Inc. manufacturing entities will provide insights related to industry standards and practices. The advisory committee will assist the program in establishing, achieving, and assessing its goals. The committee will periodically review the program curricula and provide advice on current and future needs of the technical fields in which graduates will be employed. The advisory committee will provide UW-Green Bay, UW-Oshkosh, and NEW ERA, Inc. institutions information regarding workforce skills and competency requirements, future trends in workforce educational development, and the relevancy of educational programs.

Program costs and revenues will be monitored collaboratively. General program revenue and tuition revenue will be used to support three additional F.T.E. (faculty) for each institution (6.0 F.T.E. total). UW-Green Bay and UW-Oshkosh will co-deliver shared courses until enrollment growth supports multiple course offerings. Therefore, faculty hiring will occur relative to program growth. If fewer than 50 students per major are enrolled in the first year, then hiring of the six-proposed full-time faculty will be delayed until program growth is

sufficient to support additional personnel costs. The financial modeling assumes another 120 students will enroll in the second year of the program. As enrollment grows and stabilizes, tuition funds generated will allow faculty to be hired in years two and three to fill programmatic needs (teaching, mentoring, and advising).

Additional per-semester-revenues will be generated through the engineering technology special course fees. These fees, on average, will amount to approximately \$700 per semester for full-time students enrolled in fundamental and advanced coursework. These funds will be leveraged to secure state-of-the-art laboratory and scientific equipment that can be used by all three proposed engineering technology programs. The ownership of this equipment will be maintained by the University of Wisconsin System, although the equipment may be placed at partnering institutions' facilities. Estimated program costs and revenue are projected based on a semester average of 25 students enrolled from each campus in each of the three proposed engineering technology majors (for a total of 144 students in year 2). It is anticipated that students will enroll in approximately 15 credits per semester at the tuition rates, as stated on page 2.

Diversity

Both UW-Oshkosh and UW-Green Bay are committed to finding ways to expand the diversity of their student body and faculty, curriculum, and student learning experiences. The goal of expanding the diversity of the student body is reflected in the UW-Oshkosh Academic Program Plan and in its commitment to meet the strategic challenges for diversification of the student body and faculty. At UW Green-Bay, faculty members have been engaged in several significant initiatives to recruit a more diverse student body and to close the achievement gap among students of color. Students in this collaborative program, 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 UW-Oshkosh Center for Academic Support and Diversity and the Center for Academic Resources. UW-Green Bay will build upon the work of the American Intercultural Center and the Center for the Advancement for Teaching and Learning to foster diverse experiences for students in this program.

The proposed B.S. in Environmental Engineering Technology will serve non-traditional students, as well as transfer and first-year cohort students. The faculty at the Wisconsin Technical Colleges and the two-year UW Colleges will 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, as well as business and industry partners.

Plans are underway to actively recruit students for the major from the McNair Scholars Program at UW-Oshkosh by engaging students in undergraduate research, participation in student organizations, and through presentations. Women in Science student services support programs at both institutions will also be used to recruit students. Students served by the program are first-generation college students who have an interest in the STEM fields. Recruiting through campus student organizations based on ethnicity will also provide access to STEM fields for underserved populations. Finally, diversity will be integrated within the curriculum. For example, students will participate in internships in diverse settings across the region including in larger urban areas and small corporate settings.

Student Learning Outcomes

The coursework for the B.S. in Environmental Engineering Technology provides students with a solid foundation through the completion of supporting and fundamental courses in biology, chemistry, geosciences, mathematics, physics, as well as introductory courses in air, solid waste, water, and wastewater. Through the upper level fundamentals courses, students will also learn about environmental economics, environmental systems, GIS, hydrology, and soil science. The advance study courses include a required course in project management, a required capstone project or internship/co-op experience, and a number of other electives where students can focus on a particular area of Environmental Engineering Technology. These areas include specific environmental issues, such as air, hazardous waste, solid waste, water, or wastewater, and could also include courses in environmental data analysis, environmental law, industrial safety and hygiene, pollution prevention, or renewable energy.

The B.S. in Environmental Engineering Technology will share the following student learning outcomes with the proposed B.S. in Electrical Engineering Technology and the B.S. in Mechanical Engineering Technology. The shared student learning outcomes for these degrees have been established by the Accreditation Board for Engineering and Technology (ABET) and the International Engineering Alliance (IEA) and are cited verbatim below. According to IEA, graduates of the Engineering Technology baccalaureate degree programs must be able to:

- Comprehend and apply the knowledge embodied in widely-accepted and applied procedures, processes, systems, or methodologies.
- Comprehend and apply the knowledge of embodied procedures, processes, systems, or methodologies that is specific to the jurisdiction in which they practice.
- Identify, clarify, and analyze broadly-defined problems.
- Design or develop solutions to broadly-defined problems.
- Evaluate the outcomes and impacts of broadly-defined activities.
- Recognize the reasonably foreseeable social, cultural, and environmental effects of broadly-defined activities generally, and have regard to the need for sustainability.
- Take responsibility in all these activities to avoid putting the public at risk.
- Manage part or all of one or more broadly-defined activities.
- Choose appropriate technologies to deal with broadly-defined problems. Exercise sound judgment in the course of their broadly-defined activities.

According to ABET, graduates of the Engineering Technology baccalaureate degree programs must demonstrate:

• An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities.

- An ability to select and apply knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies.
- An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.
- An ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives.
- An ability to function effectively as a member or leader on a technical team.
- An ability to identify, analyze, and solve broadly-defined engineering technology problems.
- An ability to apply written, oral, and graphical communication in both technical and nontechnical environments; and an ability to identify and use appropriate technical literature.
- An understanding of the need for and an ability to engage in self-directed continuing professional development.
- An understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity.
- Knowledge of the impact of engineering technology solutions in a societal and global context.
- A commitment to quality, timeliness and continuous improvement.

The following learning outcomes have been identified for those students completing the B.S. in Environmental Engineering Technology:

- An ability to identify, analyze, and solve environmental problems by applying knowledge, modern instrumentation and techniques, and technical skills.
- An ability to select and apply a knowledge of mathematics, science, engineering, and technology to environmental problems that require the application of principles and applied procedures or methodologies.
- An ability to conduct standard tests and measurements and to conduct, analyze, and interpret experiments.
- An ability to apply written, oral, and graphical communication and identify and use appropriate technical literature.
- An ability to function effectively as a member or leader of technical teams.
- An understanding of the need for continuing professional development.
- An understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity.
- A knowledge of the impact of engineering technology solutions in local, regional, national, and global contexts.
- A commitment to quality, timeliness, and continuous improvement.

Assessment of Objectives

The chairs of the programs, in collaboration with the program oversight committee, will have responsibility for the assessment of student learning. As documented in the ABET accreditation for general program outcomes, the engineering program has documented student

outcomes that prepare graduates to attain the program's educational objectives. The program curriculum committee will set specific learning goals for each course that are designed to address identified core competencies related to ABET. The assessment plan outlines how each of the ABET competencies are assessed throughout the program. Direct and indirect assessments of program learning outcomes will take place throughout the students' enrollment in the program. A more detailed assessment plan that is aligned to the ABET assessment plan will be created as the courses are implemented during the next two years. The assessment plan will be evaluated in terms of the clarity of the learning outcomes, the appropriate alignment of assessment tools and the learning outcomes, the process used to collect, analyze, and interpret data, and the use of data to inform program changes and continuous improvement decisions. The program oversight committee reviews assessment data to inform any program or curricular changes.

Program Curriculum

The B.S. in Environmental Engineering Technology will consist of between 129 to 132 credits. The variance is attributable to the different General Education Requirements at each institution. Coursework is separated into three categories: support courses, fundamental courses, and advanced courses.

Environmental Engineering Technology Support Courses (41 credits)			
Introduction to Engineering Technology	2 credits		
Physics I	5 credits		
Biology	4 credits		
Calculus I	4 credits		
Calculus II	4 credits		
Chemistry I	5 credits		
Chemistry II	5 credits		
Introduction to Statistics	4 credits		
Introduction to Business	3 credits		
Drafting	2 credits		
Surveying	3 credits		
Engineering Technology Fundamentals Courses (23 cred	dits)		
Environmental Microbiology	4 credits		
Fluids / Hydraulics	3 credits		
Geosciences	4 credits		
Introduction to Air	3 credits		
Introduction to Solid Waste	3 credits		
Introduction to Water	3 credits		
Introduction to Wastewater	3 credits		
Environmental Engineering Technology Advanced Courses: (29 Credit Core with Options)			
Environmental Economics	3 credits		
Environmental Systems	4 credits		
Hydrology	3 credits		
Soil Science	4 credits		

Geography Information Systems	3 credits
Advanced Air	3 credits
Advanced Solid Waste	3 credits
Advanced Water	3 credits
Advanced Wastewater	3 credits
Environmental Data Analysis	3 credits
Hydrogeology	3 credits
Hazardous Waste Management	3 credits
Pollution Prevention	3 credits
Renewable Energy	3 credits
Water Resources Management	3 credits
Project Management	3 credits
Industrial Safety Hygiene	3 credits
Environmental Law	3 credits
Lean Processes	3 credits
Capstone Project	3 credits
Co-op Internships	3 credits

General Education Requirements UW-Green Bay (37-48 credits)

Mathematics and English Competency	0-9 credits
Fine Arts	3 credits
Humanities	9 credits
Social Science	9 credits
Natural Science	10-12 credits
Ethnic Studies	3 credits
World Culture	3 credits

General Education Requirements-UW-Oshkosh (41 credits)

Culture	9 credits
Nature	8 credits
Society	9 credits
Math	3 credits
Quest Speaking	3 credits
Quest Writing	3 credits
Connect*	3 credits

(*A final course in the revised general education requirements in the new University Studies Program. In this advanced writing 3-credit course, students synthesize their understanding of a liberal education and the three signature questions related to intercultural knowledge, sustainability, and civic engagement).

Projected Time to Degree

Students will be able to complete the degree in a four-year period by following an academic plan for each year of the program. Transfer student pathways will be addressed through articulation agreements among two- and four-year institutions.

Program Review Process

The educational objectives of the program will be reviewed regularly by the program oversight committee and revised, as needed, to meet current ETAC of ABET accreditation requirements, and to serve the education and training needs of the engineering technology students, employees, and employers in northeastern Wisconsin. Changes to the objectives may be proposed by the advisory committee or faculty, and will be considered by the Environmental Engineering Technology Curriculum Committee representing the collaborating educational institutions. The program will be reviewed on a seven-year cycle as a part of each university's program review policy. Each program is reviewed concurrently at each four-year institution. The department, the college program review committee, the dean of the appropriate college, and an external reviewer will conduct reviews before the senior administration completes the program review. Additionally, the program will be reviewed by the appropriate section of the ABET professional accrediting association.

Institutional Review

Each program is required to complete a self-study and be reviewed by an external reviewer. Faculty governance committees charged with program review at both UW-Green Bay and UW-Oshkosh governance bodies will review this program. College level program review committees, in addition to university-level program review committees, will review the programs.

Accreditation

The program will need to be approved through a consortial agreement with the Higher Learning Commission. The two four-year universities in this collaboration will propose the B.S. in Environmental Engineering Technology for accreditation by the Engineering Accreditation Commission. Programs requesting an initial accreditation must have at least one graduate prior to the academic year when the on-site review occurs. In order to take advantage of the substantial advantages that accreditation confers upon a program, the Environmental Engineering Technology baccalaureate program will seek accreditation under the Criteria for Accrediting Engineering Technology Programs of the ABET Technology Accreditation Commission (ETAC). May 7, 2013



Dr. Kevin Reilly, President University of Wisconsin System Administration 1720 Van Hise Hall 1220 Linden Drive Madison, WI 53706

Dear President Reilly,

The University of Wisconsin-Green Bay is proposing three new majors, all of which are connected to our existing Bachelor of Science degree. We are seeking Board of Regents approval for a new Environmental Engineering Technology major, Electrical Engineering Technology major, and a Mechanical Engineering Technology major. I am writing to confirm the full commitment and support of the College of Liberal Arts and Sciences and the Office of the Provost. We plan to support these programs through tuition and fees.

These three majors have been in development for almost three years and began with a survey of businesses in Northeastern Wisconsin to assess the need and demand for students for these majors. There is a high demand, and the federal Bureau of Labor Statistics predicts that the demand for engineering technologists will increase by nearly 25% by 2020. Working with partners at New North and NEW ERA, the University has forged broad partnerships with the two year colleges, technical colleges, and the College of Menominee Nation to establish many pathways for students interested in engineering technology. Essentially, no matter the route to the University, students with an interest in engineering technology will be well situated to not only take advantage of the majors but also the employment opportunities that may await after graduation.

The Department of Natural and Applied Sciences in the College of Liberal Arts and Sciences and the Faculty Senate have approved all three new majors. The faculty members and the dean have a plan to acquire the expertise to implement the programs. Additionally, they are working with the external accrediting agency ABET to make sure that the first students to complete the degree graduate from accredited programs.

We are enthusiastic about these majors for they hold tremendous potential for students and reflect the positive spirit of public and private cooperative relationships among the state's business community, the technical colleges, a private tribal college, and the UW System. These majors also support UW-Green Bay's strategic direction and help make the campus even more integral to the economic future of Northeastern Wisconsin.

Sincerely,

Julia E. Wallace Provost and Vice Chancellor

Connecting learning to life Office of the Provost and Vice Chancellor for Academic Affairs, David A. Cofrin Library, Suite 835 University of Wisconsin-Green Bay, 2420 Nicolet Drive, Green Bay, Wisconsin 54311-7001 Phone: 920-465-2334 • Fax: 920-465-2430 May 7, 2013



Dr. Kevin Reilly, President University of Wisconsin System Administration 1720 Van Hise Hall 1220 Linden Drive Madison, WI 53706

Dear President Reilly,

UW Oshkosh, in collaboration with UW Green Bay, proposes three new Bachelor of Science degree programs in Electrical Engineering Technology, Mechanical Engineering Technology, and Environmental Engineering Technology in the College of Letters and Science. I am writing to confirm the full commitment of the College of Letters and Science and the Office of the Provost to these new programs. The addition of these programs represents new areas of study in engineering technology for UW Oshkosh students. The proposed majors were created in response to professional needs and interest on the part of manufacturing and industry in the Fox Valley and the NEW ERA institutions. The institutions involved in this collaboration created these programs in response to employer needs, taking into account the nature and type of industry in the region and the requirements found necessary for the economic vitality of the region. The Bureau of Labor Statistics indicates that demand for these positions will be high in the future.

Students from Wisconsin Technical Colleges, two-year UW Colleges, as well as the College of the Menominee Nation will be able to transfer to either of the four-year institutions to complete the engineering technology programs. At UW-Oshkosh, the programs consist of 41 credits of general education, engineering technology support courses, fundamental courses and credits in advanced study.

The College of Letters and Science, the Academic Policies Committee and the Faculty Senate have all approved the new programs. Advisory committees of engineering and manufacturing professionals and a consultant of the ABET Accrediting Engineering Technology Commission examined the initial coursework and structure for these programs. Ongoing consultation with ABET will assist the program faculty in their efforts to ensure quality in these programs as they are implemented. These programs will be integrated into the University assessment and program review procedures, as well as the accreditation review by ABET. The University, in collaboration with UW Green Bay, has the resources, faculty and courses to offer these programs.

Lastly, the new program supports the Academic Plan and the Strategic Plan of the UW Oshkosh. The program promotes students' abilities to look at the impact of engineering technology solutions in the local, regional, and global contexts, which, in turn align with our global learning priorities. Also, the program will develop the ability to identify, analyze and solve engineering technology problems that promote active learning. These majors support engaged learning and high impact practices such as internships, community engagement and active learning strategies, as reflected in our Academic Plan. Lastly, the engineering technology majors support the campus' sustainability strategic priority and its commitment to promote economic and workforce development in the region.

If you have additional questions, I would be happy to discuss them with you.

Sincerely,

Jack Em

Lane R. Earns Provost and Vice Chancellor

PROVOST AND VICE CHANCELLOR • ACADEMIC AFFAIRS UNIVERSITY OF WISCONSIN OSHKOSH • 800 ALGOMA BLVD • OSHKOSH WI 54901-8622 (920) 424-0300 • FAX (920) 424-0247 • www.uwosh.edu/provost

An Equal Opportunity/Affirmative Action Institution • www.uwosh.edu

Program Authorization (Implementation) Bachelor of Science in Mechanical Engineering Technology UW-Oshkosh and UW-Green Bay

EDUCATION COMMITTEE

Resolution I.1.a.(3):

That, upon the recommendation of the Chancellor of the University of Wisconsin-Oshkosh and the Chancellor of the University of Wisconsin-Green Bay, as well as the President of the University of Wisconsin System, the Chancellors be authorized to implement the Bachelor of Science in Mechanical Engineering Technology.

NEW PROGRAM AUTHORIZATION COLLABORATIVE BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING TECHNOLOGY UW-OSHKOSH UW-GREEN BAY

EXECUTIVE SUMMARY

BACKGROUND

In accordance with the procedures outlined in Academic Planning and Program Review (ACIS 1.0, Revised August 2012, available at <u>http://www.uwsa.edu/acss/planning/</u>), the new program proposal for a Collaborative Bachelor of Science in Mechanical Engineering Technology at the University of Wisconsin-Green Bay and the University of Wisconsin-Oshkosh is presented to the Board of Regents for consideration. The institution has submitted the authorization document, a financial statement, and a letter of institutional commitment from the universities' Provosts.

REQUESTED ACTION

Approval of Resolution I.1.a.(3), authorizing the implementation of a Collaborative Bachelor of Science in Mechanical Engineering Technology at the University of Wisconsin-Green Bay and at the University of Wisconsin-Oshkosh.

DISCUSSION

The University of Wisconsin-Green Bay and the University of Wisconsin-Oshkosh propose to establish a Collaborative Bachelor of Science (B.S.) in Mechanical Engineering Technology. The collaboration involves shared faculty, curriculum, facilities, oversight committee, and advisory groups. The B.S. in Mechanical Engineering Technology is one of three proposed degree-completion majors within a suite of collaborative engineering technology degrees at UW-Green Bay and UW-Oshkosh, which are submitted for consideration by the BOR at the same time. Proposals for a Collaborative Bachelor of Science in Electrical Engineering Technology and in Environmental Engineering Technology are also on the July 2013 Education Committee agenda.

The proposed new program reflects a distinctive, collaborative degree between NEW North, Inc. institutions and business. The higher education partnerships will consist of articulation agreements with five University of Wisconsin Colleges; (UW-Fond du Lac, UW-Fox Valley, UW-Manitowoc, UW-Marinette, and UW-Sheboygan); four Wisconsin Technical College System institutions; (Fox Valley Technical College, Lakeshore Technical College, Moraine Park Technical College, and Northeast Wisconsin Technical College); and at the College of Menominee Nation. Program completion will occur at UW-Green Bay or at UW-Oshkosh, depending on the student's choice. Additional partners in this program include industry partnerships. The creation of a B.S. in Mechanical Engineering Technology responds to the workforce needs articulated by manufacturers and municipalities in northeastern Wisconsin. The program will provide students with instruction and hands-on experience to develop competencies in applied Mechanical Engineering and analytical and critical problem-solving skills. As a result, industry will benefit through attainment of a more knowledgeable and flexible workforce who will continue to build their confidence and competence relative to their employment positions.

Graduates will fill positions in regional industries, manufacturing, and engineering service firms. The curriculum emphasizes interdisciplinary learning, which aligns well with the current focus on the preparation and requirements for engineers of the 21st century. The interdisciplinary approach supports creative problem solving, critical thinking, teamwork, leadership, communication, and cultural diversity to enrich and engage students. After mastering concepts associated with basic physics, chemistry, and math, students will take courses in specialized areas that reflect current and new directions in the field, including drawing, modeling, and analysis using state of the art software packages. Students will also study behaviors and characteristics of materials and machine system components; engage in advanced study of thermal and fluid systems; and learn about the integration of mechanical, electrical, and electronic systems as well as designing projects and managing them from start-to-finish.

RECOMMENDATION

The University of Wisconsin System recommends approval of Resolution I.1.a.(3), authorizing the implementation of a Collaborative Bachelor of Science in Mechanical Engineering Technology at the University of Wisconsin-Green Bay and at the University of Wisconsin-Oshkosh.

RELATED REGENT AND UW SYSTEM POLICIES

Regent Policy 4-12: Academic Program Planning, Review, and Approval in the University of Wisconsin System.

Academic Information Series #1 (ACIS-1.0; revised August 2012): Statement of the UW System Policy on Academic Planning and Program Review.

REQUEST FOR AUTHORIZATION TO IMPLEMENT A BACHELOR OF SCIENCE DEGREE IN MECHANICAL ENGINEERING TECHNOLOGY AT UW-GREEN BAY AND UW-OSHKOSH

PREPARED BY UW-GREEN BAY AND UW-OSHKOSH

ABSTRACT

The University of Wisconsin-Green Bay and the University of Wisconsin-Oshkosh propose to establish a collaborative Bachelor of Science (B.S.) in Mechanical Engineering Technology. The proposed degree-completion program will be one of three majors within a suite of proposed collaborative engineering technology degrees at UW-Green Bay and UW-Oshkosh. Students may begin their studies at one of five campuses of UW Colleges; UW-Fond du Lac, UW-Fox Valley, UW-Manitowoc, UW-Marinette, and UW-Sheboygan; at one of the four Wisconsin Technical College System institutions; Fox Valley Technical College, Lakeshore Technical College, Moraine Park Technical College, and Northeast Wisconsin Technical College; at the College of Menominee Nation; or at UW-Green Bay or UW-Oshkosh. Program completion will occur at UW-Green Bay or UW-Oshkosh with the conferral of a B.S. in Mechanical Engineering Technology.

UW-Oshkosh and UW-Green Bay already offer related pre-engineering programs. The development of this program responds to the regional economic needs of manufacturers and municipalities in northeastern Wisconsin as identified by an employer survey of the NEW North, Inc. related to current and future needs. The program will provide students with applications-based mechanical engineering technology expertise. Graduates will have the knowledge, problem solving ability, and hands-on skills to enter careers in the design, installation, manufacturing, testing, evaluation, technical sales, or maintenance of mechanical systems, with particular strengths in the analysis, applied design, development, implementation, and oversight of advanced mechanical systems and processes.

PROGRAM IDENTIFICATION

Institution Names University of Wisconsin-Green Bay University of Wisconsin-Oshkosh

Title of Proposed Program Mechanical Engineering Technology

Degree/Major Designations Bachelor of Science

Mode of Delivery

Instruction will be delivered face-to-face at UW-Green Bay, UW-Oshkosh, or at partnering campus facilities. Degrees will be conferred by UW-Green Bay and UW-Oshkosh.

Projected Enrollments by Year Five

Table 1 represents enrollment and graduation projections for students entering the program over the next five years. The initial year of the program will have approximately 50 students enrolled. An additional 25 students will be admitted each year. At the end of five years, a total of 170 students, that is 85 each for UW Oshkosh and UW Green Bay, will be enrolled in the program.

Year	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
New Students Admitted	50	25	25	25	25
Continuing Students	0	47	68	68	63
Total Enrollment	50	72	93	93	88
Graduating Students	0	0	25	30	25

Table 1: Projected Enrollment

Tuition Structure

The B.S. in Mechanical Engineering Technology program is comprised of 120 credits that are separated into three categories: support courses, fundamental courses, and advanced courses. The support courses consist of 41 credits and are built on the foundation of the General Education Programs and Bachelor of Science Degree requirements at each institution. Within the fundamental and advanced course categories, there is a set of core non-Engineering Technology prerequisite courses, such as mathematics or laboratory science courses. Courses that fall in the support category and those that are prerequisites to the fundamental and advanced courses are currently offered at both UW-Green Bay and UW-Oshkosh. The delivery of these courses is funded from the general purpose revenue (GPR) budget.

During the semesters students are enrolled in support and non-Engineering Technology prerequisite courses, they will pay the regular undergraduate tuition and fees relative to each institution. Students must enroll at one of the institutions; they cannot be enrolled at both universities. For the current academic year at UW Oshkosh, the residential tuition and segregated fees total \$3,678.58 per semester for full-time students who are enrolled in 12 to18 credits per term. Of this amount, \$467.50 is attributable to segregated fees and \$3,211.08 is attributable to course tuition. At UW-Green Bay, the residential tuition and segregated fees total \$3,824.16 per semester for full-time students who are enrolled in 12 to 18 credits per term. \$675.00 is attributable to segregated fees and \$3,149.16 is attributable to course tuition. The tuition differences between the two institutions are related to specific services that are supported by tuition at each institution.

At the time students formally declare an Engineering Technology major and are admitted to courses in the Fundamental and/or Advanced category, a full-time student will pay on average \$700 per semester in Engineering Technology special course fees in addition to the tuition and fees listed above. Part-time students will pay fewer special course fees per semester. Tuition will be paid to the institution where the student is currently enrolled. A full-time student should be able to complete the required Fundamental and Advanced courses in four to five semesters. A discussion regarding anticipated program revenues and costs may be found on page 9 in the "Delivery" section of this document.

Department or Functional Equivalent

Department of Natural and Applied Sciences at UW-Green Bay Department of Physics at UW-Oshkosh UW-Green Bay will serve as the lead institution for purposes of accreditation by the Higher Learning Commission.

College, School, or Functional Equivalent

College of Liberal Arts and Sciences at UW-Green Bay College of Letters and Sciences at UW-Oshkosh

Proposed Date of Implementation

Fall, 2013, or the next semester after HLC approval is confirmed.

INTRODUCTION

Rationale and Relation to Mission

The proposed program reflects a distinctive collaboration among institutions and businesses within the NEW North, Inc. economic development region. Once approved by the UW System Board of Regents, students will be able to begin their studies at any of the area's four technical colleges, five UW Colleges, the College of Menominee Nation, or at UW-Green Bay and UW-Oshkosh. Program completion will occur at UW-Green Bay or UW-Oshkosh with the conferral of a Bachelor of Science in Mechanical Engineering Technology. Participating institutions will sign a Memorandum of Understanding.

The proposed B.S. in Mechanical Engineering Technology was created in response to the workforce needs articulated by manufacturers and municipalities in Northeastern Wisconsin. According to the Bureau of Labor Statistics (2012), nationally, the demand for mechanical engineering technicians is expected to increase. This demand may be explained, in part, as the interest and demand for alternative energy sources, such as wind power and solar power increase. The graduates will fill vacant positions in industry and aid in corporate technology advancement endeavors. Graduates may also work with firms in engineering services and in research and development.

The program will benefit students, employers, and the educational institutions involved in the collaboration. Students will receive instruction and hands-on experience to develop competencies in applied mechanical engineering and analytical and critical problem solving skills. As a result, industry will benefit through attainment of more knowledgeable and flexible workers who will continue to build their confidence and competence relative to their employment positions as part of their professional development. This may support an employer's ability to retain employees over a longer period of time. Business and industry in the region will also benefit from state-of-the-art technology and training centers at regional technical colleges, UW institutions, and regional industrial facilities. The institutions involved in the collaboration will further their educational missions to support regional economic and workforce development while making more efficient use of their intellectual, human, and physical resources through collaboration efforts.

The program furthers the UW System's mission to develop human resources and technological expertise across the state. Further, the program supports the UW System Core Mission of the University Cluster and UW System's strategic interests by providing collaborative degree programs and activities designed to promote economic development to meet the unique needs of our region. The program will advance these interests through its curriculum by partnering with a highly-engaged regional industrial sector to offer capstone projects, internships, and employment opportunities.

UW-Oshkosh and UW-Green Bay are committed to offering programs in high demand areas, especially as they relate to STEM fields. The academic plan of UW-Oshkosh stresses engaged learning, student excellence, globalization, diversity, sustainability, and community engagement. This degree will draw a more diverse student population, and will fulfill a major priority of the academic program plan at UW-Oshkosh. Furthermore, UW-Green Bay is committed to offering high-quality, interdisciplinary, problem-focused programs that have real world applications, especially in the areas of ecology and sustainability. This degree fits well within the institution's primary mission and broadens its reach into the community by advancing the capacity of the region to build economic infrastructure.

The particular program objectives are consistent with the select missions of the degreegranting institutions. At UW-Green Bay, the Mechanical Engineering Technology program supports the institution's mission by emphasizing interdisciplinary, problem-focused learning and engaged citizenship. The program advances the mission of UW-Oshkosh by providing a quality educational opportunity to the people of north eastern Wisconsin and beyond through the discovery, synthesis, preservation, and dissemination of knowledge.

The proposed program also strongly supports major themes within each institution's strategic plan. Central to these plans are institutional commitments to increase the number of college-educated persons in their service areas. This program will help address a primary goal of the UW System Growth Agenda for Wisconsin and institutional strategic plans by increasing the number of graduates through development and implementation of academic programs that target student populations not currently served by UW-Oshkosh or UW-Green Bay. The demand articulated by local businesses in the NEW North, Inc. economic development region suggests that the Mechanical Engineering Technology has the potential to be a popular major at both institutions and that graduates will find employment in the region.

Need as Suggested by Current Student Demand

Student application data indicate UW-Oshkosh and UW-Green Bay have currently enrolled students who may be interested in engineering technology degree programs. According to 2006-2012 application data, a total of 317 applicants specified an interest in engineering fields on their admissions applications. Of this group, 43% (136) enrolled at UW-Oshkosh. During the same period at UW-Green Bay, 366 applicants specified interest in engineering. Of this group, 40% (146) enrolled at UW-Green Bay. Students who complete the pre-engineering program offered at UW-Oshkosh and UW-Green Bay are prepared to transfer to another UW System institution where engineering is offered. The addition of the engineering technology programs at UW-Oshkosh and UW-Green Bay will enable current pre-engineering students to continue their studies and complete a Bachelor of Science in one of three proposed engineering technology collaborative degree programs: Environmental Engineering Technology, Electrical Engineering Technology, or Mechanical Engineering Technology. The provision of this degree program may also serve to meet current Wisconsin Technical College System (WTCS) student demand for a bachelor's degree completion program in engineering technology. Findings of a 2012 WTCS survey indicated 534 engineering students transferred from a WTCS institution into the UW System engineering and engineering technology.

Need as Suggested by Market Demand

Mechanical engineering is a broad academic discipline that includes the design, manufacturing, and testing of a range of devices, including tools, engines, and machines. Mechanical engineers and technologists must also have knowledge regarding the behavior of various materials and energy sources. Consequently, there is a need for individuals with a degree in mechanical engineering technology across a large span of industries. Bureau of Labor Statistics Job Outlook data projects that, nationally, the demand for mechanical engineers will increase by 9% between 2010 and 2020, and the demand for mechanical engineering technicians by 4%.¹

Similarly, Wisconsin's Department of Workforce Development's 2010-20 occupational projections indicate 7% growth in the demand for mechanical engineers.² Employers within the northeastern region are specifically seeking engineering technologists with bachelor's degrees. In a May 2010 survey of NEW North, Inc. manufacturers, 34% of respondents reported they had current openings or were planning to hire engineering technologists with bachelor's degrees. In the same survey, 15 of the companies recommended that their existing employees complete a baccalaureate in engineering technology. These findings not only demonstrate the current workforce demand for individuals with a bachelor's degree in engineering technology; but they show employers are committed to investing in their current employees and are interested in advancing their employees'skills toward the attainment of a bachelor's degree.

The longstanding existence of significant manufacturing in northeastern Wisconsin and projected capital growth provides a relevant context in which to develop and offer this degree. Nearly one-quarter (24%) of the jobs within this region are in manufacturing, exceeding overall percentages for both the state of Wisconsin (19%) and the U.S. (11%). UW-Oshkosh, UW-Green Bay, and partnering institutions developed the trio of proposed engineering technology degrees in response to employer needs and potential industry growth. The NEW North, Inc. and members of the Northeast Manufacturing Alliance in November 2010 administered a survey of manufacturers that had \$3 million or more in revenue and 25 or more employees, with 179 of the 378 companies surveyed completing the survey. Of the respondents, 41% were planning some form of capital expansion in the following 12-24 months; with a median investment of \$250,000. Almost half (48%) of the firms reported they planned to invest in some form of capital expansion and modernization that would support job growth in the area of engineering technology.

¹ Bureau of Labor Statistics (2012) Occupational Handbook. Retrieved from http://www.bls.gov/ooh/architectureand-engineering/mechanical-engineers.htm

² Wisconsin Workforce Development, Office of Economic Advisors. 2010-20 Occupational Projections. Retrieved from http://worknet.wisconsin.gov/worknet/downloads.aspx?menuselection=da&pgm=occprj.

Emerging Knowledge and Advancing New Directions

The curriculum emphasizes interdisciplinary learning, which aligns well with the current focus on the preparation and requirements for engineers of the 21st century. The interdisciplinary approach supports creative problem solving, critical thinking, teamwork, leadership, communication, and cultural diversity to enrich and engage students. These concepts are aligned with the LEAP outcomes adopted by the UW System campuses and are reflected in the general education outcomes at the system campuses. This approach benefits students completing the Mechanical Engineering Technology program at UW Green Bay or UW Oshkosh by enhancing their long-term performance as engineering technologists.

After mastering concepts associated with basic physics, chemistry, and math, students will take courses in specialized areas that reflect current and new directions in the field, including:

- drawing, modeling, and analysis using state of the art software packages
- behaviors and characteristics of materials and machine system components
- advanced study of thermal and fluid systems
- the integration of mechanical, electrical, and electronic systems
- designing projects and managing them from start to finish

DESCRIPTION OF PROGRAM

General Structure

The B.S. in Mechanical Engineering Technology program's objectives and coursework will prepare engineering technologists who specialize in the component of the technological spectrum relating to product improvement, manufacturing, construction, and operational engineering functions. This engineering technology program will include instruction in various engineering support functions for research, production, and operations, and applications to specific engineering specialties. Coursework will provide mechanical engineering technologist professionals with hands-on and applications-based engineering knowledge in product design, testing, development, field engineering, technical operations, and quality control.

Institutional Program Array

UW-Green Bay and UW-Oshkosh currently operate joint undergraduate programs in Engineering with other UW institutions. UW-Green Bay participates in a cooperative engineering program with UW-Milwaukee that offers degrees in civil, electrical, industrial and manufacturing, materials, and mechanical engineering. UW-Green Bay also has a partnership agreement with Northwest Wisconsin Technical College to offer a B.S. in Manufacturing Engineering degree in collaboration with UW-Stout. UW-Oshkosh participates in a dual degree program with UW-Madison and the University of Minnesota in which students earn a B.S. in Physics at UW- Oshkosh and a degree in a selected engineering field from one of the other Schools of Engineering. UW-Green Bay and UW-Oshkosh also provide pre-professional courses for transfer into other engineering programs at UW-Milwaukee, UW-Madison, UW-Platteville, and UW-Stout. Typically, students can take at least two years of courses at UW-Green Bay or UW-Oshkosh and then transfer to a School of Engineering or equivalent to complete their final two years of study. Required pre-engineering coursework is drawn from mathematics, physics, chemistry, computer science, engineering drawing, engineering mechanics, and other related disciplines. Finally, UW-Green Bay operates a cooperative program in Engineering with UW-Milwaukee. Students can take up to three years of coursework at UW-Green Bay and then transfer to UW-Milwaukee for a final two years of study.

Other Programs in the University of Wisconsin System

There is one other engineering technology program offered in the State of Wisconsin at UW-Stout. While offering strong programs for north-central Wisconsin residents, the existing degree program does not meet the needs of many students in northeastern Wisconsin who graduate from two-year programs and who are geographically bound. UW-Stout also offers a B.S. in Mechanical Engineering in collaboration with NWTC in Green Bay, but not a B.S. in Mechanical Engineering Technology. In addition, as noted in the previously collected data, the need for engineering technologists in Wisconsin exceeds the resource capabilities of a single institution.

Collaborative Nature of the Program

The B.S. in Mechanical Engineering Technology will be a collaborative degree program offered by UW-Green Bay and UW-Oshkosh. The collaboration will involve shared faculty, curriculum, facilities, an oversight committee, and advisory groups. Additional partners in this program include industry partnerships and other institutions of higher education in the Northeast Wisconsin Educational Resource Alliance (NEW ERA). Partnerships across business and industry will be in the form of internships, expert guest speakers, research collaborations, touring of facilities, advisement on programs, and student placements. The higher education partnerships will consist of articulation agreements among five University of Wisconsin Colleges (UW-Fond du Lac, UW-Fox Valley, UW-Manitowoc, UW-Marinette, and UW-Sheboygan); four Wisconsin Technical College System institutions (Fox Valley Technical College, Lakeshore Technical College, Moraine Park Technical College, and Northeast Wisconsin Technical Colleges), and the College of Menominee Nation. Students from these institutions will be eligible to transfer into this program. Additionally, faculty from the transfer partner institutions may provide instructional support, research assistance, or advising for transfer students depending on program needs and faculty expertise.

Qualified faculty from UW-Green Bay and UW-Oshkosh will teach courses in their areas of expertise at one or more campus locations. Other NEW ERA qualified and appropriately-credentialed institutional faculty may teach in the collaborative program at UW-Green Bay or UW-Oshkosh, or at a shared lab facility at a partner institution located between UW-Green Bay and UW-Oshkosh. Faculty members will serve on the program oversight committee and will have the responsibility to advise program students. Additionally, faculty from each campus will

be eligible to engage in collaborative research projects, supervise interns, and collaborate with advisory committees.

The curriculum for the engineering technology programs represents another collaborative aspect of this program. For each engineering technology program, courses are developed, evaluated, and taught by faculty members from both campuses that have the appropriate academic and professional qualifications. Matters related to curriculum will be a part of the responsibility of the oversight committee. Whenever appropriate, qualified faculty from NEW ERA institutions will also teach or develop curriculum related to their areas of expertise. Each of the three engineering technology programs will have a designated curriculum committee who will approve new courses or program changes. Curriculum changes will be reviewed at each institution, including the partnering institutions, through the existing governance processes.

Delivery

The majority of coursework will be taught in a traditional face-to-face format at each of the collaborating campuses. When curricular goals require specific equipment that is not owned by the universities or would be too costly to purchase, UW-Oshkosh and UW-Green Bay will collaborate to teach lab courses at an off-campus facility at a NEW ERA transfer partner institution located between UW-Oshkosh and UW-Green Bay. This will enable the students to take lab courses in state-of-the-art-locations that are best equipped to meet curricular goals. Both faculty and students will drive to the shared lab facility for select courses regardless of their home campus designations.

Faculty members and program directors from each collaborating campus will serve on the oversight committee for the B.S. in Mechanical Engineering Technology. Faculty members and program directors from UW-Green Bay and UW-Oshkosh will be involved in setting academic standards, creating and reviewing the curriculum, implementing and interpreting the assessment of student learning, and the advising of students. The oversight committee will participate in the recruitment and assignment of teaching assignments based on expertise and qualifications. The oversight committee will carry out the program assessment plan and interpret assessment results to make program recommendations. This group will collaborate on recruitment and advising as well as admission criteria.

A second operational committee comprised of representatives from all institutions, including transfer partners, will provide guidance with the administrative functions related to the collaboration, such as financial aid, admissions, registration, transfer, student support services, and library services. This group will review the Memorandum of Understanding (MOU) for each program on a cyclical basis, and provide feedback and recommendations to the academic oversight committee.

Furthermore, an advisory board consisting exclusively of representatives of NEW ERA manufacturing entities will provide insights related to industry standards and practices. The advisory committee will assist the program in establishing, achieving, and assessing its goals. The committee will periodically review the program curricula and provide advice on current and future needs of the technical fields in which graduates will be employed. The advisory

committee will provide UW-Green Bay, UW-Oshkosh, and NEW ERA institutions information regarding workforce skills and competency requirements, future trends in workforce educational development, and the relevancy of educational programs.

Program costs and revenues will be monitored collaboratively. General program revenue and tuition revenue will be used to support three additional F.T.E. faculty for each institution (6 F.T.E. total). UW-Green Bay and UW-Oshkosh will co-deliver shared courses until enrollment growth supports multiple course offerings. Therefore, faculty hiring will occur relative to program growth. If fewer than 50 students per major are enrolled in the first year, then hiring of the six-proposed full-time faculty will be delayed until program growth is sufficient to support additional personnel costs. The financial modeling assumes another total 120 students will enroll in the second year of the program. As enrollment will grow and stabilize, tuition funds generated will allow faculty to be hired in years two and three to fill programmatic needs (teaching, mentoring, and advising).

Additional per-semester-revenues will be generated through the engineering technology special course fees. These fees, on average will be approximately \$700 per semester for fulltime students enrolled in fundamental and advanced coursework. These funds will be leveraged to secure state-of-the-art laboratory and scientific equipment that can be used by all three proposed engineering technology programs. The ownership of this equipment will be maintained by the University of Wisconsin System; although the equipment may be placed at partnering institutions' facilities. Estimated program costs and revenue are projected based on a semester average of 25 students enrolled from each campus in each of the three proposed engineering technology majors (for a total of 144 students in year two). It is anticipated students will enroll in approximately 15 credits per semester at the tuition rates stated on page 2.

Diversity

Both UW-Oshkosh and UW-Green Bay are committed to finding ways to expand the diversity of their student bodies and faculty, curriculum, and student learning experiences. The goal of expanding the diversity of the student body is reflected in the UW-Oshkosh Academic Program Plan and in its commitment to meet the strategic challenges for diversification of the student body and faculty. At UW Green-Bay, faculty members have been engaged in several significant initiatives to recruit a more diverse student body and close the achievement gap among students of color. Students in this collaborative program, 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 UW-Oshkosh Center for Academic Support and Diversity and the Center for Academic Resources. UW-Green Bay will build upon the work of the American Intercultural Center and the Center for the Advancement for Teaching and Learning to foster diverse experiences for students in this program.

The proposed B.S. in Mechanical Engineering Technology will serve nontraditional students as well as transfer and first-year cohort students. The faculty at the Wisconsin Technical Colleges and the two-year UW Colleges will 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 as well as business and industry partners.

Plans are underway to actively recruit students for the major from the McNair Scholars Program at UW-Oshkosh by engaging students in undergraduate research, participation in student organizations, and through presentations. Women in Science student services support programs at both institutions will also be used to recruit students. Students served by that program are first-generation college students and have an interest in the STEM fields. Recruiting through campus student organizations based on ethnicity on campus will also provide access to STEM fields for underserved populations.

Finally, diversity will be integrated within the curriculum. For example, students will participate in internships in diverse settings across the region including in larger urban areas and small corporate settings.

Student Learning Outcomes

The program objectives and coursework support the preparation of engineering technologists who are specialists in the portion of the technological spectrum closest to product improvement, manufacturing, construction, and operational engineering functions. This engineering technology program typically includes instruction in various engineering support functions for research, production, and operations, and applications to specific engineering specialties. Coursework will provide engineering technologist professionals with hands-on and applications-based engineering knowledge in product design, testing, development, field engineering, technical operations, and quality control.

The collaborative B.S. in Mechanical Engineering Technology Baccalaureate Program will:

- Prepare students to select and pursue an engineering career within the broad field of Mechanical Engineering Technology as a practitioner in the application of mechanical engineering knowledge and skills.
- Prepare students to obtain experience and develop competence through the application of specific knowledge and skills in their employment situation(s).
- Prepare students through both conceptual and hands-on practical training in real-world applications.
- Prepare students to fulfill the practical engineering needs of industrial and manufacturing employers, thereby contributing to the success of such businesses and related endeavors, wherever that may be geographically.
- Meet the mechanical engineering technology employee needs of all applicable employers of northeastern Wisconsin, including members of The NEW North, Inc., and members of the Northeast Wisconsin Manufacturing Alliance (NEWMA).

The B.S. in Mechanical Engineering Technology will share student learning outcomes with the proposed B.S. in Electrical Engineering Technology and the B.S. in Environmental Technology. The shared student learning outcomes for these degrees have been established by the Accreditation Board for Engineering and Technology (ABET) and the International Engineering Alliance (IEA).

In compliance with IEA requirements (which are cited verbatim below), graduates of the UW-Green Bay and UW-Oshkosh collaborative engineering technology baccalaureate degree programs will be able to:

- Comprehend and apply the knowledge embodied in widely-accepted and applied procedures, processes, systems, or methodologies.
- Comprehend and apply the knowledge-embodied procedures, processes, systems, or methodologies that are specific to the jurisdiction in which they practice.
- Identify, clarify, and analyze broadly-defined problems.
- Design or develop solutions to broadly-defined problems.
- Evaluate the outcomes and impacts of broadly-defined activities.
- Recognize the reasonably foreseeable social, cultural, and environmental effects of broadly-defined activities generally, and have regard for the need for sustainability.
- Take responsibility in all these activities to avoid putting the public at risk.
- Manage part or all of one or more broadly-defined activities.
- Choose appropriate technologies to deal with broadly-defined problems. Exercise sound judgment in the course of their broadly-defined activities.

According to ABET, graduates of the Engineering Technology baccalaureate degree programs must demonstrate:

- An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities.
- An ability to select and apply their knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures, or methodologies.
- An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.
- An ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives.
- An ability to function effectively as a member or leader on a technical team.
- An ability to identify, analyze, and solve broadly-defined engineering technology problems.
- An ability to apply written, oral, and graphical communication in both technical and nontechnical environments; and an ability to identify and use appropriate technical literature.
- An understanding of the need for and an ability to engage in self-directed continuing professional development.
- An understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity.
- Knowledge of the impact of engineering technology solutions in a societal and global context.
- A commitment to quality, timeliness, and continuous improvement.

The specific learning outcomes for students completing the B.S. in Mechanical Engineering Technology include:

- A command of techniques and instrumentation associated with mechanical engineering technology in the specific areas of mechanical design and instrumentation control systems that integrate mechanical and electrical systems.
- An ability to design systems, components, and processes for engineering technology problems in mechanical design and integrated control systems.
- The capability to conduct experiments, and to analyze and interpret the results in order to improve performance or accommodate changes.
- The basis for life-long learning in general, and a specific ability to adapt to ever-changing knowledge and technology in science, mathematics, and engineering.
- The ability to function effectively and productively within a team, and to do so with an awareness of ethical responsibilities.
- An ability to apply written, oral, and graphical communication in both technical and nontechnical environments; and an ability to identify and use appropriate technical literature.

Assessment of Objectives

The chairs of all three proposed engineering technology programs, in collaboration with the program oversight committee, will have responsibility for the assessment of student learning. The curriculum committee of the Mechanical Engineering program will set specific learning goals for each course that are designed to address identified core competencies. The assessment plan will outline how each of the outcomes is assessed throughout the program. Direct and indirect assessments of program learning outcomes will take place throughout the students' enrollment in the program. Instructors will assess student learning via hands-on laboratory work, theoretical problems, examinations, and longer-term, integrative projects as direct assessments of learning. As documented in the ABET accreditation requirements for general program outcomes, the program will document student outcomes that prepare graduates to attain the program educational objectives. At the conclusion of the program, during their last semester of study, graduates will complete a survey, an indirect measure, related to their level of satisfaction with the program. Additional indirect measures or satisfaction surveys will be distributed to program graduates and employers.

The plan will be evaluated for the clarity of the learning outcomes, the appropriate alignment of assessment tools and the learning outcomes, the processes used to collect, analyze, and interpret data, and the use of data to inform program changes and continuous improvement decisions. The program oversight committee reviews assessment data to inform any program or curricular changes.

Program Curriculum

The program will be comprised of at least 120 credits. Any variation in degree requirements is attributable to differences in general education requirements at each institution.

Mechanical Engineering Technology Support Courses (34 credits)	
Calculus I & II	8 credits
General Chemistry I & II	10 credits
General Physics I & II	10 credits
Basic Electrical Circuits I	3 credits
Statistics	3 credits
Engineering Technology Fundamentals Courses (26 credits)	
Fundamentals of Engineering Technology	2 credits
Fundamentals of Drawing	3 credits
Parametric Modeling I & II	4 credits
Mechanics of Materials	3 credits
Machine Components	3 credits
Basic Manufacturing Processes	3 credits
Statics & Dynamics	6 credits
Fluids I	2 credits
Mechanical Engineering Technology Advanced Course (31 credits)	
Thermodynamics The program will be comprised of The	
program will be comprised of	3 credits
Heat Transfer	3 credits
Materials Science	3 credits
Fluids II	2 credits
Finite Element Analysis	3 credits
Design Problems	3 credits
Motors & Drives	3 credits
Mechatronics	4 credits
Project Management	3 credits
Capstone Project	4 credits
Conoral Education Requirements - UW-Green Ray (37-18 credits))	
Mathematics and English Competency	0-9 credits
Fine Arts	3 credits
Humanities	9 credits
Social Science	9 credits
Natural Science	10-12 credits
Fthnic Studies	3 credits
World Culture	3 credits
Wohld Culture	5 creans
General Education Requirements - UW-Oshkosh (41 credits)	
Culture	9 credits
Nature	8 credits
Society	9 credits
Math	3 credits
13	

Students may transfer in coursework completed at partner institutions according to current transfer agreements.
Quest Speaking	3 credits
Quest Writing	3 credits
Connect*	3 credits
(*A final course in the revised general educated	tion requirements in the new University Studies

Program. In this advanced writing 3-credit course, students synthesize their understanding of a liberal education and the three signature questions related to intercultural knowledge, sustainability, and civic engagement).

Projected Time to Degree

Full-time students will be able to complete the degree in a four-year period and all required courses will be offered on a regular basis. Students will follow an academic plan for each year of the program. Transfer student pathways will be addressed through articulation agreements among two- and four-year institutions.

Program Review Process

The educational objectives of the program will be reviewed regularly by the program oversight committee comprised of representatives from each participating institution or specified designees, and revised, as needed, to meet current Engineering Technology Accreditation Commission (ETAC) of ABET accreditation requirements, and to serve the education and training needs of the engineering technology students, employees, and employers in northeastern Wisconsin. Changes to the objectives may be proposed by the advisory committee or faculty, and will be considered by the Joint Electrical Engineering Technology Curriculum Committee representing the collaborating educational institutions. The program will be reviewed on a seven-year cycle as a part of each university's program review policies. Each program will be reviewed concurrently at each institution. The departments, the college program review committee, the deans of the appropriate colleges, and an external reviewer will conduct reviews before the senior administration at UW-Green Bay and UW-Oshkosh jointly, and comprehensively complete the program review together. Additionally, the program will be reviewed by the appropriate section of the ABET professional accrediting association.

Institutional Review

Each program is required to complete a self-study and be reviewed by an external reviewer at each institution. Faculty governance committees charged with program review at both UW-Green Bay and UW-Oshkosh will review this program. College-level program review committees in addition to university-level program review committees at both institutions will review the programs as a whole.

Accreditation

The B.S. in Mechanical Engineering Technology will need to be approved through a consortial agreement with the Higher Learning Commission. This program is also intended to be accredited under the Criteria for Accrediting Engineering Technology Programs of the ABET Engineering Technology Accreditation Commission (ETAC).

Program Authorization (Implementation) Bachelor of Science in Electrical Engineering Technology UW-Oshkosh and UW-Green Bay

EDUCATION COMMITTEE

Resolution I.1.a.(4):

That, upon the recommendation of the Chancellor of the University of Wisconsin-Oshkosh and the Chancellor of the University of Wisconsin-Green Bay, as well as the President of the University of Wisconsin System, the Chancellors be authorized to implement the Bachelor of Science in Electrical Engineering Technology.

NEW PROGRAM AUTHORIZATION COLLABORATIVE BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING TECHNOLOGY UW-OSHKOSH UW-GREEN BAY

EXECUTIVE SUMMARY

BACKGROUND

In accordance with the procedures outlined in Academic Planning and Program Review (ACIS 1.0, Revised August 2012, available at <u>http://www.uwsa.edu/acss/planning/</u>), the new program proposal for a Collaborative Bachelor of Science in Electrical Engineering Technology at the University of Wisconsin-Green Bay and the University of Wisconsin-Oshkosh is presented to the Board of Regents for consideration. The institution has submitted the authorization document and a letter of institutional commitment from the universities' Provost.

REQUESTED ACTION

Approval of Resolution I.1.a.(4), authorizing the implementation of a Collaborative Bachelor of Science in Electrical Engineering Technology at the University of Wisconsin-Green Bay and at the University of Wisconsin-Oshkosh.

DISCUSSION

The University of Wisconsin-Green Bay and the University of Wisconsin-Oshkosh propose to establish a Collaborative Bachelor of Science (B.S.) in Electrical Engineering Technology. The collaboration involves shared faculty, curriculum, facilities, oversight committee, and advisory groups. The B.S. in Electrical Engineering Technology is one of three proposed degree-completion majors within a suite of collaborative engineering technology degrees at UW-Green Bay and UW-Oshkosh, which are submitted for consideration by the BOR at the same time. Proposals for a Collaborative Bachelor of Science in Mechanical Engineering Technology and in Environmental Engineering Technology are also on the July 2013 Education Committee agenda.

The proposed new program reflects a distinctive, collaborative degree between NEW North, Inc. institutions and business. The higher education partnerships will consist of articulation agreements with five University of Wisconsin Colleges; (UW-Fond du Lac, UW-Fox Valley, UW-Manitowoc, UW-Marinette, and UW-Sheboygan); four Wisconsin Technical College System institutions (Fox Valley Technical College, Lakeshore Technical College, Moraine Park Technical College, and Northeast Wisconsin Technical College); and at the College of Menominee Nation. Program completion will occur at UW-Green Bay or at UW-Oshkosh, depending on the student's choice. Additional partners in this program include industry partnerships. The proposed B.S. in Electrical Engineering Technology responds to the workforce needs articulated by manufacturers and municipalities in northeastern Wisconsin, as well as 2010-2020 Bureau of Labor Statistics projections that estimate a 14% increase in electrical engineering technology positions. The program will fill this need by producing a highly-competent and technically-knowledgeable workforce with expertise related to Electrical Engineering Technology. The graduates will fill positions in regional industries, manufacturing, and engineering service firms.

The curriculum includes courses on the application of circuit analysis and design, computer programming, and engineering standards for the building, testing, operation, and maintenance of electrical/electronic(s) systems. Upon graduation, students will have the ability to analyze, design, and implement control systems, instrumentation systems, communications systems, computer systems, or power systems.

RECOMMENDATION

The University of Wisconsin System recommends approval of Resolution I.1.a.(4), authorizing the implementation of a Collaborative Bachelor of Science in Electrical Engineering Technology at the University of Wisconsin-Green Bay and at the University of Wisconsin-Oshkosh.

RELATED REGENT AND UW SYSTEM POLICIES

Regent Policy 4-12: Academic Program Planning, Review, and Approval in the University of Wisconsin System.

Academic Information Series #1 (ACIS-1.0; revised August 2012): Statement of the UW System Policy on Academic Planning and Program Review.

REQUEST FOR AUTHORIZATION TO IMPLEMENT A COLLABORATIVE BACHELOR OF SCIENCE DEGREE IN ELECTRICAL ENGINEERING TECHNOLOGY AT UW-GREEN BAY AND UW-OSHKOSH PREPARED BY UW-GREEN BAY AND UW-OSHKOSH

ABSTRACT

The University of Wisconsin-Green Bay and the University of Wisconsin-Oshkosh propose to establish a collaborative B.S. in Electrical Engineering Technology. The proposed degree-completion program will be one of three majors within a suite of proposed collaborative engineering technology degrees at UW-Green Bay and UW-Oshkosh. Students may begin their studies at one of five campuses of UW Colleges; UW-Fond du Lac, UW-Fox Valley, UW-Manitowoc, UW-Marinette, and UW-Sheboygan; one of the four Wisconsin Technical College System institutions: Fox Valley Technical College, Lakeshore Technical College, Moraine Park Technical College and Northeast Wisconsin Technical College; at the College of Menominee Nation; or at UW-Green Bay or UW-Oshkosh. Program completion will occur at UW-Green Bay or UW-Oshkosh with the conferral of a B.S. in Electrical Engineering Technology.

UW-Oshkosh and UW-Green Bay already offer pre-engineering programs. This degree will prepare students for a career as an electrical engineering technologist who will have the technical and managerial skills necessary to enter careers in the design, application, installation, manufacturing, operation, and maintenance of electrical/electronic systems. The B.S. in Electrical Engineering Technology will be comprised of 122 credits. Coursework will prepare students to specialize in the component of the technological spectrum relating to product improvement, manufacturing, construction, and operational engineering functions.

PROGRAM IDENTIFICATION

Institution Names

University of Wisconsin-Green Bay University of Wisconsin-Oshkosh

Title of Proposed Program Electrical Engineering Technology

Degree/Major Designations Bachelor of Science

Mode of Delivery

Instruction will be delivered face-to-face at UW-Green Bay, UW-Oshkosh or at partnering campuses. Degrees will be conferred by UW-Green Bay and UW-Oshkosh.

Projected Enrollments by Year Five

Table 1 represents enrollment and graduation projections for students entering the program over the next five years. By the end of year five, it is expected that 170 students will have enrolled in

the program (85 students each for UW-Green Bay and UW-Oshkosh) and 80 students will have graduated from the program.

Year	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
New Students Admitted	50	25	25	25	25
Continuing Students	0	47	68	68	63
Total Enrollment	50	72	93	93	88
Graduating Students	0	0	25	30	25

Table 1: Projected Enrollment

Tuition Structure

The B.S. in Electrical Engineering Technology program is comprised of 122 credits that are separated into three categories: support courses, fundamental courses, and advanced courses. The support courses consist of 41 credits and are built on the foundation of the General Education Programs and Bachelor of Science degree requirements at each institution. Within the fundamental and advanced course categories, there is a set of core non-Engineering Technology prerequisite courses, such as mathematics or laboratory science courses. Courses that fall in the support category and those that are prerequisites to the fundamental and advanced courses are currently offered at both UW-Green Bay and UW-Oshkosh. The delivery of these courses is funded from the general purpose revenue (GPR) budget.

During the semesters students are enrolled in support and non-Engineering Technology prerequisite courses, they will pay the regular undergraduate tuition and fees relative to each institution. Students must enroll at one of the institutions; they cannot be enrolled at both. For the current academic year at UW Oshkosh, the residential tuition and segregated fees total \$3,678.58 per semester for full-time students who are enrolled in 12 to18 credits per term. Of this amount, \$467.50 is attributable to segregated fees and \$3,211.08 is attributable to course tuition. At UW-Green Bay, the residential tuition and segregated fees total \$3,824.16 per semester for full-time students who are enrolled in 12 to18 credits per term. \$675.00 is attributable to segregated fees and \$3,149.16 is attributable to course tuition. The tuition differences between the two institutions are related to specific services that are supported by tuition at each institution.

At the time students formally declare an Engineering Technology major and are admitted to courses in the Fundamental and/or Advanced category, a full-time student will pay on average \$700 per semester in Engineering Technology special course fees, in addition to the tuition and fees listed above. Part-time students will pay fewer special course fees per semester. Tuition will be paid to the institution where the student is currently enrolled. A full-time student should be able to complete the required Fundamental and Advanced courses in four to five semesters. A discussion regarding anticipated program revenues and costs may be found on page 8.

Department or Functional Equivalent

Department of Natural and Applied Sciences at UW-Green Bay Department of Physics at UW-Oshkosh UW-Green Bay will serve as the lead institution for purposes of accreditation by the Higher Learning Commission.

College, School, or Functional Equivalent

College of Liberal Arts and Sciences at UW-Green Bay College of Letters and Sciences at UW-Oshkosh

Proposed Date of Implementation

Fall, 2013, or the semester following HLC approval

INTRODUCTION

Rationale and Relation to Mission

The proposed program reflects a distinctive collaboration among institutions and businesses within the NEW North, Inc. economic development region. Once approved by the UW System Board of Regents, students will be able to begin their studies at any of the area's four technical colleges, five UW Colleges, the College of Menominee Nation or at UW-Green Bay, and UW-Oshkosh. Program completion will occur at UW-Green Bay or UW-Oshkosh with the conferral of a Bachelor of Science in Electrical Engineering Technology. Participating institutions will sign a Memorandum of Understanding.

The proposed B.S. in Electrical Engineering Technology was created in response to the workforce needs articulated by manufacturers and municipalities in northeastern Wisconsin, as well as Bureau of Labor Statistics projections that estimate a 14% increase in electrical engineering technology positions, nationally, between 2010 and 2020. The program will fill this need by producing a highly-competent and technically-knowledgeable workforce with expertise related to Electrical Engineering Technology. The graduates will fill positions in regional industries, manufacturing, and engineering service firms.

The program will benefit students, employers, and the educational institutions involved in the collaboration. Students will receive instruction and hands-on experience to develop competencies in applied electrical engineering and analytical and critical problem solving skills. As a result, industry will benefit through attainment of more knowledgeable and flexible workers who will continue to build their confidence and competence relative to their employment positions as part of their professional development. This may support an employer's ability to retain employees over a longer period of time. Business and industry in the region will also benefit from state-of-the-art technology and training centers at regional technical colleges, UW institutions, and regional industrial facilities. The institutions involved in the collaboration will further their educational missions to support regional economic and workforce development while making more efficient use of their intellectual, human, and physical resources through collaborative efforts.

The program furthers the UW System's mission to develop human resources and technological expertise across the state. Further, the program supports the UW System's Core Mission of the University Cluster and the UW System's strategic interests by providing collaborative degree programs and activities designed to promote economic development that meets the unique needs of individual Wisconsin regions. The program will advance these interests through its curriculum by partnering with a highly engaged regional industrial sector to offer capstone projects, internships, and employment opportunities.

UW-Oshkosh and UW-Green Bay are committed to offering programs in high demand areas, especially as they relate to STEM fields. The academic plan of UW-Oshkosh stresses engaged learning, student excellence, globalization, diversity, sustainability, and community engagement. This degree will draw a more diverse student population, and will fulfill a major priority of the academic program plan at UW-Oshkosh. Furthermore, UW-Green Bay is committed to offering high-quality interdisciplinary, problem-focused programs that have realworld applications. This degree fits well within the institution's primary mission and broadens its reach into the community by advancing the capacity of the region to build economic infrastructure.

The program objectives are consistent with the select missions of the two degree-granting institutions. At UW-Green Bay, the B.S. in Electrical Engineering Technology supports the institution's mission by emphasizing interdisciplinary, problem-focused learning and engaged citizenship. The program advances the mission of UW-Oshkosh by providing a quality educational opportunity to the people of northeastern Wisconsin and beyond through the discovery, synthesis, preservation, and dissemination of knowledge.

The proposed program also strongly supports major themes within each institution's strategic plan. Central to these plans are institutional commitments to increase the number of college-educated persons in their service areas. This program will help address a primary goal of the UW System's Growth Agenda for Wisconsin and institutional strategic plans by increasing the number of graduates through development and implementation of academic programs that target student populations not currently served by UW-Oshkosh or UW-Green Bay. The demand articulated by local businesses in the NEW North, Inc. economic development region suggests that the B.S. in Electrical Engineering Technology has the potential to be a popular major at both institutions, and that graduates will find employment in the region.

Need as Suggested by Current Student Demand

Student application data indicate that UW-Oshkosh and UW-Green Bay have currentlyenrolled students who may be interested in engineering technology degree programs. According to 2006-2012 application data, a total of 317 applicants specified an interest in engineering fields on their admissions applications. Of this group, 43% (136) enrolled at UW-Oshkosh. During the same period at UW-Green Bay, 366 applicants specified interest in engineering. Of this group, 40% (146) enrolled at UW-Green Bay. Students who complete the pre-engineering program offered at UW-Oshkosh and UW-Green Bay are prepared to transfer to another UW System institution at which engineering is offered. The addition of the engineering technology programs at UW-Oshkosh and UW-Green Bay will enable current pre-engineering students to continue their studies and complete a Bachelor of Science in one of three proposed engineering technology collaborative degree programs, Environmental Engineering Technology, Electrical Engineering Technology, or Mechanical Engineering Technology. The provision of this degree program may also serve to meet current Wisconsin Technical College System (WTCS) student demand for a bachelor's degree completion program in engineering technology. Findings of a 2012 WTCS survey indicated that 534 engineering students transferred from a WTCS institution into UW System engineering and engineering technology programs.

Need as Suggested by Market Demand

According to the Bureau of Labor Statistics, national demand for individuals with a degree in electrical and electronics engineering is expected to be high, as more electronics are integrated into wireless, GPS, and digital device technologies; automobiles; various portable and household electronics systems; and computers technologies. Workforce growth is expected to occur both within manufacturing and in engineering service firms. Bureau of Labor Statistics Job Outlook data projects that between 2010 and 2020, the demand for Electrical and Electronics Engineers will increase by 6% and the demand for Electrical and Electronic Engineering Technicians by 2%.¹

Similarly, the Wisconsin Department of Workforce Development 2010-20 occupational projections indicate growth in the demand for electronics engineers (except computer) will be at 7% and the demand for electrical engineers will grow by 3.6%.² Within the Northeast region, employers seek engineering technologists with bachelor's degrees. In a May 2010 survey of NEW North manufacturers, 34% of respondents reported they had current openings or were planning to hire engineering technologists with bachelor's degrees. In the same survey, 15 of the companies recommended that their existing employees complete a baccalaureate in engineering technology. These findings not only demonstrate the current workforce demand for individuals with a bachelor's degree in engineering technology; but they show employers are committed to investing in their current employees and are interested in advancing their employees' skills toward the attainment of a bachelor's degree.

The longstanding existence of significant manufacturing in northeastern Wisconsin and projected capital growth provides a relevant context in which to develop and offer this degree. Nearly one-quarter (24%) of the jobs within this region are in manufacturing, exceeding overall percentages for both the state of Wisconsin (19%) and the U.S. (11%). UW-Oshkosh, UW-Green Bay, and partnering institutions developed the trio of proposed engineering technology degrees in response to employer needs and potential industry growth. The NEW North, Inc. and members of the Northeast Manufacturing Alliance in November 2010 administered a survey of manufacturers that had \$3 million or more in revenue and 25 or more employees, with 179 of the 378 companies surveyed completing the survey. Of the respondents, 41% were planning some form of capital expansion in the following 12 to 24 months; with a median investment of \$250,000. Almost half (48%) of the firms reported they planned to invest in some form of capital expansion and modernization that would support job growth in the area of engineering technology.

 ¹ Bureau of Labor Statistics (2012) Occupational Handbook. Retrieved from http://www.bls.gov/ooh/architecture-andengineering/electrical-and-electronics-engineers.htm#tab-7
² Wisconsin Workforce Development, Office of Economic Advisors. 2010-20 Occupational Projections. Retrieved

² Wisconsin Workforce Development, Office of Economic Advisors. 2010-20 Occupational Projections. Retrieved from http://worknet.wisconsin.gov/worknet/downloads.aspx?menuselection=da&pgm=occprj

Emerging Knowledge and Advancing New Directions

This program proposal was developed to address the changing workforce needs and demands of employers of northeastern Wisconsin, including members of the NEW North, Inc. and members of the Northeast Wisconsin Manufacturing Alliance. The field of electrical engineering technology is very broad, ranging from laboratory and field measurements to system design and operations. An accredited electrical engineering technology program will prepare graduates to work in a number of electrician positions in which they can apply their knowledge of electrical engineering to solve modern electrical problems. Electrical and electronics engineers can work in corporate or government environments to design, test, or supervise the manufacturing of electrical equipment. Such equipment can include a range of devices, communication systems, or power generation equipment. They will also be able to understand the roles and responsibilities of public institutions and private organizations pertaining to electrical engineering to cal, state, national, and global perspectives.

DESCRIPTION OF PROGRAM

General Structure

The B.S. in Electrical Engineering Technology program's objectives and coursework will prepare engineering technologists who specialize in the component of the technological spectrum relating to product improvement, manufacturing, construction, and operational engineering functions. This engineering technology program will include instruction in various engineering support functions for research, production, and operations, and applications to specific engineering specialties. Coursework will provide engineering technologist professionals with hands-on and applications-based engineering knowledge in product design, testing, development, field engineering, technical operations, and quality control.

Institutional Program Array

UW-Green Bay and UW-Oshkosh currently operate joint undergraduate programs in Engineering with other UW institutions. UW-Green Bay participates in a cooperative engineering program with UW-Milwaukee that offers degrees in civil, electrical, industrial and manufacturing, materials, and mechanical engineering. UW-Green Bay also has a partnership agreement with Northwest Wisconsin Technical College to offer a B.S. in Manufacturing Engineering degree in collaboration with UW-Stout. UW-Oshkosh participates in a dual degree program with UW-Madison and the University of Minnesota in which students earn a B.S. in Physics at UW- Oshkosh and a degree in a selected engineering field from one of the other Schools of Engineering.

UW-Green Bay and UW- Oshkosh also provide pre-professional courses for transfer into other engineering programs at UW-Milwaukee, UW-Madison, UW-Platteville, and UW-Stout. Typically, students can take at least two years of courses at UW-Green Bay or UW-Oshkosh, and then transfer to a School of Engineering or equivalent to complete their final two years of study.

Required pre-engineering coursework is drawn from mathematics, physics, chemistry, computer science, engineering drawing, engineering mechanics, and other related disciplines.

Other Programs in the University of Wisconsin System

In addition to the collaborative programs described above, other electrical engineering programs exist in the UW System. UW-Madison, UW-Milwaukee, and UW-Platteville offer a B.S. in Electrical Engineering. UW Stout offers a subfield in Electrical Engineering within its Engineering Technology program. The UW-Platteville degree is also offered in collaboration with and at UW-Fox Valley and UW-Rock County. Although several institutions offer strong engineering programs for north central Wisconsin residents, the existing degree programs do not sufficiently meet the needs of many students in northeastern Wisconsin, who graduate from two-year programs and who are geographically place-bound. In addition, the need for engineering technologists across Wisconsin exceeds the resource capabilities of a single institution.

Collaborative Nature of the Program

The B.S. in Electrical Engineering Technology will be a collaborative degree program offered by UW-Green Bay and UW-Oshkosh. The collaboration will involve shared faculty, curriculum, facilities, an oversight committee, and advisory groups. Additional partners in this program include industry partnerships and other institutions of higher education in the Northeast Wisconsin Educational Resource Alliance (NEW ERA). Partnerships across business and industry will be in the form of internships, expert guest speakers, research collaborations, touring of facilities, advisement on programs, and student placements. The higher education partnerships will consist of articulation agreements among five University of Wisconsin Colleges (UW- Fond du Lac, UW-Fox Valley, UW-Manitowoc, UW-Marinette, and UW-Sheboygan); four Wisconsin Technical College System institutions (Fox Valley Technical College, Lakeshore Technical College of Menominee Nation. Students from these institutions will be eligible to transfer into this program. Additionally, faculty from the transfer partner institutions may provide instructional support, research assistance, or advising for transfer students depending on program needs and faculty expertise.

Qualified faculty from UW-Green Bay and UW-Oshkosh will teach courses in their areas of expertise at one or more campus locations. Other NEW ERA qualified and appropriately-credentialed institutional faculty may teach in the collaborative program at UW-Green Bay or UW-Oshkosh or at a shared lab facility at a partner institution located between UW-Green Bay and UW-Oshkosh. Faculty members will serve on the program oversight committee and will have the responsibility to advise program students. Additionally, faculty from each campus will be eligible to engage in collaborative research projects, supervise interns, and collaborate with advisory committees.

The curriculum for the engineering technology programs represents another collaborative aspect of this program. For each engineering technology program, courses are developed, evaluated, and taught by faculty members from both campuses that have the appropriate academic and professional qualifications. Matters related to curriculum will be a part of the

responsibility of the oversight committee. Whenever appropriate, qualified faculty from NEW ERA institutions will also teach or develop curriculum related to their areas of expertise. Each of the three engineering technology programs will have a designated curriculum committee who will approve new courses or program changes. Curriculum changes will be reviewed at each institution, including the partnering institutions, through the existing governance processes.

Delivery

The majority of coursework will be taught in a traditional face-to-face format at each of the collaborating campuses. When curricular goals require specific equipment that is not owned by the universities or would be too costly to purchase, UW-Oshkosh and UW-Green Bay will collaborate to teach lab courses at an off-campus facility at a NEW ERA transfer partner institution located between UW-Oshkosh and UW-Green Bay. This will enable the students to take lab courses in state-of-the-art-locations that are best equipped to meet curricular goals. Both faculty and students will drive to the shared lab facility for select courses, regardless of their home campus designations.

Faculty members and program directors from each collaborating campus will serve on the oversight committee for the B.S. in Electrical Engineering Technology. Faculty members and program directors from UW-Green Bay and UW-Oshkosh will be involved in setting academic standards, creating and reviewing the curriculum, implementing and interpreting the assessment of student learning, and the advising of students. The oversight committee will participate in the recruitment and assignment of teaching assignments based on expertise and qualifications. It will also carry out the program assessment plan and interpret assessment results to make program recommendations. Further, this committee will collaborate on recruitment and advising as well as admission criteria.

A second operational committee comprised of representatives from all institutions, including transfer partners, will provide guidance with the administrative functions related to the collaboration, such as financial aid, admissions, registration, transfer, student support services, and library services. This group will review the Memorandum of Understanding (MOU) for each program on a cyclical basis, and provide feedback and recommendations to the academic oversight committee.

Furthermore, an advisory board consisting exclusively of representatives of NEW ERA manufacturing entities will provide insights related to industry standards and practices. The advisory committee will assist the program in establishing, achieving, and assessing its goals. The committee will periodically review the program curricula and provide advice on current and future needs of the technical fields in which graduates will be employed. The advisory committee will provide UW-Green Bay, UW-Oshkosh, and NEW ERA institutions information regarding workforce skills and competency requirements, future trends in workforce educational development, and the relevancy of educational programs.

Program costs and revenues will be monitored collaboratively. General program revenue and tuition revenue will be used to support three additional F.T.E. faculty for each institution (6.0 F.T.E. total). UW-Green Bay and UW-Oshkosh will co-deliver shared courses until

enrollment growth supports multiple course offerings. Therefore, faculty hiring will occur relative to program growth. If fewer than 50 students per major are enrolled in the first year, then hiring of the six-proposed full-time faculty will be delayed until program growth is sufficient to support additional personnel costs. The financial modeling assumes another total 120 students will enroll in the second year of the program. As enrollment will grow and stabilize, tuition funds generated will allow faculty to be hired in years two and three to fill programmatic needs (teaching, mentoring, and advising).

Additional per-semester-revenues will be generated through the engineering technology special course fees. These fees, on average, will be approximately \$700 per semester for full-time students enrolled in fundamental and advanced coursework. These funds will be leveraged to secure state-of-the-art laboratory and scientific equipment that can be used by all three engineering technology programs. The ownership of this equipment will be maintained by the University of Wisconsin System, though the equipment may be placed at partnering institutions facilities. Estimated program costs and revenue are projected based on a semester average of 25 students enrolled from each campus in each of the three proposed engineering technology majors (for a total of 144 students in year two). It is anticipated students will enroll in approximately 15 credits per semester at the tuition rates as stated on page 2.

Diversity

Both UW-Oshkosh and UW-Green Bay are committed to finding ways to expand the diversity of their student bodies and faculty, curriculum, and student learning experiences. The goal of expanding the diversity of the student body is reflected in the UW-Oshkosh Academic Program Plan and in its commitment to meet the strategic challenges for diversification of the student body and faculty. At UW Green-Bay, faculty members have been engaged in several significant initiatives to recruit a more diverse student body and close the achievement gap among students of color. Students in this collaborative program, 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 UW-Oshkosh Center for Academic Support and Diversity and the Center for Academic Resources. UW-Green Bay will build upon the work of the American Intercultural Center and the Center for the Advancement for Teaching and Learning to foster diverse experiences for students in this program.

The proposed B.S. in Electrical Engineering will serve nontraditional students, as well as transfer and first-year cohort students. The faculty at the Wisconsin Technical Colleges and the two-year UW Colleges will 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, as well as business and industry partners.

Plans are underway to actively recruit students for the major from the McNair Scholars Program at UW-Oshkosh by engaging students in undergraduate research, participation in student organizations, and through presentations. Women in Science student services support programs at both institutions will also be used to recruit students. Students served by this program are first-generation college students who have an interest in the STEM fields. Recruiting through campus student organizations based on ethnicity will also provide access to STEM fields for underserved populations.

Finally, diversity will be integrated within the curriculum. For example, students will participate in internships in diverse settings across the region, including in larger urban areas and small corporate settings.

Student Learning Outcomes

The B.S. in Electrical Engineering Technology will share student learning outcomes with the proposed B.S. in Mechanical Engineering Technology and the B.S. in Environmental Technology. The shared student learning outcomes for these degrees have been established by the Accreditation Board for Engineering and Technology (ABET) and the International Engineering Alliance (IEA).

In compliance with IEA requirements (which are cited verbatim below), graduates of the UW-Green Bay and UW-Oshkosh collaborative engineering technology baccalaureate degree programs will be able to:

- Comprehend and apply the knowledge embodied in widely-accepted and applied procedures, processes, systems, or methodologies.
- Comprehend and apply the knowledge of embodied procedures, processes, systems, or methodologies that is specific to the jurisdiction in which they practice.
- Identify, clarify, and analyze broadly-defined problems.
- Design or develop solutions to broadly-defined problems.
- Evaluate the outcomes and impacts of broadly-defined activities.
- Recognize the reasonably foreseeable social, cultural, and environmental effects of broadly-defined activities generally, and have regard for the need for sustainability.
- Take responsibility in all these activities to avoid putting the public at risk.
- Manage part or all of one or more broadly-defined activities.
- Choose appropriate technologies to deal with broadly-defined problems. Exercise sound judgment in the course of their broadly-defined activities.

In compliance with ABET requirements, graduates of the UW-Green Bay and UW-Oshkosh collaborative Engineering Technology baccalaureate degree programs must demonstrate:

- An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities.
- An ability to select and apply knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles, and applied procedures or methodologies.
- An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.
- An ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives.

- An ability to function effectively as a member or leader on a technical team.
- An ability to identify, analyze, and solve broadly-defined engineering technology problems.
- An ability to apply written, oral, and graphical communication in both technical and nontechnical environments; and an ability to identify and use appropriate technical literature.
- An understanding of the need for, and an ability to engage in self-directed continuing professional development.
- An understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity.
- Knowledge of the impact of engineering technology solutions in a societal and global context.
- A commitment to quality, timeliness, and continuous improvement.

Graduates of the B.S. in Electrical Engineering Technology program will demonstrate the following learning outcomes specific to electrical engineering technology:

- The application of circuit analysis and design, computer programming, associated software, analog and digital electronics and microcomputers, and engineering standards for the building, testing, operation, and maintenance of electrical/electronic(s) systems.
- The applications of physics or chemistry to electrical/electronic(s) circuits in a rigorous mathematical environment at or above the level of algebra and trigonometry.
- The ability to analyze, design, and implement control systems, instrumentation systems, communications systems, computer systems, or power systems.
- The ability to apply project management techniques to electrical/electronic(s) systems.
- The ability to utilize statistics/probability, transform. methods, discrete mathematics, or applied differential equations in support of electrical/electronic(s) systems.

Assessment of Objectives

The chairs of all three proposed engineering technology programs, in collaboration with the program oversight committee, will have responsibility for the assessment of student learning. The curriculum committee of the Electrical Engineering Technology program will set specific learning goals for each course that are designed to address identified core competencies. The assessment plan will outline how each of the outcomes is assessed throughout the program. Direct and indirect assessments of program learning outcomes will take place throughout the students' enrollment in the program. Instructors will assess student learning via hands-on laboratory work, theoretical problems, examinations, and longer-term, integrative projects as direct assessments of learning. As documented in the ABET accreditation requirements for general program educational objectives. At the conclusion of the program, during their last semester of study, graduates will complete a survey, an indirect measure, related to their level of satisfaction with the program. Additional indirect measures or satisfaction surveys will be distributed to program graduates and employers.

The plan will be evaluated for the clarity of the learning outcomes, the appropriate alignment of assessment tools and the learning outcomes, the processes used to collect, analyze,

and interpret data, and the use of data to inform program changes and continuous improvement decisions. The program oversight committee reviews assessment data to inform any program or curricular changes.

Program Curriculum

The program will be comprised of 122 credits. Students may transfer in coursework completed at partner institutions according to current transfer agreements.

Electrical Engineering Technology Support Courses (31 credits)	
Introduction to Engineering Technology	2 credits
General Physics I	5 credits
General Physics II	5 credits
Calculus I	4 credits
Calculus II	4 credits
Chemistry for Engineers	5 credits
Engineering Graphics	3 credits
Introduction to Business	3 credits
Engineering Technology Fundamentals Courses (29 credits)	
DC Circuits	3 credits
AC Circuits	3 credits
Digital Circuits	3 credits
Linear Circuits	3 credits
Semiconductor Devices	2 credits
Computer Science OOP	3 credits
Microcontrollers	3 credits
Advanced Circuit Analysis I	3 credits
SCADA I	3 credits
Automation Devices & PLCs	3 credits
Electrical Engineering Technology Advanced Courses: (36 credits)	
Advanced PLCs	3 credits
Advanced Circuit Analysis II	3 credits
SCADA II	3 credits
Lean Business Management	2 credits
Industrial Motors / Drives	4 credits
Project Management	3 credits
Advanced Process Control	3 credits
Advanced HMI	2 credits
Electromagnetic Fields & Applications	3 credits
Electrical Power Systems & Distribution	2 credits
Data Communication & Protocols	3 credits
Capstone Project or Internship or Mechatronics	4 credits
General Education Requirements - UW-Green Bay (37-48 credits)	
Mathematics and English Competency	0-9 credits
Fine Arts	3 credits

Humanities	9 credits
Social Science	9 credits
Natural Science	10-12 credits
Ethnic Studies	3 credits
World Culture	3 credits

General Education Requirements - UW-Oshkosh (41 credits)

Culture	9 credits
Nature	8 credits
Society	9 credits
Math	3 credits
Quest Speaking	3 credits
Quest Writing	3 credits
Connect*	3 credits

(*A final course in the revised general education requirements in the new University Studies Program. In this advanced writing 3-credit course, students synthesize their understanding of a liberal education and the three signature questions related to intercultural knowledge, sustainability, and civic engagement).

Projected Time to Degree

Full-time students will be able to complete the degree in a four-year period and all required courses will be offered on a regular basis. Students will follow an academic plan for each year of the program. Transfer student pathways will be addressed through articulation agreements among two- and four-year institutions.

Program Review Process

The educational objectives of the program will be reviewed regularly by the program oversight committee comprised of representatives from each participating institution or specified designees, and revised, as needed, to meet current Engineering Technology Accreditation Commission (ETAC) of ABET accreditation requirements, and to serve the education and training needs of the engineering technology students, employees, and employers in northeastern Wisconsin. Changes to the objectives may be proposed by the advisory committee or faculty, and will be considered by the Joint Electrical Engineering Technology curriculum committee representing the collaborating educational institutions. The program will be reviewed on a seven-year cycle as a part of the each of the university program review policies. Each program will be reviewed concurrently at each institution. The departments, the college program review committee, the deans of the appropriate colleges, and an external reviewer will conduct reviews before the senior administration at UW-Green Bay and UW-Oshkosh jointly and comprehensively complete the program review together. Additionally, the program will be reviewed by the appropriate section of the ABET professional accrediting association.

Institutional Review

Each program is required to complete a self-study and be reviewed by an external reviewer at each institution. Faculty governance committees charged with program review at

both UW-Green Bay and UW-Oshkosh will review this program. College-level program review committees, in addition to university-level program review committees at both institutions, will review the programs as a whole.

Accreditation

The Bachelor of Science in Electrical Engineering Technology is intended to be accredited under the Criteria for Accrediting Engineering Technology Programs of the ABET Engineering Technology Accreditation Commission (ETAC).

Program Authorization (Implementation) Doctor of Business Administration UW-Whitewater

EDUCATION COMMITTEE

Resolution I.1.b:

That, upon the recommendation of the Chancellor of the University of Wisconsin-Whitewater and the President of the University of Wisconsin System, the Chancellor be authorized to implement the Doctor of Business Administration.

NEW PROGRAM AUTHORIZATION DOCTOR OF BUSINESS ADMINISTRATION UW-WHITEWATER

EXECUTIVE SUMMARY

BACKGROUND

This proposal is presented to the Board of Regents for consideration in accordance with the procedures outlined in Academic Planning and Program Review (ACIS 1.0, Revised August 2012, available at <u>http://www.uwsa.edu/acss/planning/</u>). The new program proposal for a Doctor of Business Administration (D.B.A.) at the University of Wisconsin-Whitewater is presented to the Board of Regents for consideration. The institution has submitted the authorization document, a financial statement, and a letter of institutional commitment from the university's Provost.

REQUESTED ACTION

Approval of Resolution I.1.b, authorizing the implementation of Doctor of Business Administration program at the University of Wisconsin-Whitewater.

DISCUSSION

In 2009, UW System Administration created University of Wisconsin System Criteria for Approving the Establishment of Professional Doctorate Programs at UW Comprehensive Institutions (available at: <u>http://www.uwsa.edu/acss/planning/Doctorates_Spring09.pdf and included here as Appendix A</u>).

Before the Board began approving the first professional doctorates at the comprehensive institutions within the UW System during the last decade, the Board limited the approval of any doctoral degrees to the doctoral cluster. Within the last few years, the Board approved several health sciences practice doctorates, including the Doctor of Audiology (Au.D.) at UW-Stevens Point in collaboration with UW-Madison, the Doctor of Physical Therapy (D.P.T.) at UW-La Crosse in collaboration with UW-Milwaukee, the Doctor of Nursing Practice (D.N.P.) at UW-Oshkosh, and the D.N.P. at UW-Eau Claire. Following a Regent-approved dissolution of the collaborative D.P.T. offered by UW-Milwaukee and UW-La Crosse, in August of 2012, UW-La Crosse has been authorized to offer the D.P.T. independently. In February of 2013, the Board approved a Doctor of Education in Career and Technical Education at UW-Stout.

The Doctor of Business Administration proposed by UW-Whitewater was developed as a terminal degree designed to address changing professional expectations in the fields of business administration and in the teaching of business administration at the college level. The proposed 60-credit D.B.A. will utilize online delivery and a series of weekend seminars to prepare working adults to assume higher-level administrative and leadership positions and conduct

applied research to solve real-world business problems. Aligned well with UW-Whitewater's mission and its signature programs in business and business education, the program is housed in the College of Business and Economics, with several departments contributing to the degree.

The proposed professional doctorate will meet growing demand for doctoratecredentialed business professionals in Wisconsin, the region, and the nation. The goal of the program is to provide business professionals the opportunity to develop the skills needed to advance their business careers and to conduct applied research needed in the complex global business environments of the 21^{st} century. In order to prepare graduates for teaching careers at the college level, graduates will also acquire skills enabling them to pursue academic careers at teaching-focused institutions.

Enrolling a cohort of 20 students each year, by 2018, the program will enroll approximately 100 students and will have graduated approximately 42 students. Students will take courses with their cohort during a period of two years and are expected to finish their dissertations within one to one-and-a half years. The proposed program is going to utilize a cost-recovery and service-based pricing model. No general purpose revenue dollars will be used. Students will pay a customized tuition at \$1,100 per credit.

The curriculum will include advanced coursework in contemporary business issues, research design and methods, technology, entrepreneurship, and global issues. The D.B.A. will be the first professional business doctorate offered at UW-Whitewater and by a UW System comprehensive institution.

RECOMMENDATION

The University of Wisconsin System recommends approval of Resolution I.1.b., authorizing the implementation of the Doctor of Business Administration at the University of Wisconsin-Whitewater.

RELATED REGENT AND UW SYSTEM POLICIES

Regent Policy 4-12: Academic Program Planning, Review, and Approval in the University of Wisconsin System.

Academic Information Series #1 (ACIS-1.0; revised August 2012): Statement of the UW System Policy on Academic Planning and Program Review.

REQUEST FOR AUTHORIZATION TO IMPLEMENT A PROFESSIONAL DOCTORATE IN BUSINESS ADMINISTRATION AT UW-WHITEWATER

PREPARED BY UW-WHITEWATER

ABSTRACT

The University of Wisconsin-Whitewater proposes to establish a Doctorate in Business Administration (D.B.A.), a terminal doctoral degree focused on applied research. This program proposal responds to a strong need in the market for individuals with such degrees. The goal of the program is to provide business professionals the opportunity to develop the skills needed to advance their business careers, improve their strategic decision-making, and conduct applied research and analyze the complex data that typifies the business world today. Graduates will also have the knowledge, skills, and credentials to pursue academic careers at institutions of higher education with an applied, teaching focus. The program will be comprised of 60 credits, which will include 48 credits of coursework and 12 credits towards an applied research dissertation. The proposal meets the University of Wisconsin System Criteria for Approving the Establishment of Professional Doctorate Programs at UW Comprehensive Institutions, adopted in 2009 (see Appendix A).

PROGRAM IDENTIFICATION

Institution Name

University of Wisconsin-Whitewater

Title of Proposed Program

Doctor of Business Administration

Degree/Major Designations

Professional Doctorate

Mode of Delivery

Single institution: Face-to-face instruction supplemented by online instruction. Online instruction will comprise approximately 30% of instruction.

Projected Enrollments by Year Five

Figure 1 below represents enrollment and graduation projections for students entering the program over the next five years. By the end of year five, it is expected that 100 students will have enrolled in the program and 42 students will have graduated from the program. UW-Whitewater anticipates admitting a cohort of 20 students each year. The College of Business and Economics has used a conservative estimate of having 16 students continue into Year Two for each cohort and 14 students from each cohort completing the program.

Figure 1: Projected Enrollment in the Doctor of Business Administration

	Year 1	Year 2	Year 3	Year 4	Year 5
Enrollment	20	36	50	50	50
Graduates			14	14	14
Cumulative Graduates			14	28	42

Tuition Structure

For students enrolled in the D.B.A. program, the following tuition per credit will apply: \$1,100 per credit. The same rate applies to resident, non-resident and international students. This program is offered under the Service-Based Pricing Guidelines as identified in ACIS-5.4, Programming for the Non-Traditional Market in the University of Wisconsin System: Service Based Pricing. The program specifically adheres to the guidelines as a graduate program for a working adult population offered on weekends. The pricing level has been established by identifying all anticipated fixed and variable costs, including fringe benefits. The program will be run without an institutional subsidy. Appendix B lists the cost and revenues projections.

Department or Functional Equivalent

The program will not be housed in a department because it is an interdisciplinary program. Instead, it will reside within the College of Business and Economics. Participating departments are: Accounting, Economics, Finance and Business Law, Information Technology and Supply Chain Management, Management and Marketing. A director will be appointed to coordinate the program.

College, School, or Functional Equivalent

The proposed program will be housed within the College of Business and Economics.

Proposed Date of Implementation

The program is scheduled to begin in the Fall of 2014.

INTRODUCTION

Rationale and Relation to Mission

The impetus for the degree started with conversations regarding the dearth of doctoral programs available to individuals with full-time jobs. Given the strong need for such doctoral degrees today, a committee was put together to evaluate the feasibility of such a degree in UW-Whitewater's signature programs offered by the College of Business and Economics. Discussions and market research revealed strong demand for a degree serving working adults who want to obtain additional credentials in business administration that give them an advantage in the employment market. An analysis of College of Business and Economics resources also indicated that a critical mass of faculty in the College of Business and Economics that will be teaching in the proposed program held the necessary credentials to participate in the delivery of a doctoral program as required by the Higher Learning Commission and UW System policies.

The D.B.A. proposal contributes to three goals of the UW System as recently articulated by the UW System Office of Economic Development (*Office of Economic Development Road Map and Recommendations: Focus on Talent, Innovation, Job Creation*, UW System Administration, Nov. 2012). First, a D.B.A. will raise awareness of the UW System in the regional business community and contribute to economic development. As discussed earlier, a D.B.A. will prepare Wisconsin professionals to acquire advanced skills that will enhance their work performance in any business and business-related field. As such, this unique degree will also enhance Wisconsin companies' competitiveness. Second, the D.B.A. will provide a stronger link between UW talent and research skills and established businesses, entrepreneurs, and other economic agencies. By preparing working business professionals, the D.B.A program will enhance connections between the UW System and businesses in Wisconsin. Third, the D.B.A. program will also ensure that UW-generated innovations can be more rapidly applied and developed. Because of the increased connections with working professionals, both as students and alumni, the D.B.A. program will enable the latest ideas and innovations generated by UW faculty to be applied in companies.

The proposed D.B.A. supports the missions of the University of Wisconsin-Whitewater and the College of Business and Economics. Specifically, this program supports the following components of the UW-Whitewater Mission:

- To offer graduate education built clearly upon its undergraduate emphases and strengths with particular emphasis in the fields of business, education, communication, and human services. The College of Business and Economics has offered *Association to Advance Collegiate Schools of Business* (AACSB)-*International*-accredited business programs since 1974. The College offers the largest M.B.A. program in the State of Wisconsin and has received numerous awards for the quality of its online graduate business programs. The D.B.A. builds upon this history and reputation of excellence, allowing the College to leverage its strong applied focus combined with rigorous academics and its focus on full-time employed professionals to address unmet market needs.
- To engage in scholarly activity, including research, scholarship, and creative endeavor that support its programs at the associate and baccalaureate degree level, its graduate programs, and its select mission. The College of Business and Economics already has a number of faculty members across various departments with strong research agendas in their own fields. A D.B.A. program would greatly enhance the ability of faculty members to continue their research, and provide an added avenue for such applied research and even stronger connections with Wisconsin industry.
- To provide a wide range of undergraduate programs and degrees, including interdisciplinary programs, in the letters, sciences, and the arts, as well as programs leading to professional degrees and specialization. The D.B.A. program will likely contribute to the current undergraduate offerings. A stronger applied research culture is likely to enhance undergraduate programs in the College of Business and Economics by encouraging faculty to work with doctoral students on emerging business issues. Because of the practitioner focus of the D.B.A., the program would enhance undergraduate teaching and learning, providing faculty with practical examples and real-world contacts. Furthermore, dissertations are typically interdisciplinary endeavors and may enhance cooperation among faculty within different departments or functional areas.

- To create and maintain a positive and inviting environment for multicultural students, students with disabilities, and nontraditional students, and provide support services and programs for them. A D.B.A. program would also be attractive to multicultural students, students with disabilities, and nontraditional students. Business schools sorely lack multicultural students. A D.B.A. program may attract students of opportunity not served by current programs as they will have the opportunity to explore further studies while also keeping their employment. In particular, UW-Whitewater has a very strong McNair Scholar program that prepares multicultural and first generation students for graduate study. Partnerships between the D.B.A. program and the McNair program will be advantageous in identifying promising diverse students interested in a terminal degree in business administration. Finally, nontraditional students will also benefit from the major. Many nontraditional students have significant work experience and may find a D.B.A. program the key to opening new career opportunities.
- To serve as a regional cultural and economic resource center through its service initiatives. UW-Whitewater already has a number of outreach support centers to assist the region with economic and other development (e.g., the Global Business Research Center, the Small Business Development Center, and the recently opened Whitewater University Technology Park and Innovation Center). A D.B.A. program would greatly enhance the ability of these centers to conduct advanced applied research to assist the region. In fact, because of the practitioner focus of the D.B.A. program, it is expected that both faculty members and students will conduct applied research studies aimed at assisting companies in solving particular problems they are facing. Such research will benefit the region and the state.

In ways similar to those described above, the D.B.A. also supports the mission of the College of Business and Economics which is to be "an inclusive and collaborative learning community dedicated to sharing values, knowledge, and skills to prepare current and future business professionals to compete successfully and responsibly in a global business environment." The addition of the D.B.A. program will enhance the College's ability to connect with business leaders through the investigation of potential applied research areas. This increased focus should create a stronger learning community focused on the application of knowledge dedicated to solving business problems. Furthermore, the international cadre of faculty will most likely result in applied dissertations with global flavors, thereby strengthening the college's ability to successfully function in the current global environment.

Need as Suggested by Current Student Demand

Available data and anecdotal evidence indicate a strong need for the proposed D.B.A. program. Business professionals are frustrated with their inability to gain the full range and depth of academic and professional skills they need for their specific industries through the more general M.B.A program. A highly advanced D.B.A. program provides the ability for working professionals to improve their skills and performance and develop the advanced application-oriented research skills necessary for the knowledge economy. The directed study and applied research included in the D.B.A. curriculum allows individual students to tailor their learning to their specific needs.

Some experts are arguing that M.B.A. s are becoming so ubiquitous that the degree may no longer provide competitive advantage in a very competitive job market (http://www.usnews.com/education/best-graduate-schools/top-businessschools/articles/2012/02/17/amidst-mba-inflation-executives-recommend-business-doctorates). Furthermore, the M.B.A. may not provide the necessary skills and abilities to deal with the complexities of today's business environment, one that is increasingly complex and data-driven. The D.B.A. satisfies the strong market demand for ambitious business professionals to learn new skills to advance their careers.

Additionally, a severe shortage of business doctorates has made it especially difficult for more teaching-oriented, applied business programs at institutions of higher education in the state and region to attract faculty of sufficient quality and credentials. While it is not the main focus of the D.B.A., the program will prepare graduates to teach in such programs and will help address severe faculty shortages.

Need as Suggested by Market Demand

There is evidence of strong market demand for such a program. The number of jobs requiring a doctorate or professional degree is expected to increase by 20% by 2030 (see http://www.cgsnet.org/data-sources-strong-employment-growth-expected-graduate-degree-recipients). The U.S. Bureau of Labor Statistics reports that individuals who are employed in business management and consulting fields will see an increased demand in job opportunities during the next seven years (see www.bls.gov). And, as indicated in the *U.S. News and World Report* article cited above, the more general M.B.A has satiated the market at the same time business is becoming increasingly complex and data-driven (see http://www.usnews.com/education/best-graduate-schools/top-business-schootorates).

According to a forthcoming AACSB task force report on doctoral education, the problem-framing research and data analysis skills fostered in a doctoral program are especially

problem-framing, research, and data analysis skills fostered in a doctoral program are especially valued in our knowledge driven society (*The Promise of Business Doctoral Education: Setting the pace of innovation, sustainability, relevance and quality*, AACSB International, 2013). Discussions with the College of Business and Economics Advisory Board, comprised of prominent business alumni, point to a growing regional need for business executives who have the knowledge and skills taught in the D.B.A.

Support for this assessment of demand also comes from conversations with the director of the first D.B.A. program that was offered at an AACSB-accredited school in the United States. The Kennesaw State University D.B.A. program saw 200 applicants for the only 20 positions it offered in its first year. Demand for that program has stayed steady over the years, and UW-Whitewater anticipates similar demand for our program.

While a primary recruitment focus of the D.B.A. is to attract business professionals who intend to remain in the business profession, UW-Whitewater anticipates that some may choose to switch into academic careers at completion of the program or further on in their careers. There is significant evidence that those who do elect this career change will enter a market where the

growth in demand is outstripping the supply. Most market demand studies and reports issued by government and professional organizations suggest there is currently a severe shortage of qualified and credentialed business faculty in the United States. AACSB started devoting attention to this matter back in 2003. In the report, many schools reported the difficulty of hiring and retaining faculty with doctoral degrees (AACSB, 2003). In fact, newer reports support this initial assessment. AACSB reports that business schools faced a shortage of 1,000 business doctorates in 2008, and this shortfall could increase to 2,000 in 2018 (Bisoux, 2009). Furthermore, while demand for business faculty has grown both domestically and internationally, supply of business doctorates has not grown consistently. In fact, data show that the number of business doctoral demand in 517 schools released in March 2013 indicated that there were 1355 unfilled positions, 78.6% of them in the business fields (see http://www.aacsb.edu/enewsline/doctoral-faculty-demand-current-and-unfilled-full-time-positions.asp).

Finally, most reports suggest that smaller universities are more impacted by the severe faculty shortages. Smaller universities often do not have the funding to attract doctoral graduates from more established, traditional Ph.D. programs. The March 2013 study presented above found new hire salaries ranging from \$149,000 to \$192,000. This misfit is particularly true for academic institutions unable to attract applicants from Ph.D. programs with a heavy original research agenda, acculturated preferences for working in other research-intensive universities, and high salary expectations. The July 1, 2013 change in AACSB's standards recognizes the need for mission-driven applied institutions to have a faculty complement with strong applied professional (clinical) credentials. A UW-Whitewater D.B.A. program will satisfy this niche for smaller, teaching-focused universities.

Additional evidence of need for the program is the large number of for-profit leadership doctoral programs in the region. Students often enroll in these expensive non-AACSB-accredited programs because space in traditional R-1 UW System doctoral programs is limited and because UW System programs are typically not designed to address the needs of regional students who are place-bound and/or must maintain employment while attending school. UW-Whitewater will be an attractive alternative given that the D.B.A. will be conferred by an institution accredited by AACSB International.

Additionally, UW-Whitewater notes that this program has strong support among many of the deans of the Colleges of Business of the comprehensive universities in the UW-System. The UW System comprehensive universities often have a difficult time attracting new faculty because of salary and other issues. Furthermore, many of these universities are also relying on academic staff without terminal degrees for teaching purposes. The UW-Whitewater D.B.A. will prepare individuals to take teaching jobs at these universities and thereby satisfy a critical need in the market.

Finally, the referenced and just completed AACSB report probably states it best: "We must seek innovations in doctoral program design and delivery that expand access to doctoral education among currently underserved populations, and enhance the ability of schools to use scarce and valuable resources more effectively [...]. The rise of the knowledge economy is

changing competitive dynamics in business, too, with implications for business doctoral education. [...] In no other aspect of education would we expect that the next generation should be trained in the same way as the preceding generation. Nor would we expect an educational product to remain static and narrow in its purpose and potential student prospect base. The same expectation of evolution and innovation must apply at the doctoral level" (AACSB, 2013)

Emerging Knowledge and Advancing New Directions

The D.B.A. will focus on the most up-to-date professional and academic knowledge regarding key business issues. The course curriculum has been designed with such objectives in mind, and is based upon best practice learning outcomes suggested for applied doctoral programs as recommended in the forthcoming AACSB task force report on doctoral education (AACSB, 2013). Through the various courses (see curriculum below), D.B.A. candidates will learn about the latest tools and techniques that can help them solve organizational problems, most especially because these challenges are posed directly by the students who are experiencing these issues in their workplaces. Only UW-Whitewater faculty with extensive, current, and ongoing research portfolios will teach D.B.A.-level classes. The D.B.A. will be the first professional business doctorate offered by any institution in the UW System.

DESCRIPTION OF PROGRAM

General Structure

The program will be comprised of 60 credits, which will include 48 credits of coursework and 12 credits towards an applied research dissertation. The coursework will focus on applying current business theories across functional areas and business disciplines. It will also help students gain significant experience with methodologies in conducting cutting-edge business research.

Institutional Program Array

The UW-Whitewater D.B.A. will be the first doctoral program offered at UW-Whitewater. There will be no overlap in courses between this program and the masters-level courses on campus. The program builds on the strengths of UW-Whitewater undergraduate and graduate business programs, including a Bachelor's of Business Administration, a Master's of Business Administration, and a Master's of Professional Accountancy, and will utilize researchqualified faculty who currently teach in our graduate programs. As is true of current UW-Whitewater undergraduate and graduate business programs, the D.B.A. program will have an applied, professional nature. Additionally, as part of the College's plan to expand graduate offerings that leverage its applied focus, outstanding faculty, and regional engagement, a Master of Science in Applied Economics is in the planning process.

Other Programs in the University of Wisconsin System

The D.B.A. program is the first professional business doctoral degree and the first D.B.A. being offered by the University of Wisconsin System. While UW-Milwaukee and UW-Madison

offer the Doctor of Philosophy (Ph.D.) in Business Administration or related business fields, the D.B.A. will be significantly different from these programs. We note the following key differences between the proposed D.B.A. and Ph.D.s offered by UW-Milwaukee and UW-Madison:

- The UW-Whitewater D.B.A. intends to recruit students who want to pursue the doctorate in a monthly residence format while still maintaining their full-time professional jobs. This approach is different from the academic model of the typical Ph.D. program which expects students to enroll in on-campus classes on a full-time work-week basis.
- In keeping with the criteria for a professional doctorate, UW-Whitewater intends to recruit students who have significant work experience. This pool of applicants is significantly different from traditional Ph.D.s who have background and experience that emphasize scholarly research and traditional classroom experiences.
- A significant minority (41%) of Doctoral Business Students is studying or prefers to study in fully online or hybrid format. The proposed residential weekend and online- (hybrid) formatted program would significantly separate the UW-Whitewater D.B.A. from the offerings at UW-Madison and UW-Milwaukee.
- Recent research also shows that some individuals who may want to make the bridge from business to academics are reluctant to do so because they do not like the heavy research format typical of most Ph.D. programs (Gille & Hoppe, 2009). Indeed, most Ph.D. programs pride themselves on their significant research orientation. The UW-Whitewater program will also cater to this practitioner group of students who want to get a doctorate with a heavier applied rather than basic/pure research focus. In fact, the curriculum is geared towards a more cross-disciplinary orientation to emphasize the practice-oriented nature of the program.

Given the above, UW-Whitewater believes that the D.B.A. program is satisfying an important niche that is currently not being satisfied by other universities in the UW system.

Collaborative Nature of the Program

At this stage, there is no planned collaboration with other UW System universities. However, UW-Whitewater will continue to communicate with the other UW System universities, particularly the business colleges and programs of the regional comprehensives, to ensure that the program meets the needs of practicing professionals that teach at their universities. The dean of the UW-Whitewater College of Business and Economics meets twice annually with heads of all UW System business programs, and can use that as an avenue for collaboration.

Diversity

This proposed D.B.A. should be attractive to students of diverse origins. The program will prepare students for the multicultural and global aspects of today's world across many classes. First, students will be exposed to such issues in one of the first courses they will be taking. The program will include a seminar on contemporary business issues in which the multicultural and global aspects of the business environment will be emphasized. In more advanced courses, students will also be exposed to multicultural and cross-disciplinary, cross-

border issues and cases. Finally, we also anticipate that this program will attract individuals who are interested in addressing projects relevant to integration of a diverse workforce into business with resulting potential multicultural issues. These students will also have the ability to work on directed studies to explore diversity topics in more depth.

The D.B.A. program will make every effort to attract minority candidates, and will continue to work with the Minority Business Program Office, the McNair Scholars program, and other Academic Support Services programs to attract and support minority students.

Student Learning Outcomes and Program Objectives

The D.B.A. program has developed an assessment rubric based on what students are expected to achieve over the program. Table 2 below lists the various traits and how these will be assessed.

Objective	Traits		Measured by	Measured in
Demonstrate expertise	1.	Complete a critical	A research	D.B.A. 870:
in a specific field		review of literature	proposal	Micro Issues in
through understanding	2.	Identify research	document	Business. Year 1,
of managerial and		questions	assignment	fall semester
organizational contexts.				
Contribute to business	1.	Generate research	Applied research	D.B.A. 880:
knowledge and prepare		hypotheses	and/or consulting	Macro Issues in
for careers that apply	2.	Recommend research	project	Business. Year
research to practice		methodology		1, spring
(Formative assessment)				semester
Demonstrate an	1.	Use of ethical	1. Quiz	1. D.B.A. 810:
understanding of		research processes		Measurement and
professional ethical		including knowledge		Research Design.
behavior		of IRB standards and		Year 1, fall
		protocols, choice and		semester
		use of sources,		
		gathering and analysis		
		of data, avoidance of		
		plagiarism, and		
		maintenance of		
		confidentiality when		
		expected		
	2.	Knowledge of	2. Discipline-	2. D.B.A. 810:
		professional codes of	specific case	Professional
		ethics demonstrated	studies.	Research.
		through performance		Year 2, spring
		on coursework.		semester
Demonstrate advanced	1.	Literature review	Portfolio review	End of Year 2

Table 2: Assessment Rubric

research skills leading	2. Research hypotheses		
to an original	3. Research design	Dissertation	Faculty
substantive applied	4. Data collection	Proposal &	committee and
research project	5. Statistical methods	Formal Defense	peer-review of
(Summative	6. Conclusions and		proposal and
assessment)	strategies		defense. Year 3

Assessment of Objectives

Student Learning Outcomes for the program will be regularly assessed using direct measures in each of the classes listed in Table 2 above. The assessment will take place in those classes each time the class is taught (once each academic year). In addition, each student will submit a portfolio of work for review after completing the first two years of coursework in the program, prior to beginning dissertation work. The portfolio will contain original student work that demonstrates competencies related to each of the learning outcomes. Information gathered in that portfolio review process will be used to improve the curriculum. All of this information will be shared with the College of Business and Economics (CoBE) Assurance of Learning Committee and the CoBE Graduate Studies Committee as well as all faculty teaching in the program. Students will also complete an exit survey upon completion of their program. The D.B.A. will follow the existing university requirements of a full-scale assessment of the program every five years using the UW-Whitewater audit and review process.

Program Curriculum

The detailed curriculum for the program is available at the following web address: <u>http://www.uww.edu/cobe/dba</u>

Students in the program will be required to complete each of the following courses:

DBA 800 Seminar in Contemporary Business Issues DBA 810 Measurement and Research Design DBA 820 Applied Regression Analysis DBA 830 Time Series Analysis and Forecasting DBA 840 Advanced Multivariate Methods DBA 850 Contemporary Research Methods DBA 860 Scientific Inquiry in Business DBA 870 Micro Issues in Business DBA 880 Macro Issues in Business DBA 910 Technology, Entrepreneurship and Global Issues in Business DBA 970 Directed Study (3 credits; repeatable for up to 6 credits) DBA 988 Dissertation (3-9 credits; repeatable for up to 30 credits)

Projected Time to Degree

Students are expected to take courses using a cohort model over 2 years. They will then have between 1 and 1.5 years to finish their dissertations. Students are therefore expected to complete the entire degree, including coursework, within 3 to 3.5 years.

Program Review Process

The program will be reviewed via the UW-Whitewater audit and review process. The audit and review process is intended to facilitate continuous program improvement and is conducted for all instructional areas on a five-year cycle. As part of the process the program faculty will engage in a self-study review of the program. That review is then sent to the Graduate Audit and Review committee which provides critical feedback and makes recommendations for improvement and continuation. That report is presented to and discussed with the faculty, dean, and provost.

Institutional Review

The curriculum for the D.B.A. has been reviewed and approved by the College of Business and Economics Graduate Studies Committee, the UW-Whitewater Graduate Council, the UW-Whitewater Faculty Senate, and the UW-Whitewater Provost's office. As part of that process, the program planners were required to demonstrate need, fit with institutional mission, and appropriate resource planning. The program will continue to be subject to regular review as part of the UW-Whitewater Audit and Review process and AACSB-International accreditation review.

Accreditation

The College of Business and Economics at UW-Whitewater is accredited by AACSB. The Doctorate of Business Administration will be included as a program under review as part of that accreditation process during the next accreditation cycle (2018). Staff at AACSB has already been informed of UW-Whitewater's intent to offer the program.

University of Wisconsin System Criteria for Approving the Establishment of Professional Doctorate Programs at UW Comprehensive Institutions

Background

Higher education in the United States has experienced a rise in the development and awarding of professional doctorates. Many of these degrees, especially those in the health or medical fields, have been, to a large extent, driven by changing practice and accreditation standards aimed at increasing the knowledge depth of individuals being awarded these degrees.¹ Thus, several of these clinical degrees currently offered at the master's degree level at comprehensive institutions within the UW System must now be offered at the professional doctorate level. The principles and guidelines stated below will guide the process for approving the establishment of professional doctorates at comprehensive institutions within the UW System, effective March 16, 2009. These principles and guidelines are in addition to all other established requirements and guidelines for the approval of new degree programs (see ACIS 1 Revised and the Guidelines document at: http://www.uwsa.edu/acss/acis/acis-1.pdf).

I. Principles:

A. Enhance access to professional degrees. The goal of offering professional doctorates at the comprehensive institutions is to provide additional high-quality doctoral degrees in fields where there are clearly defined market needs. The development of such programs may also be determined by the needs of place-bound students, regional employer needs, space limitations in UW-Madison or UW-Milwaukee programs, or clear demonstration that UW-Madison and UW-Milwaukee cannot fulfill the need.

B. Enhance efficiencies and avoid unnecessary duplication.

Collaboration with other institutions will remain a key consideration in the development of new professional doctorates.

- 1. In the case of collaborative degree programs, the proposal should demonstrate that the institutions have the capacity and logistical ability to jointly offer the program.
- 2. The proposal should demonstrate that the professional degree does not replicate unnecessarily already existing or similar degrees at other UW institutions.

C. Criteria

1. Ordinarily, professional doctorates should be offered only where Master's degrees with established high quality already exist (with existing faculty, laboratories, resources, etc.). The proposal should demonstrate that the proposed professional doctorate program is high-quality in terms of the rigor

¹ For a fuller discussion of the context leading to the rise of professional doctorates, please see the Executive Summary on *Professional Doctorates in the UW System* located at: <u>http://www.uwsa.edu/bor/agenda/2008/november.pdf</u>.

of its curriculum and program objectives, and its available resources, including faculty and facilities. The establishment of a professional doctorate at an institution that does not have a Master's degree program in the discipline may be approved if the discipline does not include the Master's degree. In such a case, it will be necessary for the institution seeking such an approval to demonstrate that it has, in addition to physical and financial resources, adequate faculty with the qualifications and significant experiences in instructing and supervising graduate students.

- 2. Geographic location of programs should be appropriate to ensure that the state's workforce needs are effectively addressed, and that students have reasonable access to the education necessary to meet those needs;
- 3. The degree should prepare students for professional practice in a specific field. The proposals should demonstrate that the degree is necessary based on new practice requirements, accreditation requirements, or for licensure in the professional field of study.
- 4. The proposal should demonstrate that the doctoral degree does not reduce the integrity of the institution's undergraduate mission, does not take away resources devoted to undergraduate education, and does not undermine the strength of undergraduate program array offerings.
- 5. The proposal should assure that offering a professional doctorate will not lead to adjuncts being overly or highly utilized in the offering of undergraduate classes.
- 6. The proposed professional doctorate program should be carefully targeted to align with the goals, mission, strategic plan or direction of the specific institution. The program should also align with the UW System's mission and Growth Agenda for Wisconsin.
- 7. Professional doctorate proposals should demonstrate national, regional and local market needs.
- 8. The cost and price for offering a professional doctorate program at an institution should be competitive.
- 9. New and emerging fields of study that do not currently exist at the Bachelor's level at the comprehensive institutions or within the UW System will be offered through UW-Madison and UW-Milwaukee.

Appendix B for Agenda Item I.1.b Revenue and Cost Associated with UW-Whitewater D.B.A. Program

	Items	Projections				
		Year 1	Year 2	Year 3	Year 4	Year 5
1	Total Enrollment (FTE)	20	36	56	56	56
2	Tenure Track Faculty (FTE)	1.33	2.33	3.33	3.33	3.33
3	Adjunct Faculty (FTE)					
4	Other Staff (FTE)					
5	Revenue					
а	From Tuition and Fees	478,500	873,543	1,162,322	1,179,162	1,214,537
b	From Reallocation	46,360				
С	Others:					_
d	Total Revenue	524,860	873,543	1,162,322	1,179,162	1,214,537
6	Expenses					
a	Salaries					
i	Tenure Track Faculty Salaries	225,000	318,750	535,125	541,628	548,260
ii	Adjunct Faculty Salaries	,	,	,	,	, i
iii	Other Staff Salaries					
b	Benefits					
i	Tenure Track Faculty	108,000	153,000	256,860	259,981	263,165
ü	Adjunct Faculty			-		
iii	Other Staff					
c	Other Expenses					
i	Facilities		***********************************			***************************************
ii	Equipment					1
	Others Marketing Global Scholars					
	Student Help.					
iii	Supplies	191.860	335,224	367,102	366,786	370.324
7	Total Cost	524,860	806,974	1,159,087	1,168,395	1,181,749
	To reallocation	,	46,360			
8	Net Revenue	0	20,209	3,235	10,767	32,788

*Year 1 reallocation from COBE to cover startup costs

Year 2 reverse allocation to COBE for startup costs

Net Revenue above zero will be used for program enhancements



May 17, 2013

Dr. Kevin P. Reilly President, UW System 1720 Van Hise Hall 1220 Linden Drive Madison, WI 53706

Dear President Reilly:

Please accept this as UW-Whitewater's Letter of Commitment for our new professional Doctorate of Business Administration (DBA) degree. The College of Business and Economics (COBE) at UW-Whitewater is the largest business school in the state and is accredited by the Association to Advance Collegiate Schools of Business (AACSB). The College of Business and Economics is widely recognized for providing high-quality academic programs and exceptional service to businesses in our region. We are proud of the achievements of our students, faculty, and staff in our College of Business and Economics, and with this new DBA the College will be able to provide another level of educational opportunities to support workforce development in Wisconsin and the surrounding region.

With this letter, I assert and make a firm commitment to the following:

- 1. The professional Doctorate of Business Administration has been designed to meet UW-Whitewater's definition and standards of quality and to make a meaningful contribution to our overall academic plan and program array. This DBA program is built from academic departments and programs that have already demonstrated high standards of quality. Five academic programs, including the Masters Degree in Business Administration, have achieved the highest level of quality review in peer evaluations through our campus audit and review process and externally through AACSB accreditation. As the DBA proposal was developed, faculty and staff consulted with our Director of Academic Assessment and Chair of Audit and Review to assure a high level of quality in program assessment. Our campus is currently engaged in strategic planning and campus master planning activities. As part of these processes, we have been intensively reviewing all of our academic programs this past year. It is clear that the DBA will provide a meaningful addition to our campus program array and our College of Business and Economics is poised for a successful launch of this new program.
- 2. We have institution-wide support and approval for this new DBA program through every phase of our campus governance process. The DBA proposal was approved by the curriculum committee in the College of Business and Economics and by the University Graduate Council. The proposal has firm support from my Office, from the College Dean, and from the Chancellor. All required approvals have been obtained on campus, with
enthusiastic support. We have also communicated our plans to the Higher Learning Commission and are prepared to seek their approval after the proposal is reviewed and accepted by the Board of Regents.

- 3. The necessary financial and human resources are in place or have been committed to implement and sustain the DBA program. College staff have thoroughly considered and provided for all of the resources needed to launch and maintain the program. A financial plan is in place to use revenues generated by the program to support the program, and reasonable projections indicate that the program will be self-sustaining after the first year.
- 4. A high-quality system for program evaluation is in place. As soon as the new DBA program is implemented, it will enter our 5-year campus cycle for audit and review to support continuous evaluation and improvement. The DBA proposal includes a fully defined list of student learning outcomes and a well-designed plan for direct and indirect assessment of those outcomes. As noted above, these plans have been reviewed and approved by our Director of Academic Assessment and Chair of Audit and Review. Members of the college curriculum committee and Graduate Council have also reviewed the program's assessment plan as an integral part of the curriculum proposal. The school also goes through am AACSB Continuous Improvement Review process every 5 years to confirm that accreditation standards are met on a consistent basis. I am confident this new program has the plans in place for successful program evaluation that will assure a high level of quality and continuous improvement.

The proposal for the new professional Doctorate of Business Administration was developed using a very thorough and careful process. We have all of the necessary resources in place or firmly planned and I am confident this program will be a success. The DBA will be a significant addition for UW-Whitewater, an important service for business leaders, and a benefit for workforce development in Wisconsin and the surrounding region. I am proud to recommend the DBA for your approval and the approval by the members of the Board of Regents. I believe this is a strong and needed addition to the University of Wisconsin System program array.

Sincerely,

Benerly Kopper

Beverly Kopper, PhD Provost and Vice Chancellor for Academic Affairs

BK/has Encl.

cc: Richard Telfer, Chancellor Greg Cook, Associate Vice Chancellor for Academic Affairs Chris Clements, Dean, College of Business and Economics John Stone, Dean, School of Graduate Studies

REPORT OF THE UW SYSTEM ASSOCIATE DEGREE STANDARDS WORKING GROUP

EXECUTIVE SUMMARY

BACKGROUND

In spring of 2011, the UW System Office of Academic and Student Affairs articulated the need to form a systemwide group that would review associate degree standards and requirements in the context of recent educational reforms and policy adjustments. Since the minimum credits and General Education breadth requirements for the associate degree had not been revised since the 1980s, it was likely that the current requirements were outdated, or incomplete, and might no longer match graduation requirements adopted by UW System institutions.

In April 2011, Senior Vice President Rebecca Martin appointed a systemwide working group to examine the existing standards and to provide recommendations for updating them, if necessary. Represented on the group were faculty and academic staff knowledgeable about degree standards and general education breadth requirements from nearly every UW System institution. Members were nominated by UW System Provosts and Vice Chancellors for Academic Affairs. Provost Greg Lampe of UW Colleges and Provost Faith Hensrud of UW-Superior co-chaired the group.

The Working Group was charged to take on the following responsibilities:

- Review the current standards for offering associate degrees in the UW System (Regent Policy 4-4 available at http://www.wisconsin.edu/bor/policies/rpd/rpd4-4.htm)
- Examine the relationship between breadth requirements and General Education requirements as part of the delivery of an associate degree;
- Examine other institutions' requirements for associate degrees, including those offered by the Wisconsin Technical College System;
- Assess the alignment of UW System Shared Learning Outcomes with the current associate degree requirements;
- Assess the alignment of the current UW System associate degree requirements with the revised UW System Transfer Policy and the current Liberal Arts Transfer Associate Degree standards; and
- If necessary, revise the current standards, requirements, and competencies for the offering of associate degrees in the UW System institutions.

The findings of the group were expected to be used to guide coordination and adaptation of common standards for associate degrees across the UW System and to help those institutions interested in starting or expanding an associate degree program meet systemwide learning goals and national standards. The group submitted its report to the Office of Academic, Faculty, and Global Programs, in March 2012.

REQUESTED ACTION

For discussion only; no action is required at this time. The goal of the discussion is for the members of the Education Committee to provide feedback on the recommendations before policy revisions are developed.

DISCUSSION

Nationally, most associate degrees require the completion of 60 to 64 credits, depending on variations within technical, career, and liberal arts-transfer degree requirements. While the associate degree is a recognized first college degree for students wishing to enter the workforce, it can also function as a milestone in progress towards a bachelor's degree. The UW System also offers an Associate of Arts and Sciences through its UW Colleges as well as selected associate degrees with a special disciplinary focus, including an Associate of Arts and an Associate of Science degree.

All state universities and colleges were authorized to offer associate degrees before the merger that formed the UW System in 1973. About half of the institutions discontinued the degree or never issued more than a very small number of them. Congruent with their missions, UW Colleges campuses throughout the state have historically conferred a majority of the associate degrees issued within the UW System.

Based on the minimum standards set by the Board of Regents in the 1980s, -UW System associate degrees currently require a minimum of 60 credits, as well as the satisfaction of certain breadth and general education requirements. A minimum of nine credits each are required in the Humanities, the Social Sciences, and the Sciences, including laboratory experiences and interdisciplinary learning. Residency requirements and other university-specific core and graduation requirements are also applicable.

While certain core requirements based on general education and a minimum of credits for degree completion serve their purpose, better alignment with 21st century higher education practices appeared desirable to the group. The group emphasized that the articulation of standards must include considerations of integrity, quality, cost, and sustainability. Further, the group wanted to ensure that the integrity of the UW System's high academic standards and excellence in education would be preserved. At the same time, cost-effectiveness for institutions providing the associate degree, and keeping costs as low as possible for students were seen as necessary goals.

The findings of the working group include recommendations for the alignment of associate degree standards with individual institutions' general education and graduation requirements. Further, the recommendations are intended to align with the revised UW System Transfer policy, which was approved by the Board of Regents in June 2011. (See http://www.wisconsin.edu/acss/acis/ACIS_6.0 revJune11.pdf)

The outcomes produced by the Working Group are recommendations on: (1) the creation of different types of aa degrees; (2) minimum requirements for an associate degree granted by a

UW System Institution; (3) the incorporation of High Impact Practices; and (4) distribution of credits to achieve general education breath in associate degrees through the incorporation of UW System Shared Learning Goals.

The major difference between the existing Regent Policy 4.4 and the recommended changes in systemwide associate degree standards is the adoption of a new framework in which to examine degree requirements and quality standards. Whereas the existing UW System model emphasized breadth as well as competency requirements, the revision emphasizes learning goals and outcomes, not merely a distribution of credits.

The group's recommendations allow institutions to be more flexible and to establish broader ranges in electives and in the total number of general education credits required of students. Currently, the total number of credits required for general education and for graduation as well as the number of credits students may take as electives varies from institution to institution (although they are all in a similar range).

Several of the minimum requirements of the existing associate degree standards from Regent Policy 4-4 are recommended to be retained. The recommendation for three different types of associate degrees maintains the minimum 60 semester-credit hour requirement and the 40 semester-hour minimum general education requirement, albeit in altered form to reflect the use of student learning outcomes rather than course inputs. The recommendations also maintain an expectation of minimum achievement in terms of grade point average, in which the grade of C is now articulated as a 2.0 G.P.A. on a 4.0 scale.

The intent of this review and discussion of the Associate Degree Standards Working Group is to provide input on the recommendations that will guide the development of policies. In particular, the following questions may guide the discussion:

- Are there recommendations that appear problematic?
- Is the concept of developing three different associate degree designations supported by the Education Committee?
- Are there recommendations that we should definitely work to implement as soon as possible?

RELATED REGENT AND UW SYSTEM POLICIES

Regent Policy 4-4: Associate Degrees in the University of Wisconsin: Minimum General Education Breadth Requirements and Associate Degree Transfer Policy

Regent Policy 4-12: Academic Program Planning, Review, and Approval in the University of Wisconsin System.

Academic Information Series # 6 (ACIS-6.0; revised June 9, 2011): University of Wisconsin System Undergraduate Transfer Policy.

University of Wisconsin System Associate Degree Standards Working Group

Findings and Report

February 2012

Executive Summary

The University of Wisconsin System Associate Degree Standards Working Group was appointed in April, 2011, by the UW System Office of Academic Affairs. The Group was charged with examining the existing systemwide Associate Degree Standards and to provide recommendations for updating the standards. This report provides an overview of the findings and recommendations of the Working Group. The findings of the Working Group will serve to guide coordination and adaptation of common standards for associate degrees across the UW System. The recommendations issued by the Working Group are intended to help those institutions interested in starting up or expanding an associate degree program in meeting systemwide learning goals and in meeting national standards for two-year degrees. In addition, the findings also provide recommendations for the alignment of associate degree standards with general education requirements and graduation requirements. Further, the recommendations are also intended to align with the UWS Transfer policy, revised in 2011.

The results of the Working Group's efforts are recommendations on: 1) the creation of different types of associate degrees; 2) recommended minimum requirements for an associate degree granted by a UW System Institution; 3) The incorporation of High Impact Practices; and 4) recommendations for the distribution of credits to achieve general education breath in associate degrees through the UW System Shared Learning Goals. In the spring of 2012, the UW System Office of Academic Affairs will share the recommendations and, depending on input received, initiate any necessary policy revision with the Board of Regents.

Table of Contents

Part I: Introduction and Background5-10
Formation of the Systemwide Working Group5
Purpose and Goals5
The Charge6
Context
Definitions6
Role of Associate Degrees in HigherEducation
Conferral of Associate Degrees in the UW System, 2001-20117-8
Associate Degree Standards in the UW System
Associate Degrees and the UW System Growth Agenda9-10
National Context10
Access to Credentialing10
Increase in Degree Attainment10
Part II: Findings11-22
Overview11
Approach and Working Principles11-12
1. History of Associate Degrees and Degree Standards in Wisconsin12-13
Types of Associate Degrees: Career-oriented, Liberal Arts Transfer, UW System Types of Degrees
Program Array Expansion at Comprehensive Institutions

2. Review of the Current Standards for the Associate Degree13-15
Minimum Standards Baseline13
Rethinking Standards in the Light of Student Achievements13-14
Integrity, Cost, and Sustainability14
Changing Demographics and Employer Perception14
What Should an Associate Degree Look Like in the 21 st Century?14-15
Weighing Flexibility against Shared Visions and Standards15
Budgetary Considerations and Resources15
 Guidance from National Higher Education Associations/UW System Shared Learning Goals
Lumina Foundation for Education16
Association of American Colleges and Universities (AAC&U)16
UW System Shared Learning Goals17
4. Wisconsin Technical College System (WTCS) and Office of Higher Education Minnesota Associate Degree Standards
WTCS17-18
Minnesota18
Creating Emphases based on the WTCS and Minnesota Models18
 The Role//Relation of General Education Requirements vis-à-vis Associate Degree Standards
6. Alignment with UW System Transfer Policy
Part III: Recommendations
Overview
Recommendation 1: Types of Associate Degrees

Recommendation 2: Minimum Requirements for an Associate Degree granted by a System Institution and Depth Requirement	UW 23
Recommendation 3: Distribution of Credits	.23-25
Recommendation 4: Additional ConsideratiOns: High Impact Practices and Responsibilities as Learning Outcomes	.24-25
Summary of Changes	25
Part IV: Appendices	.26-47
Part IV: Appendices. Appendix A: Members of the Working Group.	26
Part IV: Appendices. Appendix A: Members of the Working Group. Appendix B: Existing UW System and Regent Policy, Associate Degree Standards.	.26-47 26 27-28
Part IV: Appendices. Appendix A: Members of the Working Group. Appendix B: Existing UW System and Regent Policy, Associate Degree Standards. Appendix C: UW Platteville Associate Degree Proposals.	26 27-28 .29-35

Part I: Introduction and Background

Formation of the Systemwide Working Group

The Associate Degree Standards Working Group was formed in April of 2011 and included faculty and academic staff knowledgeable about degree standards and general education breadth requirements from a variety of UW System institutions. Members were nominated by UW Provosts and Vice Chancellors for Academic Affairs and appointed by UW System Senior Vice President for Academic Affairs. The working group was chaired by interim Provost and Vice Chancellor of Academic Affairs Faith Hensrud of UW-Superior, and Vice Chancellor and Provost Greg Lampe of the UW Colleges. A list of Task Force members may be found in Appendix A.

Purpose and Goals

In the spring of 2011, the UW System Office of Academic Affairs articulated the need to form a systemwide group that would review associate degree standards and requirements in the context of recent educational reforms and policy adjustments.

Associate degree standards outlining specific skills, knowledge, and competencies play an important role in shaping the learning expected of students and serve to maintain a high level of academic and inclusive excellence. In order to provide high-quality education at the associate degree level across the UW-System, attention to commonly shared standards is needed. Commonly accepted standards provide equal access and educational outcomes for all students. Further, shared associate degree standards establish consistency of standards across the UW System so that employers and the public can have confidence in the preparation of associate degree graduates to successfully serve their communities and the public.

The revision of the UW System Transfer Policy adopted by the Board of Regents in June 2011 also necessitated a fresh look at existing standards for the associate degree as they relate to transfer issues. The conditions under which associate degrees can be transferred from one institution within the UW System to another as well as the modalities of transfer from the Wisconsin Technical System colleges were updated and the Group considered these changes in its development of results for associate degree standards.

The purpose of forming a diverse group consisting of faculty and academic staff from all System institutions was to make sure that all institutions could have a voice in examining, and, if the group found it appropriate, in revising the existing UW system associate degree standards so that they form a better fit with the most recent curricular requirements and the needs of faculty and students (See Appendix B for the existing policy and Regent Policy 4-4). Since the minimum credits and General Education breadth requirements for the associate degree had not been revised since the 1980s, it appeared that the current requirements were possibly outdated or incomplete and no longer matched graduation requirements adopted by UW System institutions.

The Charge

The Working Group was asked to take on the following responsibilities:

Review the current standards for offering associate degrees in the UW System (Regent Policy 4-4 available at http://www.wisconsin.edu/bor/policies/rpd/rpd4-4.htm)

Examine the relationship between breadth requirements and General Education requirements as part of the delivery of an associate degree;

Examine other institutions' requirements for associate degrees, including those offered by the Wisconsin Technical College System;

Assess the alignment of UW System Shared Learning Outcomes with the current associate degree requirements;

Assess the alignment of the current UW System associate degree requirements with the revised UW System Transfer Policy and the current Liberal Arts Transfer Associate Degree standards; and

If necessary, revise the current standards, requirements, and competencies for the offering of associate degrees in the UW System institutions.

Context

Definitions

An associate degree is an undergraduate academic degree awarded by community colleges, junior colleges, technical colleges, and bachelor's degree-granting colleges and universities upon completion of a course of study usually lasting two years. Nationwide, most associate degrees require the completion of 60 to 64 credits, depending on variations within technical, career, and liberal arts-transfer degree requirements. While the associate degree is a recognized first college degree for students wishing to enter the work-force, it can also function as a milestone in progress towards the bachelor's degree. Among the different types of associate degrees offered nationwide are the Associate of Arts, the Associate of Science, and the Associate of Applied Science. The UW System also offers an Associate of Arts and Sciences through its two-year institutions, the UW Colleges, and associate degrees with a special disciplinary focus.

Role of Associate Degrees in Higher Education

Nationally, only three in ten eighth graders will earn a two- or four-year degree. Associate degrees can help to increase the numbers of degree holders and credentialed workers and citizens. In order for higher education to enroll more working adults, associate degrees have proven conducive to prior learning assessment and to adapting single, isolated credits into a portable qualification. Associate degrees can be a significant part of Adult Student Initiatives by providing milestone degrees en route to the bachelor degrees and giving students alternatives to the traditional four- to six year credits to degree time frame. In the context of adult education, associate degrees can aid in reaching out to non-traditional and working adults by providing flexible, convenient learning opportunities, including accelerated, hybrid, online, and evening and weekend courses.

Conferral of Associate Degrees in the UW System

According to data provided by the UW System Office of Policy Analysis and Research, all UW institutions were authorized at some point in time to offer associate degrees, most of them before the merger of the state institutions into the UW System in 1973. Congruent with their missions, all UW Colleges are authorized to offer associate degrees and have historically conferred a majority of the associate degrees conferred within the UW System. UW-Madison, UW-Milwaukee, UW-Parkside, UW-River Falls, and UW-Stout discontinued the degree. According to the CDR database, UW-Madison, UW-Milwaukee and UW-Stout have never reported the conferral of any associate degrees. UW-Parkside and UW-River Falls reported a small number of associate degrees before they discontinued the degree (prior to 2010-11). The following table shows the associate degrees conferred by institution and by year in the last ten years (from 2000-01 to 2010-11):

Table 1

T TX T	2001 02	2002.02	2002.04	2004.05	2005.06	2006.07	2007.00	2000.00	2000 10	2010 11
UW Institution	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
EAU	11	9	5	7	10	9	6	7	8	6
GBY	2		1				3	4	9	10
LAC	5			4					4	3
OSH									5	
PKS										
PLT			2		2	3	1	2		1
RVF										
STP	11	19	10	13	16	18	14	19	20	24
SUP	14	12	6	9	11	5	6	10	9	14
WTW	12	11	11	6	5	8	16	9	15	16
Colleges	1109	1184	1452	1218	1228	1277	1342	1426	1461	1613

Associate Degrees Awarded by UW Institutions by Year (provided by UW-System OPAR 2011)

Table 1 shows a steady increase in associate degree production at the UW Colleges from 1109 in 2001-02 to 1613 in 2010-11. Among the four-year, comprehensive institutions issuing a relatively constant number of associate degrees are UW-Stevens Point, UW-Whitewater, and

UW-Superior. Based on the numbers of the last ten years, conferral of associate degrees at UW-Lacrosse, UW-Platteville has remained steadily low. UW-Eau Claire's data show a decline since 2010. Based on the numbers presented in Table 1, comprehensive institutions, depending on their missions, have some existing capacity to issue milestone and two-year degrees.

Associate Degree Standards in the UW System

The existing systemwide standards for associate degrees define minimum requirements, such as the completion of 60 semester credit hours of work, the achievement of a "C" grade point average, successful completion of proficiency or competency requirements as defined by the institution and completion of 40 semester hours fulfilling the University of Wisconsin System minimum general education breadth requirements for the associate degree as defined below. In terms of a minimum requirement for general education breadth, the current policy specifies semester credit-hour requirements in specific fields, as well as additional requirements. The following fields of study are referenced and require a minimum number of semester hours:

1. Humanities and the fine arts - A minimum of 9 and a maximum of 15 semester hours from at least two disciplines. No more than six semester hours may be taken in the fine arts.

2. Natural sciences/mathematics - A minimum of 12 and a maximum of 16 semester hours in at least two disciplines Not less than 8 hours must be in the natural sciences, including one laboratory science.

3. Social science - A minimum of 9 and a maximum of 15 semester hours from at least two disciplines.

4. Integrated studies - A maximum of six semester hours may be included in courses which combine elements of two or more of the breadth categories as defined above.

Additional requirements include:

- 1. one course with a historical perspective
- 2. one course taught from primary texts (including translations), and
- 3. one two-semester sequence of courses.
- 4. In fine arts, only history or appreciation courses are eligible for inclusion as meeting breadth requirements.

The existing associate degree standards policy also emphasizes that breadth requirements are different from competency or proficiency requirements. Specifically, "Introductory English composition, mathematics proficiency as defined by the receiving institution, introductory public speaking, and foreign language proficiency as defined by the receiving institution do not serve to meet the breadth requirements. "Further, the current policy states that

In general, courses intended to meet or to build performance or proficiency skills shall not count toward breadth requirements. Examples of such courses include piano, news writing, or painting. Courses completed in these areas by a transferring student shall be considered for transfer on a course-by-course basis by the receiving institution. The current associate degree policy states the following regarding transferability of the UW System associate degree:

General education requirements vary from institution to institution within the University of Wisconsin System. Each represents an institutional statement developed by the faculty about the general body of knowledge which should be possessed by the recipient of that university's degree.

For the purposes of facilitating transfer between institutions in the University of Wisconsin System, associate degrees awarded by UW System institutions shall meet minimum breadth requirements as defined above. The University of Wisconsin baccalaureate-granting institutions shall consider transfer students holding such an associate degree from a UW System institution to have met the <u>university-wide, college and school</u> general education breadth requirements of that receiving institution. Transfer credits will be evaluated by the receiving institution on a course-by-course basis for purposes other than determining satisfaction of general education breadth requirements.

Competency requirements or levels of proficiency established by the receiving institution will be required of transfer students. Transfer students may be required to take general education courses normally required of junior and senior students in the last two years of their university experience.

Individual baccalaureate programs may stipulate specific courses to be taken by the student. Students should be attentive to the specific requirements of an intended major in planning their general education program.

Associate Degrees and the UW System Growth Agenda

UW System institutions are currently finding creative ways to help more students to receive credentialing, in part through prior learning assessment and degree completion programs, as well as adult education initiatives that encourage students with some credits towards a degree to return to college. Expanding student access to two-year degrees will significantly contribute to a higher number of college graduates in Wisconsin. The *Growth Agenda for Wisconsin* is the University of Wisconsin System's plan to improve Wisconsin's competitive edge, nationally and globally. Developed with broad input from communities and business, it is a three-pronged approach that will develop the state's human potential, create new jobs, and strengthen local communities that sustain citizens and businesses alike. Associate degrees can play a vital goal in implementing the UW System's *Growth Agenda's* vision to help the state of Wisconsin and its citizens thrive in the innovation economy by contributing to the core goal of more graduates that can contribute to the community and become part of a competitive workforce.

Another UW System Initiative, the *Win-Win Project*, coordinated with the Institute for Higher Education Policy (IHEP) and the Lumina Foundation for Education, also recently examined associate degrees as part of systemwide adult student completion initiatives.



The UW System's *Growth Agenda* strategies seek to boost by 80,000 the cumulative number of UW graduates over the next 15 years. However, this goal may be revised in the light of recent budgetary impacts that limit severely the operations of the UW System and may limit the number of students that UW System institutions can serve in a climate of budget cuts. Recent efforts to produce more graduates have also included creating more seats in UW classrooms. This makes it easier for students to finish their degrees faster and with fewer credits, saving them, the public, and their parents' money and freeing up classroom space. Over the past 15 years these efficiencies created space for 15,000 more students.

National Context

Access to Credentialing

Associate degrees have recently received renewed attention as college credentials in part because of the U.S. Department of Education's renewed focus on improving access and affordability of a college education for a higher number of graduates. While the United States once topped the charts for college completion rates, now, according to recent studies by the College Board, the U.S. has fallen to 12th place among 36 developed nations for the number of 25- to 34-year-olds with college degrees.

Increase in Degree Attainment

In response to the perceived need to increase the numbers of college graduates, in 2007, the Congress passed the College Cost Reduction and Access Act (CCRA) and in 2008 reauthorized the Higher Education Act

http://www2.ed.gov/policy/highered/leg/hea08/index.html). Both acts have the potential to greatly improve access to higher education and help meet the needs of current and future college students via two-year programs such as associate degrees. The 2008 Higher Education Opportunity Act , for instance, contains a number of measures intended to produce more graduates by opening up improved opportunities for financial aid, various accountability measures and increased financial support for two-year institutions. In 2010 President Obama called on U.S. institutions of Higher Education to become the world leader in college attainment by 2020. The President seeks to increase the percentage of people ages 25 to 34 that hold an

associate degree or a bachelor degree from 40 percent to 60 percent and produce eight million more college graduates by 2020.

Part II: Findings

Overview

Developing a systemwide agreement on associate degree standards necessitates that all UW System institutions recognize and rally around common principles. The charge to the group was to review a set of six inter-connected issues as they relate to setting standards for associate degrees. The efforts of the Working Group were directed toward creating a systemwide set of standards and learning goals to support UW System institutions in delivering associate degrees. The following section presents the findings and responds to each of the elements articulated in the charge to the group.

The section on "Approach and Working Principles" outlines the consensus of common starting points for considering the creation of revised or new associate degree standards. This section also provides a set of practical recommendations and policy observations. A principle can be defined as a generalization or assumption that is accepted as a given and is used to develop more specialized criteria. The section "History of Associate Degrees and Degree Standards in Wisconsin" examines in some detail the curricular and institutional changes that play a role in understanding the current associate standards policy. The section on the "Review of the Current Standards for the Associate Degree" considers guidance from national higher education associations, the UW System Shared Learning Goals, The Wisconsin Technical College System associate degree standards, and Minnesota associate degree standards, the role and relation of General Education requirements vis-a-vis associate degree standards, and issues regarding the mapping of standards with respect to transfer policy guidelines and policies in the section "Alignment with UW System Transfer Policy."

Approach and Working Principles

In considering the following principles, working group members analyzed the impact of these principles on their institutions and the impact on students both within and outside the UW System. This meant that the principles were also guided by the need to balance cross-system alignment and institutional flexibilities. The Working Group's development and adoption of working principles was informed by existing quality principles and procedures in place at UW System institutions, particularly those regarding quality, efficiency, accountability, and student-centered focus. In order to guide the work of the group in formulating associate degree standards, a number of principles were developed.

- Increased flexibility in associate degree standards;
- Establish minimum standards rather than prescriptive standards;
- Keep the 60 credit minimum and 2.0 GPA requirements;
- Possibly align minimum standards/requirements with systemwide principles/learning outcomes;

- Focus on delivering Working Group results in the academic year 2011-12;
- Compare/Contrast Minnesota standards; and
- Maintain focus on transferability.

In response to the charge issued by the Senior Vice President of Academic Affairs at the UW System, the following six areas of consideration resulted in findings: (1) "History of Associate Degrees and Degree Standards in Wisconsin," (2) "Review of Current Standards for the Associate Degree," (3) Guidance from National Higher Education Associations and UW System Shared Learning Goals," (4) "Wisconsin Technical College System (WTCS) and Minnesota Associate Degree Standards," (5) "The Role/Relation of General Education Requirements vis-à-vis Associate Degree Standards," and (6) Alignment with UW System Transfer Policy," resulted in findings.

1. History of Associate Degrees and Degree Standards in Wisconsin

Types of Degrees

Career-oriented and Technical Degrees

Different types of associate degrees are offered in the state of Wisconsin at both private and public institutions. Traditionally, technical and vocational associate degrees such as the Associate of Applied Studies are offered by the Wisconsin Technical College System (WTCS). These types of technical career-preparation programs often include pre-college credits and allow full-time students to complete training for entrance into an occupational field within 24 months.

Liberal Arts Transfer Degrees

WTCS institutions throughout the state also offer liberal arts-type two-year degrees intended for college transfer. In addition, many associate degree granting institutions have major-specific articulation agreements with four-year comprehensive and doctoral institutions, in which students complete the general education program and introductory courses before transferring into a specific major at the comprehensive institution.

UW System Types of Associate Degrees

UW System institutions, in particular the UW Colleges, have historically offered Associate degree programs that are comparable to the first two years of a four-year college curriculum. Since students typically complete the institution's general education program and satisfy competency requirements as freshmen and sophomores, the UW Colleges' associate degree, the Associate of Arts and Sciences, mostly functions as a transfer degree to a four-year institution. Within the UW System, the UW Colleges play a significant role in the production of associate degree holders by offering the Associate of Arts and Science (A.A.S) degree. Because of their special mission, (http://www.uwc.edu/administration/mission/), the UW Colleges are responsible for the conferral of the majority of UW System associate degrees, having graduated over 12,000 students with associate degrees between the years 2000 and 2010 (http://www.wisconsin.edu/opar/ssb/2009-10/pdf/r_a800.pdf).

Program Array Expansion at Comprehensive Institutions

Several comprehensive universities within the UW System have also conferred associate degrees since their inception, or have since been approved by the Board of Regents to issue them in the standard program approval process. During the past ten years, and on a much smaller scale, the following comprehensive institutions have issued some associate degrees: UW-Eau Claire, UW-Green Bay, UW-La Crosse, UW-Oshkosh, UW-Platteville, UW-Stevens Point, UW-Superior, and UW-Whitewater. Most of these comprehensives issued on average less than ten associate degrees per year within a ten year-period because the primary mission of the comprehensives is to provide baccalaureates and selected master-level degrees. However, conferral of associate degrees in 2009-10) and at UW-Whitewater (15 degrees in 2009-10). UW-Green Bay and UW-Superior also had some growth in this area. In contrast, UW Madison, UW-Milwaukee, UW-River Falls, UW-Stout and UW-Parkside have not issued associate degrees during the period 2000-2010

As more comprehensive institutions are considering expanding their program array to include face-to-face and online associate degree programs, revised standards will help to improve the functionality of the associate degree as an opportunity to meet Wisconsin's changing work-force and an institution's current engagement in degree completion programs.

2. Review of the Current Standards for the Associate Degree

Minimum Standards Baseline

Based on the minimum Standards set by the Board of Regents in the 1980s, currently UW System associate degrees require a minimum of 60 credits, a C average, and the satisfaction of certain breadth and general education requirements (See Appendix B). A minimum of nine credits each are required in the Humanities, the Social Sciences, and the Sciences, including laboratory experiences and interdisciplinary learning. Residency requirements and other university-specific core requirements are also applicable. A minimum of nine credits each are required in the Humanities, the Social Sciences, and the Sciences, including laboratory experiences.

Rethinking Standards in the Light of Student Achievement

Many of the faculty and student services professionals serving on the group perceived justifiable need for rethinking standards to guide student achievement in the associate degree programs. While certain core requirements based on general education and requiring a minimum of credits for completion seemed to serve their purpose, some modernization or alignment with 21^{st} century higher education appears appropriate because.... The associate degree or different variations in associate degree types needed to be made relevant to all possible constituents seeking an education in the state of Wisconsin.

Integrity, Quality, Cost, and Sustainability.

Discussions about the articulation of standards must include considerations of integrity, quality, cost, and sustainability. The integrity of the high academic standards and excellence in education needs to be preserved. At the same time, cost-effectiveness for institutions providing the associate degree and keeping costs as low as possible for students were seen as desirable goals. As standards are set for a broad number of constituents, these standards must be sustainable in the long run in order to provide added value.

Changing Demographics and Employer Perceptions

A demonstrable need for a revision of associate degree standards was perceived as advisable on the ground of changing student demographics. Many students want a credential and perceive that a degree of any kind can help to get a job. Employers also seem to become more accepting of two-year degrees as career preparation. In particular, returning adult students often seek to turn their transfer credits into a marketable degree. The conferral of associate degrees as milestones and completion programs may also improve institutions' statistics on retention and reduces the perception of students who do not complete a baccalaureate as "drop-outs." Adult students' life circumstances often change en route to a degree and many of them need credentials that show that they have progressed in their education even if they may not be able to attain a baccalaureate degree.

What Should an Associate Degree Look Like in the 21st Century?

The vision that emerged for the group's deliberations was based on deliberations on the question: "What Should an Associate Degree Look Like in the 21st century?" In the landscape of higher education reform, different paradigms concerning standards have been developed and institutions have undergone shifts in articulating learning goals for students. The UW System standards have been in existence for over 30 years and do not reflect the shifts and best practices developed in the last two decades. Whereas previously the focus seemed to have been on learning and course inputs, the new language of higher education now emphasizes outcomes. Further, the existing standards seemed prescriptive and do not necessarily correspond to assessable and student-centered outcomes. Moreover, UW System's inclusivity and inclusive excellence initiatives during recent years have also introduced learning goals such as diversity, inclusivity as well as global and intercultural goals, which are not currently thematized in the existing associate degree standards.

Quintessentially, the purpose of developing more and better associate degree options is to help students to navigate higher education options and to serve all students' different needs in reaching their potential. The group agreed to consider alternatives to the "associate degree" as a general umbrella term. This meant looking at the needs of students at the comprehensives as compared to those of students at community colleges, the technical colleges, etc. It also meant looking at different developmental and educational paths chosen by different students at different points in their lives.

Weighing Flexibility against Shared Visions and Standards

In addition, flexibility in the design of common standards is needed because the needs of individual institutions are quite different, depending on circumstances and campus culture. At some UW System comprehensive institutions, faculty and administrators showed some reluctance to expand degree options to the Associate of Arts(A.A.) because of mission and other concerns. The group agreed that minimum prescriptiveness was best so that different UW institutions could adapt the associate degree standards to their local needs. The intention of any revision of the standards is that each campus will have the latitude to react to its specific set of circumstances. It became clear early on in the discussion that both the need for change and conservation of proven elements in the existing standards would be considered side by side. A comparison with the State of Minnesota standards for associate degrees used by the Minnesota Office of Higher Education was regarded as productive in guiding the establishment of distinct associate degree options. The group also decided to review the UW-Platteville proposal (see Appendix 2), which introduced some proposals for an Associate of Arts and an Associate of Science, specific to the needs of students at UW-Platteville. Currently, UW System standards are only for a generic "associate degree." However, the UW Colleges have a specific set of core and competency requirements for their Associate of Arts and Sciences degree, which the group also reviewed.

Budgetary Considerations and Resources

The budgetary impacts of associate degree delivery were given due attention during discussions. The group recognized that an increase in the number of associate degree offerings definitely has a financial and economic aspect since these offerings contribute to revenue and may have other budgetary impacts in FTE allocation, etc. At some comprehensive institutions, associate degree offerings may help to maintain the present number of faculty and are conducive to establishing particular foci and concentrations, such as a Pre-engineering focus in the form of an A.A. degree. At other institutions, current pressures and lack of resources in the baccalaureate degree delivery may not point into a direction for growth in associate degrees. At some institutions, associate degrees will also be valued as degree completion programs and provide students with alternatives to degree competition within the technical college system. At some institutions, associate degree options may also serve as fertile ground for collaboration agreements both with institutions within and outside the UW System.

3. Guidance from National Higher Education Associations and UW System *Shared Learning Goals*

In order to benefit from national recommendations for the improvement of higher education, including degree standards and learning outcomes for undergraduate students, the group took an inventory of the information from different sources, such as the 2011 Lumina Foundation for Education Degree Qualifications Profile. (See: http://www.luminafoundation.org/publications/The Degree Qualifications Profile.pdf) and the AAC&U's LEAP (Liberal Education and America's Promise) Essential Learning Outcomes. (See: http://www.aecu.org/leap/vision.cfm).

Lumina Foundation for Education

The Lumina Degree Qualification Profile presents a qualifications framework which is intended to illustrate "clearly what students should be expected to know and be able to do once they earn their degrees — at any level." This Degree Profile thus proposes specific learning outcomes that "benchmark the associate, bachelor's and master's degrees regardless of a student's field of specialization." The Degree Profile describes five basic areas of learning: Broad, Integrative Knowledge; Specialized Knowledge; Intellectual Skills; Applied Learning, and Civic Learning.

While the learning outcomes as presented in the report also overlap with current learning outcomes contained in System recommendations, the Lumina Report appeared prescriptive to the group. Prescriptiveness, however, limits the flexibilities desired by institutions in interpreting standards and adapting them to local circumstances. UW System institutions are already currently requiring most, if not all areas of knowledge and learning outcomes as articulated by the Lumina Foundation, and further incorporation of Lumina Foundation language or content was not deemed necessary. Further, the UW System's Shared Learning Goals are in alignment with the Lumina Foundation goals and meet the criterion of "measurability."

Association of American Association of Colleges and Universities (AAC&U)

The AAC&U Essential Learning Outcomes also appear as very similar to learning goals that were adopted by UW System. LEAP recommends learning in the areas of Knowledge of Human Cultures and the Physical and Natural World, Intellectual and Practical Skills, Personal and Social Responsibility, and Integrative and Applied Learning, which is closely mirrored by the systemwide Shared Learning Goals adopted by UW System in 2009.

UW System Shared Learning Goals

As part of the Growth Agenda for Wisconsin, Step #1, "Commit to Shared Learning Goals for All UW Undergraduates, shared learning goals were developed to provide a framework to communicate broadly the meaning and value of a college education. The Shared Learning Goals represent the UW System's commitment to prepare students to be competent citizens in the 21st –century, knowledge-based, global society.(See:

https://committees.uwsp.edu/gedpolrev/Shared%20Documents/Documents/UW%20System%20Shared%20Learning%20Goals.pdf).

While the shared learning goals were developed primarily for baccalaureate degrees, the goals are universal in nature and apply to the learning goals for associate degrees as well.

Having considered the Lumina Foundation for Education Degree Qualifications Profile and the AAC&U Essential Learning Outcomes (LEAP), and the UW System's own Shared Learning Goals as models, the group was in general consensus that the recommendation for associate degree standards would be based on a vision of shared learning goals. The group agreed that it was necessary to examine how broadly defined learning goals "translate" into actual courses or local curricula.

4. Wisconsin Technical College System (WTCS) and Office of Higher Education Minnesota Associate Degree Standards

Wisconsin Technical College System

In order to determine which standards exist across Wisconsin in institutions outside the UW System, a contextual comparison with the WCTS associate degree requirements was considered productive. It helped the group understand what's already in existence and what inventory can be created by looking at various requirements inside and outside the system

Within the WTCS, five colleges offer associate degree options that function as transfer degrees to four-year institutions; these are not terminal degrees but specifically designed for transfer to four-year institutions. The group examined Wisconsin Technical Colleges' 2006 documents that described the standards for the above-mentioned transfereligible Associate of Arts and Associate of Science Degrees. Courses marked by "Code 20" are courses that can be counted towards a transfer-type technical associate degree. These "Code 20" courses are roughly equivalent to UW System 200-level courses and they differ from 100-level courses leading to applied college degrees. Eight Wisconsin technical colleges actually teach Code 20 courses; all others offer only Code 10 courses. For its transfer-eligible associate degrees with a liberal arts focus, the WCTS requires 60-64 credits, depending on variations in electives. Generally, WCTS students earn 64 credits in their associate degrees, which is in excess of the required 60 credits for UW System associate degrees. Some Wisconsin technical colleges have entered partner agreements with UW System institutions to offer better transfer opportunities for students. In some cases, local technical colleges have adjusted credit and breadth requirements to fit the general education and graduation requirements of a particular UW System institution. Whereas students who have earned an associate degree at one of the UW Colleges are generally considered to have satisfied the receiving institutions' general education program, additional breadth and specific graduation requirements are not necessarily met and students will have to enroll in additional credits. UW-Madison and MATC (Madison College) have aligned their requirements, and associate degree students from MATC earn 62-64 credits before transferring to UW-Madison.

Minnesota Office of Higher Education Associate Degree Standards

The Minnesota Standards require evidence of certain competencies and specify categories of general education experiences, such as independent learning and interdisciplinary study in addition to learning in disciplines, such as Humanities, Social Sciences, and Science (http://www.ohe.state.mn.us/pdf/associate.pdf). Minnesota also distinguishes between different kinds of associate degrees, requiring different numbers of credits. The group discussed the possibility of recommending more than one general associate degree and standards, following the Minnesota example. However, several group members anticipated that this plan might produce issues with transferability of courses in the sciences/math. For UW System transferability purposes and alignment with the existing Transfer Policy (revised and adapted by the Board of Regents in June 2011), an Associate of Science(s) degree would have to be equally transferable as an Associate of Arts. The group may also consider two or more different associate degrees, one of which would be intended to serve as a broad-based liberal arts transfer degree and other types which would serve as more career-focused options. Strong advising would be necessary; students who know to which institution they would transfer to will have an easier time navigating requirements that will count, and will be able to seek out courses that fulfill requirements at their current institution and the destination institution.

Creating Emphases based on the WTCS and Minnesota Models

It was noted that UW Colleges and other UW System institutions are considering creating emphases within associate degrees or concentrations in a specific field, such as engineering or business (see Appendix C, "Platteville Proposal"). UW-Platteville submitted such a proposal for different associate degree types with differing purposes for different students to UW System Administration. As the group reviewed the UW-Platteville proposal, it concluded that students might be best served if the associate degree aims at satisfying breadth requirements—leaving students enough flexibility to meet competency and other institution-specific requirements. One or several broad-based associate degrees that contain sufficient science and humanities/arts may better serve students who intend to transfer and who intend to major in a particular field. Transferability of credits to institutions outside the state of Wisconsin is also an

important consideration. Faculty workloads and limitation of resources also need to be considered as learning goals or requirements are articulated.

5. The Role/Relation of General Education Requirements vis-à-vis Associate Degree Standards

What is the exact relationship of campus general education requirements to associate degree standards? As a study of the current systemwide standards shows, in the past, the associate degree standards were largely determined by general education and breadth requirements as described in Appendix B. The assumption underlying this foundation in general education seems to have been that general education standards and breadth requirements were uniform across institutions. Further, standards were largely defined by a focus on minimum credits, completion of a minimum number of semester hours, minimum grade point average, and competency/breadth requirements that complemented core requirements. Was this structure a necessary one, and should it be maintained? Or were other configurations possible?

One particular issue seemed important to investigate further: Not all general education requirements at all campuses overlap with the existing A.A. standards and vice versa. There seems to be a general overlap primarily in basic general education requirements such as English/Writing, Math, Science, etc. Regarding distribution and specific courses required by each institution, there seems to be a bit more variation as, for instance, service learning and/or global education is emphasized at some institutions but not at others. (See overview in Appendix D).

Further, many UW System institutions are currently undergoing general education reform and are aligning standards to essential learning outcomes and the UW System shared learning goals. Particular campuses may require additional courses to satisfy graduation requirements and/or interpret credit requirements differently by including different disciplines. A comparison of general education breadth requirements and stated learning outcomes revealed that while there is some overlap in the core areas of Humanities, the Sciences, the Social Sciences, and the Arts, locally, interpretations of which courses and which course levels count towards general education requirements may differ considerably. It was noted that the variability of requirements seems to affect students' ability to transfer credits from one institution to another. It appears that an associate degree is generally counted as a transfer degree that satisfies general education outcomes. However, proficiencies and specific learning outcomes as well as graduation and institution-specific course requirements may not necessarily be satisfied when a student obtains an associate degree under the current policy. Some institutions may have already instituted learning outcomes in excess of the existing policy.

The following overview grid, Table 2, shows how the learning goals from a variety of sources align. Table 2, Comparison/Alignment of Requirements shows that there are shared features and overlaps between the UW System Shared Learning Goals, the current associate degree standards adopted by the UW System in the 1980s, the required breadth in the fields of Humanities, Natural Science, Written Communication, Ethnic and Cultural Studies, Social Sciences, etc., at all UW System institutions. Further,

there are also clear overlaps between the UW System goals, degree standards and general education requirements with the Wisconsin Technical System associate degree requirements and Standards, as well as with the Minnesota core requirements for associate degrees and the Lumina Foundation for Education's articulation of key areas of learning. The Platteville proposal is also in concert with the categories and standards articulated by the above mentioned institutions and organizations.

Further, Table 2 also indicates that while the names for certain requirements and goals leading to standards might sound different, there is agreement on the kinds of learning outcomes expected from students. The shared learning goal of "Knowledge of Human Cultures and the Natural World, for instance," aligns well with the current UW System associate degree credit requirement in the Humanities and the Fine Arts as well as with the WTCS and Minnesota core requirements and the areas of learning identified by the Lumina Foundation for Education as "Broad Integrative Learning."

Table 2

UW System	Current UW	Gen Ed	Wisconsin	Platteville	Minnesota	Lumina
Shared Learning	System Assoc.	Credits	Technical	Proposal for	Core	Foundation
Goals	Degree	required by	College	discipline-	requirements	for Education
	Standards	ALL UW	System	specific	-	Areas of
		System	associate	associate		Learning
		inst.	degree req.	degrees		
Knowledge of	Humanities/	Humanities	Humanities	Humanities/	Humanities	Broad
Human Cultures	Fine arts			fine arts		Integrative
and the Natural						Knowledge
World						
Critical and	Natural	Nat. Sci/	Math/Nat.	Math/Nat Sci	Nat Sci/Math	
Creative Thinking	Sci/Math	Math	Sci			
Skills						Intellectual
Effective		Writing	Eng/Speech	Freshman	Communicati	Skills
Communication		Comm.		comp/speech	on	
Skills						
Intercultural		Ethnic	World/	Ethnic/gender/		Civic
Knowledge and		Cultural	foreign	international		Learning
Competence			language	studies		
			ethnic			
			studies			
Individual, Social,	Soc Sci	Soc Sci	Soc Sci	history	Soc Sci	Applied
and Environmental						Learrning
Responsibility						
Other	Integrated		Health	Second course		Specialized
	Studies		Wellness	in same field		Knowledge

Comparison /Alignment of Requirements

6. Alignment with UW System Transfer Policy

In order to expand access to higher education and to expedite students' transition from one institution to another, the UW System has developed various ways in which to expand transfer opportunities. A revised Transfer Policy was adopted by the Board of Regents in June of 2011. Because students need choices and flexibility in their educational careers, several programs exist to help students begin college at one UW campus and get their degree from another. The UW System's nationally recognized Transfer Information System (TIS) uses an interactive online "wizard" to guide students and create seamless cross-campus transfers statewide. See: <u>http://www.wisconsin.edu/acss/acis/ACIS_6.0_revJune11.pdf</u>

Any recommendations that the group issues are intended to be compatible with the new UW System transfer policy. To that end, the group studied section C of the Transfer Policy. This section articulates the rules and expectations for transfers of associate degrees that the student obtained from a UW Institution. Essentially the policy holds that all transfer students holding an associate degree shall have satisfied all receiving institutions' general education/breadth requirements. The language of the Transfer Policy still reflects the language of the existing Regent Policy 4-4 in terms of inputs and discipline-based breadth requirements.

The group is in agreement with the following stipulations as they appear in the UW System Transfer Policy (excerpted below from the actual policy):

C. For Students Transferring with a UW Institution Associate Degree

For purposes of facilitating transfer between UW institutions, associate degrees awarded by UW institutions should include the minimum general education/breadth requirements defined by The UW System Board of Regents (Regent Policy 4-4, Minimum Requirements for an Associate Degree).

In recognition of these common requirements, the following principles were selected to guide the group's work:

1. The UW baccalaureate-granting institutions shall consider transfer students holding such an associate degree to have satisfied the university-wide general education/breadth requirements of the receiving institution.

2. Colleges and schools may require transfer students to complete additional general education/breadth requirements beyond the university-wide total if also required of continuing students.

3. The following may not necessarily be satisfied by the associate degree:

a. Competency requirements or levels of proficiency (e.g., English composition, speech, foreign language, math, quantitative reasoning) established by the receiving institution for continuing students.

- b. Upper division general education courses normally required of continuing junior and senior students.
- c. General education courses that are prerequisites to a particular program or major and are required of continuing students (e.g., micro- and macro-economics for business majors).
- d. Requirements mandated by external professional accrediting associations or program approving agencies (e.g., Department of Public Instruction, Accreditation Board for Engineering and Technology, American Assembly of Collegiate Schools of Business).

4. Students who transfer with an associate degree awarded by a UW institution which includes an ethnic studies (cultural diversity) component will be considered to have satisfied the ethnic studies requirement at any other UW institution.

5. Transfer credits will be evaluated by the receiving institution on a course-bycourse basis to determine if and whether credits will apply beyond the satisfaction of general education breadth requirements.

Part III: Recommendations

Overview

The Working Group developed a set of recommendations, summarized below under Recommendation (1), "Types of Associate Degrees," Recommendation (2), "Minimum Requirements and Depth Requirement," Recommendation (3), " Distribution of Credits," and (4), "Additional considerations."

Recommendation (1) includes the creation and/or maintenance of three unique and separate associate degrees that will meet student demand and employer need: (a) The Associate of Science, (b) The Associate of Arts, and (c) The Associate of Arts and Science.

Under recommendation (2), the group is recommending minimum requirements for each of the three types of associate degrees and a depth requirement.

Under recommendation (3), the group articulated a model of distribution of credits to effect students' achievement of learning goals.

Under Recommendation (4), the group is recommending the use of high-impact practices and inclusion responsibilities as learning outcomes.

Recommendation (1) – Types of Associate Degrees

a) <u>Associate of Arts</u> – This degree is primarily intended to provide a broad liberal arts background and is designed to be the foundation for and satisfy the general education requirements for most bachelor degree programs.

- b) <u>Associate of Sciences</u> This degree is primarily intended to provide a basic liberal arts background with an enhanced focus on knowledge of the physical and natural world and quantitative literacy. It is designed to provide the foundational courses in preparation for a bachelor's degree with highly structured major requirements (e.g. art, engineering, business and the sciences including biology, chemistry and pre-professional programs).
- c) <u>Associate of Arts and Science(s)</u> This option is primarily for institutions that will continue to offer this traditional type of two-year terminal degree. It will include a broad, balanced liberal arts and sciences background and satisfy the general education breath requirements at four-year institutions.

In distinguishing between different types of associate degrees, different student populations and different institutional purposes can be accommodated. All three associate degrees currently exist at one or more UW System institutions Institutions may choose whether to offer only one or all of the types. Thus, the Associate of Arts serves to educate broadly and to provide an avenue towards satisfying primarily general education requirements for most bachelor programs. In contrast, the Associate of Science(s) is designed for students who may need foundational courses in a particular discipline. This degree type may not function necessarily to satisfy general education requirements and may require the student to take additional breadth and core courses required by a receiving institution. The Associate of Arts and Science(s) is currently offered by the UW Colleges and functions both as a transfer degree and as a terminal degree.

Apart from offering an array of associate degrees, the recommendations also include minimum requirements, such as a minimum number of semester hours, requirements for general education, and a grade point average.

Recommendation (2)--Recommended Minimum requirements for an Associate Degree Granted by a UW System Institution, including Depth Requirement

Minimum Requirements

- a) Completion of a minimum of 60 semester credit hours of college level work.
- b) Completion of a minimum of 40 semester hours fulfilling the University of Wisconsin System minimum general education learning goals (see below).
- c) Achievement of a 2.0 grade point average on a 4.0 grading system.

Depth Requirement

Each associate degree must contain a two-course sequence in which the first course provides the foundation for the second.

Recommendation (3)—Distribution of Credits

Table 3 below illustrates the group's recommendation of credits for each UW System Learning Goal, as differentiated by type of associate Degree. The major difference between the original Regent Policy 4-4 and the recommended changes is the adoption of a new framework in which to examine degree requirements and quality standards for the associate degree. Whereas the existing UW System model emphasized breadth as well as competency requirements, the revision emphasizes learning goals and outcomes, not merely distribution of credits. The Learning Goal "Knowledge of Human Cultures and the Natural World" reflects a minimum and a maximum range of credits that reflect the need for institutional flexibility. Flexibility also requires the ranges in electives and the total number of general education credits recommended Currently, the total number of credits required for general education and for graduation as well as the number of credits students may take as electives varies from institution to institution (although they are all in a similar range).

Table 3

UW System Shared Learning Goal	Degree		
	Associate of Arts	Associate of Science(s)	UW Colleges Associate of Arts and Science(s)
Knowledge of Human Cultures and the Natural World	18-20	20-25	21-24
Critical and Creative Thinking	3	6	3
Effective Communication	6	6	6
Intercultural Knowledge and Competence	6	3	3
Individual, Social, and Environmental Responsibility	6	6	6
Total General Education Credits	39-41	41-46	39-42
Electives leading to desired baccalaureate degree – chosen with help of advisor	19-21	14-19	18-21
Total Credits to Degree	60	60	60

Recommended distribution of credits to achieve general education breadth in associate degrees via the UW System Shared Learning Goals (adopted in 2009)

Notes:

Knowledge of Human Cultures typically includes coursework in social sciences, humanities, fine arts, and world languages.

Knowledge of the Natural World typically includes coursework in biology, chemistry, geology, physics, and mathematics.

Critical and Creative Thinking Skills are typically included as learning goals in different disciplines throughout the university curriculum.

Effective Communication typically includes coursework in multiple communication modes, including Speaking/Listening, Writing, English, Communication, and Media Studies.

Intercultural Knowledge and Competence typically includes coursework that satisfies the UW System Diversity requirement, including coursework in the social sciences, humanities, fine arts, foreign languages and ethnic studies. **Individual, Social and Environmental Responsibility** are typically addressed in courses that employ high-impact practices such as internships, study abroad, and service learning.

Recommendation (4)--Additional Considerations: High Impact Practices and Responsibilities as

Learning Outcomes

The following high-impact practices should be considered for inclusion in associate degree programs: first-year seminars, learning communities, writing intensive courses, undergraduate research, collaborative assignments and projects, diversity/global learning, opportunities, service-learning/community-based learning, internships, and capstone courses and projects Research has shown that systematic incorporation of these active learning practices can result in increased student achievement of learning outcomes.

Desirable learning outcomes for all associate degree holders include an understanding and enactment of individual, social and environmental responsibility. This set of responsibilities spans all categories of learning and all breadth requirements and competencies. As citizens, graduates of the University of Wisconsin System exercise their responsibilities both as individuals and as members of communities. Graduates are expected to demonstrate a knowledge of sustainability and its applications as well as civic knowledge and engagement at the local and global level. High Impact Practices, such as service and community-based learning as well as global experiences such as study abroad can help to develop that intercultural knowledge and competence in students. In considering individual, social and environmental responsibility, students will become competent in ethical reasoning and action and thus lay foundations and skills for lifelong learning. These skills will be developed through real-world challenges and active involvement with diverse communities.

Summary of Changes

If the above recommendations are adopted by the Board of Regents, several of the minimum requirements of the existing associate degree standards structure from the 1980s document would be retained. The recommendation for the three different types of associate degrees still sets a minimum 60-semester-redit-hour requirement and keeps the 40-semester-hour minimum general education requirement, albeit in altered form to reflect the use of student learning outcomes rather than course inputs. The new recommendation also maintains a minimum achievement in terms of grade point average in which the grade of C is now articulated as a 2.0 G.P.A. on a 4.0 scale.

Appendices

Appendix A

On April 19, 2011, Associate Vice President Stephen H. Kolison, Jr. appointed faculty and academic staff from UW System institutions to the Working Group. Appointments were made upon the recommendation of the Provosts at each institution and included:

Caroline Geary (UW-Manitowoc), Associate professor of Chemistry and Associate Dean

Kate Lang (UW-Eau Claire), Associate Professor of History, Chair of the History Department

Hye-kyung Kim (UW-Green Bay), Associate Professor of Humanistic Studies

Rebecca LeDocq (UW-La Crosse), Faculty Senate Chair and Professor of Mathematics

Todd Kostman (UW-Oshkosh), Associate Professor and Co-Chair, Department of Biology and Microbiology.

Lori Allen (UW-Parkside), Associate Professor of Chemistry

Colleen McCabe (UW-Platteville), Associate Professor of Health and Physical Education

Arunendu Chatterjee (UW-River Falls), Assistant Professor of Mathematics

Kami Weis (UW-Stevens Point), Advising Services

Byron Anderson (UW-Stout), Program Director, B.S. in Information and Communication Technologies and Associate Professor, Apparel and Communication Technology

Rhoda Robinson (UW-Superior), Associate Dean, Academic Affairs

Carolyn Morgan (UW-Whitewater), Associate Professor of Psychology

Mary Schey, UW-Madison, Assistant Director of Admissions (now UW-Madison, Business School)

Provost Greg Lampe of the UW Colleges and Provost Faith Hensrud of the UW Superior were asked by Kolison to co-chair the group. Academic Planner Carmen Faymonville of the UW System Administration Office of Academic, Faculty, and Global Programs (AFGP) and Special Assistant to the Senior Vice President of Academic and Student Affairs served as UW System staff.

Appendix B

ASSOCIATE DEGREE IN THE UNIVERSITY OF WISCONSIN Minimum General Education Breadth Requirements and Associate Degree Transfer Policy

I.ASSOCIATE DEGREE REQUIREMENTS

- A. Minimum requirements for an associate degree granted by a UW System institution shall include:
- 1. Completion of a minimum of 60 semester credit hours of work.
- 2. Achievement of a "C" grade point average.
- 3. Successful completion of proficiency or competency requirements as defined by the institution.
- 4. Completion of 40 semester hours fulfilling the University of Wisconsin System minimum general education breadth requirements for the associate degree as defined below.
- B. Minimum University of Wisconsin System general education breadth requirements for the associate degree.

The following semester credit hour requirements shall constitute the minimum general education breadth requirements for an associate degree awarded by UW System institutions:

- 1. Humanities and the fine arts A minimum of 9 and a maximum of 15 semester hours from at least two disciplines. No more than six semester hours may be taken in the fine arts.
- 2. Natural sciences/mathematics A minimum of 12 and a maximum of 16 semester hours in at least two disciplines. Not less than 8 hours must be in the natural sciences, including one laboratory science.
- 3. Social science A minimum of 9 and a maximum of 15 semester hours from at least two disciplines.
- 4. Integrated studies A maximum of six semester hours may be included in courses which combine elements of two or more of the breadth categories as defined above.
- Additional specific requirements must include one course with a historical perspective, one course taught from primary texts (including translations), and one two-semester sequence of courses. In fine arts, only history or appreciation courses are eligible for inclusion as meeting breadth requirements.

Competency or proficiency requirements such as introductory English composition, mathematics proficiency as defined by the receiving institution, introductory public speaking, and foreign language proficiency as defined by the receiving institution shall not serve to meet the breadth requirements. In general, courses intended to meet or to build performance or proficiency skills shall not count toward breadth requirements. Examples of such courses include piano, news writing, or painting. Courses completed in these areas by a transferring student shall be considered for transfer on a course-by-course basis by the receiving institution.

II.INTERINSTITUTIONAL TRANSFER OF GENERAL EDUCATION BREADTH REQUIREMENTS OF AN ASSOCIATE DEGREE GRANTED BY A UW SYSTEM INSTITUTION.

- General education requirements vary from institution to institution within the University of Wisconsin System. Each represents an institutional statement developed by the faculty about the general body of knowledge which should be possessed by the recipient of that university's degree.
- For the purposes of facilitating transfer between institutions in the University of Wisconsin System, associate degrees awarded by UW System institutions shall meet minimum breadth requirements as defined above. The University of Wisconsin baccalaureategranting institutions shall consider transfer students holding such an associate degree from a UW System institution to have met the <u>university-wide</u>, college and school general education breadth requirements of that receiving institution. Transfer credits will be evaluated by the receiving institution on a course-by-course basis for purposes other than determining satisfaction of general education breadth requirements.
- Competency requirements or levels of proficiency established by the receiving institution will be required of transfer students. Transfer students may be required to take general education courses normally required of junior and senior students in the last two years of their university experience.
- Individual baccalaureate programs may stipulate specific courses to be taken by the student. Students should be attentive to the specific requirements of an intended major in planning their general education program.

Appendix C

UW-Platteville Proposed Models for Associate's Degrees

May 10, 2011 Submitted by

Jodi McDermott, Ed.D.

Assistant Dean of the College of Business, Industry, Life Science and Agriculture mcdermoj@uwplatt.edu and

Arthur Ranney, Ph.D.

Special Assistant to the Provost ranneya@uwplatt.edu Proposed Models for Associate's Degrees [rev 05.04.11] p. 2 of 10

Rationale

The University of Wisconsin-Platteville is authorized to offer an associate's degree, and in fact, has granted associate's degrees within the recent past. The writers believe that a clarification of the requirements and the policies concerning associate's degrees would be beneficial, both to students and to the university. Similarly, an expansion of the current scope of the associate's degree program at Platteville could positively affect student performance and retention while increasing the number of degrees offered by the university.

Students can become discouraged by a four-year degree program, either due to its length or to the daunting prospect of advanced course work. Promoting a milestone credential in the form of an associate's degree would encourage students to remain enrolled for at least two years and offer a tangible credential to those who have concluded that a four-year degree is beyond their reach. Other students, encouraged by their success in attaining the associate's degree, will be empowered to continue their studies and pursue the baccalaureate degree.

The current associate's degree offered by Platteville is, in effect, an associate of arts. We propose to continue that offering; the only change to the current degree program would be in the name. In this document, however, we also are offering a model that, if adopted, would allow UW-Platteville to offer associate's degrees that are major-specific: Business Administration, Communication Technologies, and Physical Education have embraced the concept and have designed models for your consideration; we anticipate interest from other majors will materialize in the future. The current associate's degree would be designated as an associate of arts; any major-specific degree would be designated as an associate of science. The major-specific programs would appeal to students who are interested in a particular area of study but who, for one reason or another, have decided that four years represents a commitment they cannot fulfill. There are career paths open to students who hold a two-year degree in a major field; issuing those degrees will result in a number of positive outcomes, not the least of which is to

increase the number of degrees granted by System institutions.

Please note that the models below represent a first step toward a redesigned associate's degree program at UW-Platteville. We are seeking feedback from System — and most specifically, from the newly formed associate's degree working group — concerning the viability of these models. Until we are satisfied that our models, at least in principle, are viable at the System level, we will not pursue any changes at the university level. Therefore, these models have only informal approval from the departments involved; formal proposals will, of course, be subject to review by the appropriate faculty governance bodies.

We thank you in advance for your careful consideration and welcome any questions, concerns, or feedback you might have to offer.

Current One-Degree Structure

The University of Wisconsin-Platteville currently offers an associate's degree. In order to be granted an associate's degree, students must have:

- 1. Earned a minimum of 60 credits
- 2. Fulfilled all general education requirements
- 3. Attained a cumulative grade point average of at least 2.00
- 4. Earned at least 24 of the 60 credits at UW-Platteville

Proposed Two-Degree Structure

UW-Platteville proposes to offer two associate's degrees: Associate of Arts and Associate of Science.

Associate of Arts (A.A.)

This degree would be identical to our current associate's degree. It would continue to transfer to other UW System four-year comprehensive institutions to satisfy general education requirements as noted in Regent Policy Document 4-4. [See http://www.wisconsin.edu/bor/policies/rpd/rpd4-4.htm]

Associate of Science (A.S.)

This degree also would comply with Regent Policy Document 4-4, but it would be a topic-specific degree. The short-term goal is to offer the Associate of Science in Business Administration, Communication Technologies, and Physical Education; we anticipate other programs to follow suit as these programs succeed. Communication Technologies would offer four emphasis options: Imaging Media, Journalism, Public Relations, and Video & Audio Production. The specific requirements for the A.S. degree appear in the following pages. Please note that students in an associate of science program must earn a minimum of 60 credits, with at least 24 credits completed at UWPlatteville. Students must finish the program with a cumulative grade point average of 2.00 or higher per current university requirements.

General Education Requirements

Proposed Associate of Science Degree

The Associate of Science degree will require approximately 64 credits, including a minimum of 40 credits in General Education required courses. General Education requirements will include

courses that fulfill university requirements for:

- Freshman Composition 6 credits
- Mathematics 3 credits
- SPCH 1010 or SPCH 1250 (speech requirement) 2-3 credits
- History 3 credits
- Humanities 3 credits
- Fine Arts 3 credits
- Second course in humanities/fine arts 3 credits
- Social science 6 credits
- Second course in social science 3 credits
- Natural science 8 credits

• Requirements for ethnic, gender, and international studies may be met through above coursework; otherwise they will need to be met separately.

The requirements in the bulleted items above will be combined with a minimum of 24 credits required from the major area (i.e., Business Administration, Communication Technologies, and Physical Education) as prescribed by the department housing the major area. Total credit count may vary, since some courses in the major or general education may fulfill requirements in more than one area, but a student must earn 60 or more discrete credits before a degree can be conferred. Proposed requirements for the three programs are outlined below.

Department of Business Administration Requirements Proposed Associate of Science Degree

General education requirements as noted above A minimum of 24 credits required from the required and elective courses below* Required Courses (21 credits): BSAD 1300 - Global Business BSAD 2330 - Leadership & Management BSAD 2630 - Marketing BSAD 3030 - Human Resource Management BSAD 3620 - Finance ACCT 2010 - Financial Accounting ECON 2130 - Macro Economics or ECON 2230 - Micro Economics Elective Courses (3 credits) ACCT 2020 - Management Accounting Any BSAD course numbered greater than 3000 (except Internship, independent study, and special topics) *18 of the 24 credits must come from UW-Platteville

Department of Communication Technologies Requirements Proposed Associate of Science Degrees

General Education requirements as noted above must be combined with an approved 24-credit program

within Communication Technologies to earn the degree. At least 18 of the 24 credits must come from UW-Platteville. Approved programs include: Imaging Media; Journalism; Public Relations; or Video & Audio Production. Courses in *italics* have a prerequisite.

IMAGING MEDIA (24 credits) **REQUIRED COURSES (18 credits)** Course # Title Credits Sem/Yr. CT Software: Any 6 courses 6 CT 1230 Survey of Imaging 3 CT 1630 Introduction to Mass Media 3 CT 1930 Basic Photography 3 CT 3070 History of Imaging 3 **CONCENTRATION** (Select one of the following sets) NEW MEDIA CONCENTRATION: Course # Title Credits Sem/Yr CT 2090 Principles of Interactivity 3 CT 3030 Multimedia Projects 3 PHOTOGRAPHY CONCENTRATION Course # Title Credits Sem/Yr CT 3500 Photography II 3 CT 4500 Photography III 3

JOURNALISM

(24 credits) **REQUIRED COURSES (15 credits)** Course # Title Credits Sem/YR CT 1160 Software: In-Design Basic 1 CT 1030 Software: Photoshop Basic 1 CT 1930 Basic Photography 3 CT 2030 Basic Newswriting & Reporting 3 CT 2110 Applied Communication (Publications) 1 CT 3730 Project Writing & Reporting 3 CT 3830 Editing for Print 3 **ELECTIVES (9 credits)** CT 1230 Survey of Imaging 3 CT 2050 Broadcast Media Writing 3 CT 3150 Communication Research 3 CT 3560 Broadcast News 3 CT 3580 Documentary 3 CT 3770 Theories in Media & Culture 3 CT 3920 Promotional Techniques 3 CT 3930 Communication Law 3 CT 4140 U.S. Investigative Journalism 3 ENGL 3360 Magazine Writing & Editing 3 ENGL 3940 Grammar in Context 3 **POSC 3000**
or above Any Political Science upper division course 3 **PUBLIC RELATIONS** (24 credits) THE FOLLOWING COURSES ARE REQUIRED: Course # Title Credits Sem/Yr CT 1630 Introduction to Mass Media 3 CT 2360 Public Relations Principles 3 CT 3010 Business Communication 3 Select one (3 credits) technology-based course from the list below: CT 1730 Intro to Communication Technologies or CT 1930 Basic Photography 3 Select one (3 credits) basic media writing course from the list below: CT 2030 Basic Newswriting & Reporting or CT 2050 Broadcast Media Writing 3 Select one (3 credits) advanced media writing course from the list below: CT 3730 Project Writing & Reporting or CT 3920 Promotional Techniques 3 Select two (6 credits) from the PR strategy course below: CT 3800 Meetings & Events or CT 3860 Media Advertising & Sales or CT 4270 Volunteers, Fundraising, & Grants

VIDEO & AUDIO PRODUCTION

(24 credits) **REOUIRED COURSES (15 credits)** Course # Title Credits Sem/Yr. CT 1250 Audio & Video Systems 3 CT 1630 Intro to Mass Media 3 CT 1730 Intro to Communication Technologies 3 CT 2070 Intro to Video Field Production 3 CT 2530 Audio Production 3 **ELECTIVES (9 credits)** Course # Title Credits Sem/Yr. CT 1030 Software: Photoshop Basic 1 CT 1040 Software: Photoshop Intermediate 1 CT 1100 Software: Flash Basic 1 CT 1130 Software: Dreamweaver Basic 1 CT 2050 Broadcast Media Writing 3 CT 2090 Principles of Interactivity 3 CT 3030 Multimedia Projects 3 CT 3240 Video Production 3

CT 3290 Radio Station Procedures 3 CT 3560 Broadcast News 3 CT 3580 Documentary 3 CT 3660 Broadcast Performance 3 CT 3840 Post-Production 3 CT 3860 Media Advertising & Sales 3 CT 3930 Communication Law 3 CT 4130 Communication Technologies Management

Course GENERAL COMPETENCY REQUIREMENTS (11 credits) Credits

ENGLISH 1130 Freshman Composition I 3 ENGLISH 1230 Freshman Composition II 3 MATH at or above 1630 recommend 1830 Elementary Statistics 3 SPEECH 1010 SPCH 1010 Public Speaking 2 HUMANITIES & FINE ARTS & HISTORICAL PERSPECTIVE (12 credits) **ENGLISH 3** FINE ARTS 3 HIST 3 *Second course in Humanities, Fine Arts or Historical Perspective 3 **SOCIAL SCIENCES (9 credits)** 3 3 3 NATURAL SCIENCES (8 credits) BIOL 2340 Essentials of Anatomy & Physiology 4 Gen Ed credits - 40 PHYSICAL EDUCATION - 18 of 24 credits must come from UW-Platteville Course REQUIRED COURSES (20 Credits) Credits PHYSED 2020 First Aid 2 PHYSED 2030 Health Education 2 PHYSED 2320 Introduction to Health and Physical Education - Level I Portfolio 2 PHYSED 3010 Technology in Health & Physical Education – Level II Portfolio 2 PHYSED 3020 Physiology of Exercise 3 PHYSED 3360 Fitness Evaluation 2 PHYSED 3720 Kinesiology 3 PHYSED 3850 Nutrition 2 PHYSED 4520 Injury Prevention 2 **ELECTIVES** (4 Credits) PHYSED 2330 Adventure Education 2 PHYSED 2410 Team Sports 2 PHYSED 2510 Individual Sports 2 PHYSED 3330 Lifetime Activities 2 PHYSED 3400 Outdoor Activities/WSI 2 Physical Ed credits - 24 Physical Education Knowledge, Skills and Disposition Check offs

_____ Initial Fitness Assessment – performed within first academic year

_____ Level I portfolio – Autobiographical Sketch, Initial Philosophy, Goal Statement

Level II portfolio – Revision of Level I artifacts and addition of NASPE Content Standards Artifacts

_____ Final Fitness Assessment – performed within final academic term

Appendix D

UW System Institutions: General Education Outcomes/Goals

UW Colleges

http://www.uwc.edu/academics/proficiencies/

The following are listed as A.A.S. degree requirements, not general education requirements as such:

Carrying out this mission, the UW Colleges commits to developing in students a set of proficiencies that prepares them for baccalaureate and professional programs, for lifelong learning, and for leadership, service, and responsible citizenship. To provide students with the skills for success in these roles, the UW Colleges regards the following areas of proficiency to be of primary importance in the education of our students: Analytical Skills, Quantitative Skills, Communication Skills, and Aesthetic Skills.

I. Analytical Skills

Students must be able to:

- interpret and synthesize information and ideas;
- analyze and evaluate arguments;
- construct hypotheses and support arguments;
- select and apply scientific and other appropriate methodologies;
- integrate knowledge and experience to arrive at creative solutions; and
- gather and assess information from printed sources, electronic sources, and observation.

II. Quantitative Skills

Students must be able to:

- solve quantitative and mathematical problems;
- interpret graphs, tables, and diagrams; and
- use statistics appropriately and accurately.

III. Communication Skills

Students must be able to:

- read, observe, and listen with comprehension and critical perception;
- communicate clearly, precisely, and in a well-organized manner;
- demonstrate a large and varied vocabulary;
- recognize and use a variety of communication forms and styles; and
- use computer technologies for communication.

IV. Aesthetic Skills

Students must be able to:

- engage with and critically reflect on a work of creative expression; and
- discuss their engagement with and critical reflection on a work of creative expression.

UW-Green Bay

http://www.uwgb.edu/catalog/undrgrad/gened.htm

Purpose

The general education program gives students an opportunity to strengthen academic skills, broaden intellectual horizons, develop and explore new academic interests, reflect on personal values, and build a foundation of knowledge for future course work and lifelong learning.

In addition to providing a breadth of knowledge, the general education program is designed to enhance students' ability to solve problems, think critically and communicate effectively. Students take courses in six broad domains: fine arts, humanities, social sciences, natural sciences, ethnic studies, and world culture.

Learning Outcomes

All students who graduate from UW-Green Bay should achieve the three skill-based learning outcomes listed here in addition to domain-specific learning outcomes. The general education program emphasizes developing these skills:

- The ability to communicate effectively through listening, speaking, reading, writing, and the use of computers.
- The ability to think critically.
- The ability to exercise problem-solving skills, such as problem identification and analysis, solution formulation, implementation and assessment, using an integrated, interdisciplinary approach.

UW-La Crosse

http://www.uwlax.edu/records/Timetable/GeneralEducation.htm

- <u>GE01 Literacy Tools for Skilled Communication</u>
- <u>GE02 Mathematical/Logical Systems and Modern Languages: Tools for Structure</u> Analysis and Communication
- <u>GE03 Minority Cultures or Multiracial Women's Studies</u>
- <u>GE04 International and Multicultural Studies: Becoming World Citizens</u>
- <u>GE05 Science: Understanding the Natural World</u>
- <u>GE06 Self and Society: Understanding Oneself and the Social World</u>

- <u>GE07 Humanistic Studies: The Search for Values and Meaning</u>
- <u>GE08 Arts: The Aesthetic Experience</u>
- <u>GE09 Health and Physical Well-Being: Learning to Create Healthy Lives</u>

UW-Madison

Competencies: Core of intellectual and practical skills (outcomes) adapted from Madison Website http://pubs.wisc.edu/ug/geninfo_study_ger.htm

- living a productive life,
- being a citizen of the world,
- appreciating aesthetic values,
- engaging in lifelong learning in a continually changing world,
- competence in communication,
- critical thinking,
- analytical skills appropriate for a university-educated person,
- investigation of the issues raised by living in a culturally diverse society;
- basic knowledge of human cultures and the physical world (and, importantly, the strategies used to understand these topics),
- tools intended to contribute to their sense of personal and social responsibility,
- to learn what they need to know not just for making a living, but also for making a life.

UW-Milwaukee

http://www4.uwm.edu/current_students/ger_information/

Competency requirements in English, Math and Foreign Languages

UW-Oshkosh

under revision: General Education; see liberal education outcomes below

http://www.uwosh.edu/registrar/bulletins/bulletin/2005_2007/policies/academic_pol.php#gen_ed

The General Education Program at the University of Wisconsin Oshkosh is designed to help all students learn to see, think about and understand human beings, human interactions, and human societies. The program prepares students to grow intellectually and to adapt to changes by suggesting how they might apply faculties of reason to come to a better understanding of their surroundings. The General Education Program helps students grow to be liberally educated persons capable of making reasoned decisions and establishes a common liberal arts based experience before the student engages in a specialized field of study.

Liberal education outcomes

In 2008, the University's Liberal Education Reform Team developed the following set of essential student learning outcomes that students can expect to gain across the curriculum: http://www.uwosh.edu/projects/lert/lert.php

- Knowledge of human cultures and the physical and natural world through study in fine and performing arts, humanities, mathematics and science, and social science.
- Both intellectual and practical skills, including identification and objective evaluation of theories and assumptions; critical and creative thinking; written and oral communication; quantitative literacy; technology and information literacy; teamwork; leadership; and problem solving. The skills should be practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects and standards for performance.
- Responsibility, as individuals and communities, including knowledge of sustainability and its applications; civic knowledge and engagement local and global; intercultural knowledge and competence; ethical reasoning and action; foundations and skills for lifelong learning. These skills will be developed through real-world challenges and active involvement with diverse communities.
- Learning that is integrated, synthesized, and advanced, including synthesis and advanced accomplishment across general and specialized studies demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems.

UW-Platteville

http://www.uwplatt.edu/academics/catalogs/undergraduate/current/gened.html

[Our] educational philosophy is rooted in four ideas: first, that students are capable of and responsible for making choices; second, that the quality of choice is largely dependent upon the nature and extent of their experience; third, that experience becomes more meaningful and constructive when it is informed by knowledge; and fourth, that while students need certain kinds of knowledge to practice their professions, they need other kinds of knowledge to become well-rounded and fulfilled.

The development of these latter kinds of knowledge is the essential purpose of a liberal arts education. Such an education empowers people to live thoughtful lives, frees them from ignorance and awakens them to a universe much larger than their immediate environment and about a public realm that reaches far beyond their professional circle, local community or nation. More specifically, this central part of education promotes the ability to think and communicate coherently, critically and creatively about:

- the thoughts and actions of people from one's own culture, as well as from different cultures
- the processes of nature, both animate and inanimate
- the interrelations among people and between nature and humankind
- the possibilities for each person to enhance or detract from the goodness and beauty of life

UW-Parkside

http://www.uwp.edu/departments/general.education/ (adopted in 2009)

Communication

- Literacy: reading and writing for understanding and effective communication
- Oral communication: listening, speaking and presenting effectively
- Information technology competence: using modern information technology to retrieve and transmit information
- Creative expression: communicating through artistic statement

Reasoned Judgment

- Critical thinking: applying logic and reasoning to problem solving
- Ethical thinking: recognizing and analyzing ethical issues and actions
- Scientific thinking: understanding and applying the scientific method
- Analytical skills: understanding how to produce and interpret quantitative and qualitative information
- Aesthetic skills: critiquing and appreciating the fine arts (literary, visual, and performing)

Social and Personal Responsibility

• Individual accountability: understanding what a responsible choice is and that one's present education and lifelong learning is a personal responsibility

• Social equality: understanding and questioning social, political, economic and historical conditions that construct diversity and inequality

• Civic engagement: learning to use knowledge and skills to contribute to the community

• Global perspective: acquiring the knowledge and skills that provide an understanding of international/global issues and processes

Teamwork: working effectively with others for a common goal

These competencies are achieved by taking courses in three broad areas:

- Humanities and the Arts
- · Social and Behavioral Science
- · Natural Science

All courses must satisfy one outcome from each of the broad learning goals/categories.

UW-River Falls

http://www.uwrf.edu/Catalog/GenEdRequirements.cfm

UWRF General Education Mission Statement

The purpose of the UWRF General Education program is to facilitate the acquisition and integration of knowledge, abilities, and ethics in order to form a foundation for lifelong learning.

The interdisciplinary foundation includes the ability to communicate effectively; to demonstrate knowledge of past and present human endeavor; apply scientific principles to the human and natural world; engage in multidisciplinary inquiry; and to evaluate individual responsibility to self, society, and the world.

UW-Stevens Point

http://www3.uwsp.edu/AcadAff/Pages/generalEducation.aspx

The UWSP general education curriculum is being revised.

Mission Statement: The General Education Program provides the framework of a liberal education, equipping students with the knowledge and skills to facilitate intellectual and personal growth, pursue their advanced studies, and improve the world in which they live.

Liberal Education Outcomes:

At UWSP, we believe that a liberal education is essential to living in today's global society. We also believe that global citizenship requires that individuals learn to see the world from perspectives other than their own. Some of these perspectives are cultural and develop from the study of other languages, ethnicities, and beliefs. Some perspectives come from honing new intellectual skills, by learning math and science, for example, or cultivating an understanding of the past and an appreciation of the arts and literature. And some perspectives are the products of unique experiences such as getting involved in a community or studying abroad.

Ultimately, the more students are encouraged to step outside their familiar habits and beliefs, the more they gain the wisdom to see connections between themselves and the world around them, the generosity to empathize with the differences they encounter, and the willingness to place their newfound abilities in the service of a larger community. In this way, a liberal education at UWSP prepares students to be responsible global citizens.

Program Outcomes

The General Education Program seeks to develop these qualities of global citizenship in four distinct ways. After completing the general education curriculum, students will:

- Demonstrate critical thinking, quantitative, and communication skills necessary to succeed in a rapidly changing global society.
- Demonstrate broad knowledge of the physical, social, and cultural worlds as well as the methods by which this knowledge is produced.
- Recognize that responsible global citizenship involves personal accountability, social equity, and environmental sustainability.
- Apply their knowledge and skills, working in interdisciplinary ways to solve problems.



UWSP General Education Program 40–49 credits

UW-Stout

http://www.uwstout.edu/provost/upload/geescorslist.pdf

Each degree program has a general education component designed to provide you with knowledge and skills in communication, analytic reasoning, health and physical education, humanities and the arts, social and behavioral sciences, natural sciences and technology.

Additionally:

Racial and Ethnic Studies Requirements

Each student must satisfy the racial and ethnic studies requirement as preparation for being an engaged citizen in a highly diverse society. Through approved courses, it is hoped that graduates will come to appreciate, understand, value and respond respectfully to cultural diversity. Through the study of U.S. cultures other than those from a European origin, we hope to discourage racism and thus reduce its effects. Courses examine the experiences of historically underrepresented U.S. racial/ethnic groups: African American, Hispanic/Latino, Asian American (with an emphasis on Southeast Asian American), and American Indian. An important emphasis is critical reflection and application of acquired learning to professional and personal contexts.

Global Perspective Requirement

Both the globalization of work and the career education that is part of UW-Stout's mission make it desirable that students appreciate cultural, economic, political, environmental and social differences. Learning a second language at the college level and developing an understanding of another culture provides students with skills they will use in international situations.

UW-Superior

http://www.uwsuper.edu/catalog/2010-12/policies/degree-requirements.cfm#_5_1115574

Overall Learning Goals for the General Education Program

The General Education Program at the University of Wisconsin-Superior integrates students into a community of creative learners rooted in the tradition of liberal arts education. It does so by familiarizing students with the "ways of knowing" associated with the various academic disciplines and by fostering the development of a set of habits of mind and academic skills associated with reflective and critical learning. The goals of the General Education Program are:

- I. To foster the development of the following habits of mind and academic skills:
 - An ability to express oneself in multiple forms, with an emphasis on oral and written communication
 - Appreciation for the diversity of human experience, together with respect and empathy for these differences
 - Critical reading, including quantitative literacy
 - Deductive and inductive reasoning
 - A view of education as an ongoing, interactive, and transformative process
 - Ownership for one's own learning
 - A penchant for collaboration with others
 - Valuing Service
 - Questioning and analyzing sources of knowledge and belief, including one's own, while appreciating the value of multiple interpretations and perspectives

II. To develop familiarity with the approaches to knowledge associated with the Humanities, Social Sciences, Natural and Physical Sciences, and Fine and Applied Arts.

Additionally, there are:

Learning Goals for General Education Core Categories

College Writing (WRIT 101 and 102)

In the writing sequence, students:

• Improve their ability to read critically and write analytically and clearly

- Develop their rhetorical skills
- Come to see research as a means of discovering ideas, information, and evidence and learn to conduct library research
- Learn to properly acknowledge, cite, and document sources
- Learn to recognize various persuasive appeals in the arguments of others and to incorporate appropriate, reasoned appeals into their own arguments

Mathematics and Computer Science

A course fulfilling the mathematics core requirement develops the skills necessary for analytical and quantitative problem-solving in all subjects, using central concepts and methods from mathematics and computer science, including: number systems, symbolic representation, formal languages, mathematical modeling, and logical reasoning.

Communicating Arts

A communication course fulfilling the core requirement helps students develop essential interpersonal communication, group communication, and public speaking competencies through practice, analysis, and critical exploration of diverse human interactions.

Health and Human Performance

A health and human performance course fulfilling the core requirement will provide students with a knowledge base, creating a positive attitude and lifelong skills concerning the seven dimensions of wellness: physical, intellectual, emotional, spiritual, career, social and environmental (i.e. personal health)

Learning Goals for General Education Knowledge Categories - TOP

HUMANITIES

World Language, Culture and Philosophy

Includes courses in the humanities other than history and literature that encourage students to:

- make connections across all areas of knowledge, different modes of communication, and diverse cultural, linguistic, and conceptual traditions, and;
- develop empathy and understanding for other cultural, linguistic, and conceptual traditions.

History

Enables students to recognize that reasoned interpretations of the human past:

- must be consistent with verifiable historical evidence, and;
- are nonetheless contested as they are reshaped to serve the concerns of the present.

Empowers students to create personal meaning by developing their own reasoned interpretations of the human past.

Literature

Instills the joy of reading literature and stimulates the power of the imagination.

Promotes the analysis of various types of literary expression.

Explores different traditions and modes of telling stories.

SOCIAL SCIENCES

Enables students to examine human behavior or interaction using the methods and assumptions of social science research.

NATURAL AND PHYSICAL SCIENCE

Lab Course

Enables students to understand the nature of science and scientific inquiry through hands-on experiences.

Environmental Course

Enables students to understand our natural environment and the effects of human interactions on it.

FINE AND APPLIED ARTS

Fine Arts History, Criticism, and Appreciation

Helps students to analyze, evaluate, and relate artists, creative artifacts, and artistic productions of diverse cultures from ancient times to the present.

Aesthetic Experience

Gives students practical experience in developing their own creativity in one or more genres of expression, and augments appreciation for the diversity of creative communication.

UW-Whitewater

http://www.uww.edu/gened/goals

General Education enhances students' abilities to:

- 1. Think critically and analytically integrate and synthesize knowledge, and draw conclusions from complex material.
- 2. Make sound ethical and value judgments based on the development of a personal value system, on an understanding of shared culture heritage, and knowledge of past success, failures, and consequences of individual roles and societal choices.
- 3. Understand and appreciate the culture diversity of the U.S. and other countries, and live responsibly in an interdependent world.
- 4. Acquire a base of knowledge common to educated persons and the capacity to expand that base over their lifetime.
- 5. Communicate effectively in written, oral, and symbolic form
- 6. Understand the nature and physical world, the process by which scientific concepts are developed and modified.
- 7. Appreciate the fine and performing arts.
- 8. Develop the mathematical and quantitative skills necessary of calculation, analysis and problem solving.
- 9. Understand the principles essential for continual mental and physical well-being.

Growth Agenda for Wisconsin 2013-14 Award Winners - Institutional Change Grants

Institutional Change Grants				
Proposal Title	Abstract	University/Colleges/Extension	Total	
	Undergraduate Research			
UW-Superior Center for Undergraduate Research	The Center for Undergraduate Research will integrate undergraduate research as a high impact practice throughout the liberal arts curriculum increasing graduates, jobs, and regional partnerships, while providing the continuum of student centered services that connect the students' undergraduate research opportunities and research methods courses/workshops.	UW-Superior	\$266,900 over three years	
	Economic Development			
UW-Fox Valley Center for Device Design and Development (3DC)	The University of Wisconsin-Fox Valley Center for Device Design and Development (3DC) is a public-private initiative to advance device development in the Fox Valley region. With the cooperation of engineering faculty and students, multiple prototyping facilities including the Fox Valley Technical College Fab Lab and Fused Innovation (Neenah, WI), 3DC will facilitate device development, testing, and market entry, while creating new jobs and strengthening local communities.	UW-Fox Valley (partnering with UW-Platteville, UW-Extension, Fox Valley Technical College, WiSys Technology Foundation, Fused Innovation, & Global Precision Inc.)	\$289,522 over three years	
Establishing a Student Innovation and Entrepreneurship Program at UWM	The UW-Milwaukee Student Startup Challenge is an innovative approach to student entrepreneurship education that is helping build a culture of innovation at the University of Wisconsin-Milwaukee.	UW-Milwaukee	\$274,652 over three years	
	Retention			
UW Colleges Access to Success Part-Time Student Attainment, Retention, and Transfer (PART)	The PART project combines targeted outreach (intrusive advising), enhanced guidance and resources for academic counselors, and removal of structural barriers to course enrollment and completion to reduce the considerable success gap between full and part-time students enrolled at UW Colleges both in terms of first to second year retention and, ultimately, Associates of Arts and Sciences (AAS) degree completion or upward transfer by targeting students who enroll part-time, or who are thinking of enrolling part-time.	UW Colleges	\$398,722 over three years	
Radar on Retention	Radar on Retention is a focused initiative to increase retention and graduation success rates for multicultural/disadvantaged and STEM students at UW-River Falls.	UW-River Falls	\$162,580 over two years	
Parkside Academic Collegiate Engagement	The PACE program is designed to increase student retention and persistence to graduation of first year freshmen identified as needing remediation by building a connective and collaborative learning environment through front loading support, intrusive advising strategies, and technology driven engagement.	UW-Parkside	\$229,100 over three years	
	Community Partnership			
Development of a Multi-Institutional Institute for Urban Agriculture and Nutrition	The project is the development of the Institute for Urban Agriculture and Nutrition, a new collaborative entity (six academic institutions and three civic and community organizations) focused on a research, education, and outreach in urban food systems and associated public health issues, using a community engagement framework.	UW-Milwaukee (partnering with UW-Madison and UW-Extension)	\$426,796 over three years	
Total Institutional Change Grants			\$2,048,272 over three years	

Growth Agenda for Wisconsin 2013-14 Award Winners - Conference and Professional Development Grants

Conference and Professional Development Grants			
	Faculty Development		
Identifying, Recruiting, and Retaining Nurse Educators	The overall goal is to enable six UW System nursing programs to address the shortage of academic nurse educators by strengthening campus and Systemwide efforts to identify, recruit, and retain faculty.	UW-Eau Claire (partnering with UW-Green Bay, UW-Madison, UW- Milwaukee, UW-Oshkosh, & UW- Stevens Point)	\$15,690 in 2013-14
Implementing the <i>edTPA (Teacher Performance Assessment)</i> in UW System Educator Preparation Programs	A fall, two-day, professional development conference and a spring, one-day workshop for UW System educator preparation faculty and staff, and selected P-12 collaborators, to prepare for implementation of the state-mandated, summative assessment (edTPA) to be required of all teacher candidates graduating from WI educator preparation programs.	UW-River Falls (partnering with UW-Oshkosh, UW-Stout, & UW- LaCrosse)	\$131,410 over three years
Professional Development for Core English Skills Instructors: Using Research-Based Teaching Strategies to Improve the Retention and Academic Success of Underprepared College Readers and Writers	A two-year, statewide professional development project by the UW Colleges English Department, that will provide training in research-based teaching strategies to improve core skills instruction for significantly underprepared students.	UW Colleges	\$79,900 over three years
Total Conference and Professional Development Grants			\$227,000 over three years
Total 2013-14 Growth Agenda for Wisconsin Grant Awards \$2 Th			\$2,275,272 over Three years

Growth Agenda for Wisconsin 2012-13 Award Winners - Institutional Change Grants

Institutional Change Grants			
Proposal Title	Abstract	University/Colleges/Extension	
	Retention		
Using Data Analytics to improve	Data analytics will be used at three UW institutions to create an early	UW-Madison (partnering with UW	3 years
Retention: A Joint Proposal from UW-	warning system for students exhibiting at-risk academic behavior	Platteville & UW Colleges)	\$649,238
Madison, UW-Platteville and the UW	which will trigger early intervention mechanisms to improve academic		
Colleges	success and retention		
Promoting Student Success through	Increase success for all students through general education	UW-Oshkosh	3 years
Curricular Reform	curriculum reform resulting in increased student engagement and		\$418,400
	retention		
Creating a UW-Superior Center for Adult	Creation of a center to provide programming and mentoring for adult	UW-Superior	3 years
Nontraditional Students and Veterans	students and veterans, resulting in increased satisfaction and		\$298,482
	retention		
Firm Footing	Implement the Developmental Mathematics Enhancement Program	UW-LaCrosse	3 years
	for a cohort of incoming freshmen which will assist in the retention of		\$123,393
	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		
Expanding Pathways to Success	Develop and implement an enhanced advising and academic support	UW-Whitewater	2 years
	services model to underserved students at risk for academic failure		\$479,506

Economic Development			
Fab Lab - Leveraging Innovation to Grow	Seamlessly connect high quality academic programs, a digital	UW-Stout	2 years
People, Jobs, and Communities	fabrication laboratory and small and medium-sized enterprises to		\$523,579
	improve undergraduate retention rates and increase the number of		
	graduates primed to create and advance into innovative well-paying		
	jobs in Wisconsin communities		

Recruitment			
Educational Opportunity Network for	Develop a collaborative recruitment model for the Continuing	UW-Eau Claire (partnering with	2 years
Rural Access to College - UWEC Pilot	Education units and Admissions offices in 7 UW Campuses in rural	UW Colleges, UW-Stevens Point,	\$452,969
Project	Wisconsin	UW-Stout, & UW-Superior)	

STEM			
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)	1 year \$127,886
STEM Lab Initiative	A hands-on teaching experience for underrepresented Teacher Education students in STEM disciplines	UW-River Falls (partnering with area high schools)	3 years \$55,380
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	3 years \$425,040

Growth Agenda for Wisconsin 2012-13 Award Winners - Conference and Professional Development Grants

Conference and Professional Development Grants			
Proposal Title	Abstract	University/Colleges/Extension	
Diversity			
Recruiting & Retaining	Student development conference for diverse and underrepresented	UW-LaCrosse (partnering with UW	3 years
Underrepresented Future Teachers: A	high school students and undergraduate students interested in	Stout, UW-Platteville, UW-River	\$119,250
Student Development Conference	exploring teaching careers	Falls, and UW System	
Sharing Successes and Challenges in	Conference to bring together faculty and staff from across the UW	UW-Madison	1 year
Underrepresented Minority	System to share best practices and strategies for closing the		\$32,600
Achievement conference	achievement gap for underrepresented minorities		

Teacher Education			
Implementing the Teacher Performance	Professional development conference and follow-up regional	UW-River Falls (partnering with	1 year
Assessment in UWS Educator	workshops for educator preparation faculty and staff to prepare for	UW-Oshkosh, UW-Eau Claire, UW-	\$58,142
Preparation Programs	implementation of the recently state-mandated, summative assessment (Teacher Performance Assessment) to be required of all teacher candidates graduating from WI educator preparation programs	Stout, & UW-LaCrosse)	

Faculty Development			
Course Redesign in Developmental and	Two conferences on redesign of developmental and competency-level	UW Colleges (partnering with UW-	2 years
Competency-Level Mathematics	mathematics courses targeted toward UW System faculty, staff, and	Eau Claire, UW-Platteville, UW-	\$43,874
	administration	LaCrosse, UW-Parkside, &UW-	
		Superior	
Advancing Assessment of the UW	Annual conferences (2012-15) to provide an opportunity for student	UW-Superior (partnering with UW	3 years,
System Shared Learning Goals: A	learning assessment coordinators in UW institutions to share and	Eau Claire, UW-Parkside, & UW-	\$5,646
Conference for Student Learning	develop best practices of assessment of the UW System Shared	Stout)	
Assessment Leaders in UW Institutions	Learning Goals		

Undergraduate Research			
Institutionalizing Undergraduate	Statewide conference for the thirteen 4-year and select 2-year	UW-Eau Claire (partnering with 13	2 years
Research in the UW System	campuses who are aiming to institutionalize undergraduate research	UW four year and select two year	\$22,650
	at the local and system level.	campuses)	

Student Services			
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	1 year \$21,843
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	1 year, \$8,086

Community Partnerships			
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	1 year \$20,317
A New Business Model for UW-Stevens Point: UWSP Entrepreneurial Summit	Conference to increase entrepreneurism 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	1 year \$12,912