

Proposal for Authorization to Implement New Program

**Collaborative, Online Bachelor of Science Degree in Sustainable
Management**

**University of Wisconsin-Parkside
University of Wisconsin-River Falls
University of Wisconsin-Stout
University of Wisconsin-Superior**

With administrative and financial support from UW-Extension Division
of Continuing Education, Outreach and E-Learning

Introduction

The Bachelor of Science Degree Completion Program in Sustainable Management was first conceived in Fall 2007, and planning for it began in earnest in 2008. At that time it was already clear that the State of Wisconsin and the entire nation must pay significant attention to how we use natural and environmental resources and how our business practices impact human welfare. Escalating costs of energy, shrinking supplies of fresh water, and global climate change are only a few examples.

Market research conducted to evaluate the demand for this type of program supported our efforts. In 2007 only four undergraduate programs existed in the U.S. focusing on sustainability, all were at small liberal arts colleges, none were in Wisconsin, and none were online.

As faculty and administrators from the four partner campuses worked together to draft a curriculum, create processes for collaboration, and engage with industry to identify critical competencies, the need for this program continued to grow. Other institutions began to enter the marketplace with various programs designed to serve multiple audiences. Arizona State, for example, opened a School for Sustainability in winter 2007, and a number of universities have begun to build departments and programs in similar areas. What continues to distinguish the UW program from all others, however, is its focus on adult and nontraditional students, its online mode of delivery, and its multi-institutional, cross-disciplinary support. It is truly a unique model.

Today the need for this program is clear. The future of the country will be heavily dependent on its ability to compete in the Green Economy, and nearly all sectors will be impacted. What is also evident is that this is a very dynamic and rapidly evolving area so the program and its eventual graduates will have to be nimble, flexible, and highly multidisciplinary.

Flexibility and market-responsiveness have been built into the structure of the program to ensure that the program will be able to adjust with the changes in the broad field of sustainability, and to ensure that the program will remain relevant for its target audience: nontraditional and adult learners looking to complete bachelors' degrees. The academic focus of the program is to teach students to think in terms of systems: natural systems, social systems, and business systems, and to encourage them to focus on the intersections between systems. The interconnectedness of commerce, the environment, and communities is reflected by industry's growing concern for the triple bottom line (strong profitability, vibrant communities, healthy environment). Most industries now recognize that long-term viability requires attention to all three parts. Businesses were involved in the initial development of the curriculum, and they will continue to be involved and review the curriculum annually to comment on its ability to remain current and relevant.

1. Program Identification

Title of Program

Bachelor of Science Degree Completion Program in Sustainable Management

Department, College, School, or Functional Equivalent

This is a highly collaborative, interdisciplinary program. The departments and schools/colleges that will offer courses toward this program on each campus are as follows.

At UW-Parkside, the Sustainable Management program will be housed in the College of Arts and Sciences.

At UW-Stout, the Sustainable Management program will be housed in the College of Management.

At UW-River Falls, the interdisciplinary program will be housed in the College of Agriculture, Food and Environmental Sciences.

At UW-Superior, the Sustainable Management major will be housed within the Department of Business and Economics.

Timeline for Initiation

Pending approval by UW System and the Board of Regents in Spring 2009, the first classes for the degree will be offered in Fall 2009.

Delivery

This degree completion program (second 63 credits of a 123 credit bachelor's degree) will be delivered fully online. It is currently not offered in any other format on any UW campus.

The first 60 credits of the degree consist of general education classes and prerequisites, and those may be taken either online through the UW Colleges, UW-Stout, or UW-Superior, or they may be taken in face-to-face formats on all UW campuses, as well as at other institutions in Wisconsin and elsewhere.

2. Context

History of Program

There are very few undergraduate programs--and none at the top tier institutions--that focus specifically on developing effective, engaged, and informed leaders who understand *both* business systems and natural systems, and who are able to bring to industry relevant and applicable knowledge to enable businesses to be profitable *and* to contribute to global sustainability.

Four campuses in the University of Wisconsin System are taking a national leadership role in addressing this issue. UW-Parkside, UW-River Falls, UW-Stout, and UW-Superior seek approval to offer a *Sustainable Management Bachelor's Degree*. UW-Extension will provide administrative and financial support. This degree will focus on developing the competencies required to enable graduates to help businesses meet triple bottom line requirements: strong profitability, vibrant communities, healthy environment.

This Sustainable Management Bachelor's Degree will focus primarily on adult and nontraditional students, helping to ensure that they are well versed in business and science. Particular attention will be paid to teaching students about *systems* and how various systems interact so that students gain a comprehensive understanding of the ways in which natural processes, business structures, and social needs intersect. This knowledge will make UW

graduates especially qualified to help Wisconsin businesses enhance their competitive advantage while preserving natural resources, protecting the environment, and strengthening communities.

A number of businesses in Wisconsin and in the nation have been consulted about the competencies that graduates should have to be particularly valuable employees. They expressed strong support for this program, and the information they provided has been used in developing the curriculum.

The institutions that came together to develop this degree--UW-Parkside, UW-River Falls, UW-Stout, UW-Superior, and Extension--quickly formed a very positive and amicable working relationship. Extension provided market research, program coordination and leadership, corporate engagement, and connectivity to UW System, while the campuses focused on the academic content, quality, and integrity of the program, as well as the student registration, financial aid, and other support services.

The specific process for the development of this degree went as follows.

Extension conducted market research to determine the viability of an undergraduate, online degree in Sustainable Management. That information was shared with all UW campuses. In addition, Extension developed a budget model for a self-supporting program. In the start-up phase, Extension assumes the financial risk in developing the degree, relieving the campuses of this burden. In addition, Extension provides resources to each partner campus to buy-out faculty time for a one-fourth time academic director, faculty time to develop courses, and faculty time to teach courses. Campuses administer those funds as they deem fit. Once the degree is self-supporting and net revenue generating, two-thirds of net revenues revert to the partner campuses, and one-third remains in Extension for further program development.

Initially, Eau Claire, UW-Parkside, UW-River Falls, UW-Stout, and UW-Superior self-selected to participate in this degree. During June and July, 2008, faculty representatives from all five campuses convened in 3 two-day retreats to develop the curriculum. Business representatives were invited to the first retreat to share their views on the competencies that this type of degree should build, and several nontraditional students were consulted for their input into the structure of a degree that is favorable to nontraditional audiences. Once the competencies were identified, the faculty representatives constructed the curriculum to meet the needs of nontraditional students.

At the beginning of the Fall 2008 semester, the draft curriculum was shared with faculty governance groups on the participating campuses, and additional retreats were scheduled for the student and registration services representatives from each campus. During this time partner campuses had multiple opportunities to evaluate the collaborative process and to reaffirm their commitment to the partnership. Feeling particularly burdened by a number of administrative challenges--including a move to PeopleSoft--Eau Claire chose to withdraw from this degree, requesting to participate in future degrees as appropriate. The remaining partner institutions (UW-Parkside, UW-River Falls, UW-Stout, and UW-Superior) distributed the curricular offerings among themselves and proceeded to draft the Request for Entitlement to Plan document. Extension continued to provide leadership and support for all partner campuses.

Just after the New Year in 2009, a retreat for the faculty developing courses and teaching in the program was held. At this time faculty discussed the curriculum and their specific courses to minimize redundancy and increase a collective understanding of the degree, prospective student audiences, and teaching online. Extension staff conducted several demonstration and training sessions focusing on online course development, online pedagogy, and providing strong student support to online students. Another faculty retreat is scheduled for May 2009, and if this degree is approved, program faculty and administrators will meet semi-annually to evaluate the progress of the program and to adjust it to changing needs and circumstances.

The partner institutions have already expressed interest in developing more collaborative degrees, and future degrees will be explored including degrees in healthcare, global information systems, and STEM for educators. All other campuses in the UW will be invited to participate. Campuses will self-select as to which degrees they choose to develop.

Relation to Institutional and System Mission

The Sustainable Management Bachelor's Degree will contribute directly to the institutional mission of the University of Wisconsin System by supporting the UW Growth Agenda. The three components of the Growth Agenda are to increase the number of degree holders in Wisconsin, increase the number of high paying jobs, and build stronger communities. The Sustainable Management degree will contribute to all three components of the Growth Agenda by providing a degree that is in demand, supported by Wisconsin businesses, and develops competencies that enable graduates to help Wisconsin employers meet the triple bottom line (strong profitability, healthy environment, and vital communities). More specifically, the Sustainable Management Bachelor's Degree will support UW System efforts to create more flexible and affordable pathways for older, non-traditional students, as well as new venues specifically designed for working adults. In other words, it is a degree targeted at adult and nontraditional students and thus broadens access to the university.

The Sustainable Management Bachelor's Degree will support the institutional missions of the four partner campuses by contributing to the core of liberal education by developing communication, critical thinking, problem-solving and analytical skills, leadership, teamwork, and collaboration skills. Furthermore, this is a multidisciplinary degree that will help build bridges among disciplines and develop students' abilities to think in terms of systems and interrelationships.

At UW-Parkside the Sustainable Management Bachelor's Degree will align well with its mission to build high-quality educational programs, creative and scholarly activities, and services responsive to its diverse student population. This degree will support its local, national and global communities mission, and it strengthen its goals to utilize technology creatively and effectively in courses, programs, and services. For UW-Stout as a comprehensive polytechnic university, programs are presented through an approach to learning that involves combining theory, practice and experimentation--all tenets of the Sustainable Management Bachelor's Degree, and all in alignment with UW-Stout's mission. Modeling sustainability principles is Goal 2 of "Living the Promise," the strategic plan for UW-River Falls adopted in 2007-08. The second initiative under that goal states that the university will "promote sustainability across all

dimensions of the campus and beyond” including incorporating sustainability into the curriculum. Hence, the Sustainable Management Bachelors Degree will fit very well into the Campus strategic plan. The mission of UW-Superior is to foster intellectual growth and career preparation within a liberal arts tradition that emphasizes individual attention and embodies respect for diverse cultures and multiple voices. As a part of its mission, UW-Superior has been meeting the needs of adult students through distance education for the past 30 years. Additionally, the Chancellor signed the American College and University Presidents Climated Commitment, which includes a commitment to incorporate sustainability into the curriculum. Students who master the liberal arts competencies embedded within the Sustainable Management Bachelor’s Degree will be fulfilling the UW-Superior mission by becoming positioned to help businesses meet the triple bottom line (strong profits, healthy environment, and vital communities) in a dynamic and rapidly evolving global economy.

3. Program Description

This program will be a 63-credit, online bachelor’s degree completion program in Sustainable Management. This degree is intended primarily for adult and nontraditional students.

To be eligible for admission to this program, students will have to have an Associate’s Degree from an accredited institution or 60 credits or the equivalent. More specifically, students will have to have taken UW Colleges courses in the following categories (or their equivalents) and passed with a grade of C or better.

Note: Admissions decisions are made by the home institution to which students apply. Students entering the degree program with an Associate’s Degree from UW Colleges are likely to have met most of the prerequisites. However, students will have to work with their home institution to clarify their institution’s degree requirements.

Core Requirements

- Writing: ENG 102
- Mathematics: MAT 110

Breadth Categories

Fine Arts and Humanities

A student must earn a minimum of nine credits in these categories with at least one course designated as Fine Arts and at least one course designated as Humanities. Courses that fulfill the UW Colleges degree designations of Fine Arts and Humanities are typically in the disciplines of Art, Communication and Theatre Arts, English, French, German, History, Music, Philosophy, Religious Studies and Spanish.

Mathematical and Natural Sciences

A student must earn a minimum of twelve credits in this category. In particular, students must take UW Colleges Chemistry 125 Introductory Chemistry or equivalent, Math 110 College Algebra or equivalent, Math 117 Elementary Statistics or equivalent, and Biology 109 Concepts of Biology or equivalent.

Social Sciences

A student must earn a minimum of nine credits from at least two disciplines in the Social Sciences. Social Science disciplines include: Anthropology, Economics, History, Political Science, Psychology and Sociology.

Application and Performance

A student must earn a minimum of three credits in courses designated as Application and Performance. These courses are generally found in the disciplines of Art, Business, Chinese, Communication and Theatre Arts, Computer Science, Education, Engineering, English, French, German, Music, Physical Education and Spanish. In particular, students must take UW Colleges Communication 103 Introduction to Public Speaking or equivalent.

Ethnic Studies

A student must earn a minimum of three credits in courses designated as Ethnic Studies. Ethnic Studies courses may also be counted toward another breadth category. For UW Colleges, these courses carry an ES degree designation in the UW Colleges course catalog; they are found throughout the curriculum and may vary on different UW Colleges campuses. Ethnic Studies courses can be found in the campus course schedule with an ES degree designation.

Interdisciplinary Studies

A student must earn a minimum of three credits in courses designated as Interdisciplinary Studies. For UW Colleges, Interdisciplinary Studies courses may also be counted toward another breadth category. Most Interdisciplinary Studies courses are campus specific and can be found in the UW Colleges campus course schedule with an IS degree designation.

Electives

A student who has met the core requirements and the other breadth category minimums may complete the 60 credit minimum requirement with courses in this category or any other breadth category. *Note: there are elective opportunities only for the first 60 credits toward the Sustainable Management degree. The remaining 63 credits toward the degree are required and there are no elective options.*

Students wishing to complete the entire curriculum online may do so by entering through UW Colleges Online and then finishing this degree online through any one of the four partner institutions.

Home Institution Model

Once students have satisfied the admission requirements above, they will then be eligible to apply to one of the four partner institutions to serve as their home institution. Once admitted, they will receive financial aid, degree requirement counseling, and other services from their home institution.

Due to the collaborative nature of this degree, all four partner campuses will contribute courses, program oversight, and direction to the program. Students working toward this degree will take classes from all four partner campuses, and all four partner campuses will accept all 21 courses as their own. In other words, each partner campus will contribute 5-6 classes toward the degree, but all four partners will accept all 21 courses toward the degree.

To graduate from one of the partner campuses, students in the Sustainable Management program will have to satisfy all degree requirements for their home institutions. Those degree requirements may be found in Appendixes C-1,2,3,4.

Time to Degree

Since the primary student audience for the program is the adult and nontraditional audience, it is expected that most students will have significant commitments in addition to their education, such as work, and family responsibilities. Consequently, most students will probably enroll part-time, taking two to three classes per term on average. Students will also be likely to enroll in one or two classes each summer. Put differently, it is likely that students will complete about 7 courses per year, and because they will enter the degree having already completed 60 credits, they should fulfill program requirements in approximately three years.

This program is not cohort-based. Students may enter the program at the beginning of any term, and they may take courses in whatever sequence they wish, as long as they meet the internal prerequisites listed in the course descriptions. The one exception to this is the capstone course. It should be taken toward the end of the program.

Internships

Students will be encouraged to participate in internships that provide opportunities for them to apply what they learn in a work or field setting. Several of the businesses that contributed to the list of areas of competence have paid internship opportunities for students and noted that students in this program will be ideal candidates for their internships. In some cases, successful completion of internships leads to guaranteed full-time employment.

More specifically, internship opportunities will include work in the energy sector (including energy production and energy conservation), water management, municipal management, environmental management, conservation, land use, natural resource management, and an array of business-related areas.

CEOEL is working to establish a Sustainable Management Advisory Board consisting of employers in Wisconsin. One of the responsibilities of the Advisory Board will be to identify internship opportunities for students and to facilitate student engagement in highly applied settings. The Advisory Board will also provide input about the degree and its efficacy to the Academic Directors for their annual program review meeting.

Capstone Course

The purpose of the Capstone Course is to serve as an opportunity for students to transfer the knowledge they gained through the program to industry-based or community-based projects. Students will focus on the implementation of a triple bottom line solution to industrial and/or municipal problems, and they will be required to write a term paper showing how they applied their knowledge to solve an actual problem. The program advisor/coach in CEOEL will work closely with program faculty and the four academic directors to identify meaningful capstone opportunities for students.

Learning Outcomes and Overview of Curriculum

Before drafting the curriculum for this program, corporations with histories of being interested in sustainability and triple bottom line criteria were consulted. The following companies provided input into the areas of competence that students should have after graduating from a degree in Sustainable Management.

- 3M
- Eastman Kodak
- Ford Motors
- Quad Graphics
- FedEx
- Johnson Controls
- SC Johnson
- Kohl's
- U-Fuel
- Veolia Environmental Services
- Modine Manufacturing
- Kranz, Inc.
- ISO, Inc.

In addition, the Wisconsin Department of Natural Resources and the Racine Area Manufacturers and Commerce have provided input.

As a result of the engagement with these companies, a list of areas of competence was drafted. Faculty representatives from each of the four partner campuses had opportunities to engage with the companies to refine the list. Acquisition of these areas of competency by students is the intended learning outcome of this program. The areas of competency are as follows.

Technical areas of competence

- Carbon trading, carbon credits, how the economy is expected to react to this new currency, and how corporations can be part of the process
- Climate change, global warming, and the science, policy, and economic implications of global warming. Although CO₂ is a prime focus now, it is important to understand that water and other issues are going to be even more important in the future.
- Water policy and water science: application and reduction of water use, efficiencies of water use, dry-base processing, water policy, water law, focusing on innovation rather than regulation. Looking at how a company uses water as a competitive advantage
- Logistics and transportation of raw materials, just-in-time logistics, rail, shipping, etc.
- Supply chain structures, functions, and opportunities to brand
- Energy generation, the mechanics of energy generation, energy infrastructure, energy management, energy policy, and purchasing energy

- Marketing, communications, and public affairs vis-à-vis the human impacts of manufacturing

General areas of competence

- Understanding world geography, cultural literacy, world religions, etc.
- The ability to apply cultural understanding to real-life business issues
- Knowing how to navigate political landscapes at various levels (local, state, national, international)
- Geopolitical dynamics
- Global gender issues
- The ability to identify potential, innovative, and symbiotic relationships, such as partnerships between energy producers and manufacturers

During the curriculum drafting process, adult and nontraditional students were consulted and asked about their preferences for course and curriculum formats. They expressed strong preference for having courses offered online in both traditional, semester-length formats and in accelerated formats. Students also expressed strong preference for a streamlined list of courses with few or no electives so that there is no ambiguity about which courses students should take, and which courses are required for graduation. Students also asked to minimize repetition or redundancy in the curriculum. In response to students' requests, as the partner campus faculty representatives drafted the curriculum, they limited the number of courses to 21. In most cases, students will be required to take all 21 courses to graduate once they have completed an associate's degree or the first 60 credits of coursework, including prerequisites. It will be possible for students to transfer in courses if they can demonstrate that their knowledge is equivalent to the courses in the curriculum. For example, students who have taken traditional accounting classes will not be able to transfer in those credits in lieu of the Triple Bottom Line Accounting for Manager Course. However, there may be individuals who work as accountants for firms that focus specifically on triple bottom line accounting. In those cases, students will be able to petition the Academic Directors to use their prior knowledge to place out of some of the courses in the degree program.

There are no electives in the Sustainable Management program, and the areas of competence that drive the curriculum are incorporated into the courses so that students experience a holistic program focused on a systems approach to sustainability.

Because this is a collaborative degree and there are four partner campuses, each campus will teach five or six courses in the degree. As the faculty representatives developed the curriculum, they made initial course assignments by campus based on campus curricular and faculty strengths. The curriculum is as follows.

Curriculum

The curriculum consists of the following 21 courses. These courses have significant sustainability components and are not duplicative of other online courses in the UW System.

The sustainable management courses will have some overlap with existing business courses but only in regards to basic content or knowledge. Once students gain the basic knowledge of the course content, this content will be comprehended, applied, analyzed, synthesized, and evaluated using sustainable examples and issues. In this manner, the critical thinking requested of students will pertain to sustainable management and not replicate courses already offered online.

PROGRAM COURSE LIST

	<u>CAMPUS</u>
SMGT 115 Environmental Science and Sustainability	UW-River Falls
SMGT 230 Triple Bottom Line Accounting for Managers	UW-Superior
SMGT 235 Economics in Society and Sustainability	UW-Superior
SMGT 240 Technical Writing for Sustainable Management	UW-Parkside
SMGT 310 Ecology for Sustainable Management	UW-Stout
SMGT 315 Global Environmental Chemistry	UW-Superior
SMGT 320 Energy for Sustainable Management	UW-River Falls
SMGT 325 Natural Resource Management	UW-Parkside
SMGT 330 Marketing for a Sustainable World	UW-Stout
SMGT 331 Sustainable Organizational Finance	UW-River Falls
SMGT 332 Economics of Environmental Sustainability	UW-Parkside
SMGT 335 Management & Environmental Information Systems	UW-Parkside
SMGT 340 Organizational Behavior and Sustainability	UW-Stout
SMGT 350 Operations Management and Sustainability	UW-Parkside
SMGT 360 Environmental and Sustainability Policy	UW-River Falls
SMGT 370 Logistics, Supply Chain Management, and Sustainability	UW-Superior
SMGT 430 International Management for a Sustainable World	UW-Stout
SMGT 435 International Development and Sustainability	UW-Superior
SMGT 440 Systems Thinking	UW-River Falls
SMGT 460 Environment and Society	UW-Parkside
SMGT 495 Sustainable Management Capstone	UW-Stout

Students will be allowed to take the above courses in whatever order works for them, as long as they meet the internal course prerequisites specified in the course descriptions below.

It should be noted that considerable attention was paid to the Association to Advance Collegiate Schools of Business (AACSB) accreditation. The curriculum was designed so as not to create accreditation complexities for campuses that are AACSB accredited. By its very nature, this is an interdisciplinary degree and so does not fit the AACSB model. AACSB has agreed to give an exclusion to this program. UW Parkside and UW River Falls have requested an exclusion from AACSB for this program. UW Parkside has been granted the exclusion; UW River Falls' request is pending. The partner campuses that have AACSB accredited colleges of business will offer the program through their College of Arts and Sciences or, in the case of UW-River Falls, through the College of Agriculture, Food, and Environmental Sciences. Those campuses that are not bound by AACSB accreditation criteria will offer the program through their business programs.

Descriptions for the courses in the Bachelor of Science degree completion program in Sustainable Management are as follows.

SMGT 115: Environmental Science and Sustainability – UW-River Falls

This course presents an overview of the interrelationships between humans and the environment. The material presented in the first one-third of the course focuses on important ecological concepts. The remainder of the course deals with human influence on the environment and sustainable practices to avoid or ameliorate the negative impacts. The ecological concepts are used throughout to identify, understand, and provide a basis for proposing possible solutions to contemporary environmental problems. Overall, this course will provide the student with a better understanding of how humans can more positively affect the environment in which they live.

SMGT 230: Triple Bottom Line Accounting for Managers – UW-Superior

Students will be introduced to the discipline of financial and managerial accounting and learn how this information is used. Students will gain a basic knowledge of the preparation of financial statements and their analytical use. Further, students will explore how this accounting information is applied by managers in the decision-making process helping organizations meet the triple bottom line (strong profits, healthy environment, and vital communities).

Prerequisite: College Algebra, UW Colleges MAT 110, or equivalent.

SMGT 235: Economics in Society and Sustainability – UW-Superior

General introductory course highlighting economic, social, and environmental issues facing society. In addition to covering traditional issues such as markets and prices (microeconomics), government economic management (macroeconomics), and international trade, it also introduces economic content into the analysis of selected topics such as poverty and discrimination, the environment, and the provision of government services. Critiques of conventional economic thought, within the context of systems thinking and ecological economics, are integrated throughout the course.

Prerequisite: College Algebra, UW Colleges MAT 110, or equivalent.

SMGT 240: Technical Writing for Sustainable Management – UW-Parkside

The psychology and mechanics of written communications are thoroughly explored and widely applied. Also included are non-written applications in such business areas as international/intercultural, nonverbal, and ethical communications related to sustainability.

SMGT 310: Ecology for Sustainable Management – UW-Stout

Interrelationships of organisms with each other and their environments. Investigation into composition and dynamics of populations, communities, ecosystems, landscapes, and the biosphere with emphasis on sustainability.

Prerequisites: Introductory Biology, UW Colleges BIO 109, or equivalent.

SMGT 315: Global Environmental Chemistry – UW-Superior

An exploration of chemical environments as interdependent thermodynamic and kinetic systems. The “system/surroundings” perspectives of thermodynamics will be applied to systems of

progressively larger size in order to arrive at the comprehensive view of the global environmental system.

Prerequisite: General Chemistry, UW Colleges CHE 125, or equivalent.

SMGT 320: Energy for Sustainable Management – UW-River Falls

Students will learn to apply basic engineering principles to existing and emerging energy technologies to provide a better understanding of energy production, consumption, and environmental impact; and how these principles relate to sustainable management. Topics cover a wide range of energy systems including nuclear, fossil fuels, wind, solar, biofuels and biomass. Prerequisite: Introductory Chemistry or Equivalent.

SMGT 325: Natural Resource Management – UW-Parkside

Examines the interdependence between natural resources associated with land, air, and water. Explores significant environmental issues regarding the policies and problems in the use and management of natural resources related to soils, vegetation, landscape within the context of social needs and sustainability.

SMGT 330: Marketing for a Sustainable World – UW-Stout

An analysis of an organization's opportunities to develop sustainability practices as they relate to the development of product, pricing, supply and distribution channels (retail, wholesale), promotion (advertising, sales promotion, public relations) and target markets.

Prerequisite: SMGT 235 Economics in Society and Sustainability.

SMGT 331: Sustainable Organizational Finance – UW-River Falls

An introduction to the theory and methods of sustainable organizational finance. Topics include financial statements; discounting and budgeting; uncertainty and risk/reward trade-offs; and assessing the financial implications of the triple bottom line (e.g. climate change, carbon trading, human resource management, and creating environmentally-conscious shareholder value).

Prerequisites: Introductory Statistics or Equivalent, UW Colleges MAT 117, or equivalent; SMGT 230 Triple Bottom Line Accounting for Managers; SMGT 235 (Economics in Society and Sustainability).

SMGT 332: Economics of Environmental Sustainability – UW-Parkside

Examines the interaction between market activity and the environment, applies economic analysis to the efficient and sustainable management of environmental goods and resources, and examines how economic institutions and policies can be changed to bring the environmental impacts of economic decision-making more into balance with human desires and the needs of the ecosystem.

Prerequisite: SMGT 235 Economics in Society and Sustainability.

SMGT 335: Management and Environmental Information Systems – UW-Parkside

Use of the computer as a problem-solving tool, as part of data processing systems; information systems and decision support tools for managers; information systems planning and development; overview of computer hardware, software, database management, networking and web technologies; green data centers; energy efficient trends in information technology; data and information usage in green businesses.

Prerequisite: Statistics, UW College MAT 117, or equivalent; SMGT 230 Tripple Bottom Line Accounting for Managers.

SMGT 340: Organizational Behavior and Sustainability – UW-Stout

Management principles and theories underlying human behavior in organizations are investigated. Topics include personality, motivation, communication, decision-making, leadership, teamwork, ethics, power, diversity, and work stress. Constraints and opportunities of an “eco” friendly organization are realized.

Prerequisite: Speech/Introduction to Communications, UW Colleges COM 103, or equivalent.

SMGT 350: Operations Management and Sustainability – UW-Parkside

Introduction to the role of the operations function in a sustainable organization. The course will outline how green enterprises address linear programming; continuous and intermittent production processes; aggregate planning; inventory control; materials management; scheduling; project management; quality assurance; and operations.

Prerequisites: College Algebra, UW College MAT 110, or equivalent; Statistics, UW College MAT 117, or equivalent.

SMGT 360: Environmental and Sustainability Policy – UW-River Falls

Topics include the spectrum of historical, theoretical and technical issues applicable to sustainable management of natural resources, environmental quality standards and risk management. Administrative structures that form the basis for selecting appropriate responses to complex management problems faced by industry, government and non-governmental agencies are identified. The historical development and current framework of public policy are investigated and specific foundational legislation is critiqued.

Prerequisite: SMGT 115 Environmental Science and Sustainability.

SMGT 370: Logistics, Supply Chain Management, and Sustainability – UW-Superior

This course provides an introduction to the concepts, functions, processes, and objectives of logistics and supply chain management activities. It covers those activities that are involved in physically moving raw materials, inventory, and finished goods from point of origin to point of use or consumption. It covers the planning, organizing, and controlling of such activities, and examines the role of supply chain processes in creating sustainable competitive advantage with respect to quality, flexibility, lead-time, and cost. Topics include customer service, inventory management, transportation, warehousing, supply chain management, reverse logistics, green supply chains and international logistics.

Prerequisite: SMGT 350 (Operations Management and Sustainability).

SMGT 430: International Management for a Sustainable World – UW-Stout

Analysis of the theory and practice of managing international organizations including socio-cultural aspects and group dynamics of international business and service organizations through the study of sustainable management practices. Implementation of a triple bottom line solution to organizational problems will be emphasized.

Prerequisite: SMGT 235 Economics in Society and Sustainability

SMGT 435 International Development and Sustainability – UW-Superior

Historical roots of the idea of development, economic theories of growth and their implications for sustainability, and interrelationships between population growth, food security, poverty, inequality, urbanization, technological change, international trade and environmental change at local, regional and global scales. Contemporary issues and alternatives.

Prerequisite: SMGT 235 Economics in Society and Sustainability

SMGT 440: Systems Thinking – UW-River Falls

In this course students will use systems thinking to apply the concept of sustainability in various business, social, and scientific contexts. Rather than looking at a problem by analyzing their component parts, students will learn to analyze whole systems. Students will then model the relationships and behaviors to identify leverage points for change.

Prerequisite: Senior standing and SMGT 115 Environmental Science and Sustainability, SMGT 235 Economics in Society and Sustainability, and SMGT 310 Ecology for Sustainable Management.

SMGT 460: Environment and Society – UW-Parkside

Introduce the fundamentals of human-environmental interaction; a grasp of how these interactions create problems; and how the elements of social, technological, and personal choices combine to overcome them.

Prerequisite: SMGT 115 Environmental Science and Sustainability.

SMGT 495: Sustainable Management Capstone – UW-Stout

An application and study of sustainable management through the solution of an industry-based project. Implementation of a triple bottom line solution to industrial problems will be emphasized.

Prerequisite: Senior Standing, Instructor Consent.

As noted above, every student will have to take every course. There will be no electives. Because these courses are designed specifically for this degree, are online, and include a focus on sustainability, these courses do not duplicate courses already available at the partner campuses.

Students will be eligible for admission to this degree if they have completed at least 60 credits of coursework and five prerequisites. The prerequisites are as follows. UW Campus equivalents or other college/university equivalents may be substituted.

UW Colleges MAT 110: College Algebra

UW Colleges MAT 117: Statistics

UW Colleges CHE 125: General Chemistry

UW Colleges BIO 109: Introductory Biology

UW Colleges COM 103: Introductory Communications

Interrelationship with Other Curricula

As an interdisciplinary, collaborative degree, this program is able to engage faculty experts from each partner campus. Although the courses developed for this degree by campus faculty are unique to this degree, they dovetail very well into the general curriculum of each campus and

highlight the academic strengths of each partner. This is evidenced by the diversity of departments at each campus that support this degree. (See Section 1.)

At UW-River Falls, the proposed Sustainable Management major will complement existing programs in Agricultural Economics, Business, Environmental Science, Conservation, and Geology, as well as the institution's new focus on sustainability. In the UW-System no equivalent programs currently exist. UW-Stout offers a minor in Sustainable Design and Development, and several of the other campuses offer a few courses with "sustainable" in the title. A number of UW four-year institutions have sustainability efforts focused on greening their campuses, with projects including energy efficiency, green building, and recycling; some campuses, including UW-River Falls and UW Colleges, incorporate sustainability into their curricula through specific courses (for e.g. environmental science, conservation, biological and earth sciences), but none have a complete program that addresses a complementary set of sustainable management issues.

Although this is a unique and new degree, it complements the broad array of degrees offered across the UW System by creating a new point of entry for adult and nontraditional students, by building upon the associate's degree offered by the UW Colleges and other campuses, and by engaging faculty who have expertise in related areas on all of the partner campuses. In addition, the proposed sustainable management degree will serve as an excellent starting point for students who go onto master's degrees in business, public policy, environmental science, and related fields.

Accreditation Requirements

There are currently no special accreditation requirements for this degree. Given the rapidly evolving green economy and quickly emerging fields within it, special accreditations might arise in the future. If so, they are likely to be discipline-based--for example carbon credits falling under federal trading regulations or accounting standards--but this issue will be monitored carefully, and specific accreditation will be sought if and when appropriate.

Diversity

Like other efforts at all of the partner campuses, this program will strive to achieve inclusive excellence by enrolling, retaining, and graduating sufficient numbers of student from underrepresented populations; engaging faculty from underrepresented populations; implementing strategies to promote and support integration efforts; implementing multidimensional approaches to teaching and learning; and leveraging resources so that the program is able to respond to students' evolving and growing needs.

This degree will target primarily nontraditional student populations. Many students of color, first-generation Americans, first-generation college students, and low-income students are--often by necessity--nontraditional students because they have family or work responsibilities that prevent them from attending school in traditional formats. Hence, from its inception, this degree is designed to attract underserved populations. In addition, however, recruitment and marketing efforts for this degree will focus on under-represented populations. For instance, a lead generation site through Monster.com focuses on audiences with interests in green jobs and corresponding educational opportunities. Through work with Monster.com., CEOEL will

leverage advertising space on multiple partner sites in the “Diversity & Inclusion Network:” BlackPlanet.com, AsianAvenue.com, MiGente.com, and others. CEOEL will also advertise this program in minority-focused newspapers, periodicals, and websites.

While the proposed major does not project a significant number of new faculty and staff, the partner campuses will continue to be committed to recruiting a culturally diverse campus community. Currently, there is near equity in the gender distribution of faculty, and faculty of color will be encouraged to participate in this program.

At the UW-Parkside, for instance, the student population consists of over 20% students of color; over 60% of the students are first generation (African Americans and Latinos are proportionally overrepresented among first-generation college students), and over 25% are over the age of 25. As an adult-student oriented program, the Sustainable Management program will continue to seek out underrepresented students to engage in this degree.

Southeast Wisconsin has the most diverse population in the state, and UW-Parkside is committed to providing underrepresented groups with the opportunity for a quality education. For different reasons but in similar ways, the northern sections of Wisconsin have been historically underserved, but through outreach from UW-Superior, UW-River Falls, and UW-Stout, a plurality of students will be accommodated through this degree. Put differently, a major goal of the Sustainable Management Bachelor’s Degree is to attract and retain the culturally and economically diverse array of students currently reflected throughout the University.

CEOEL has several initiatives currently underway to attract more students of color into the UW System. Through UW HELP, brochures focusing on Hispanic and Hmong students are sent to those target groups. CEOEL also employs a field recruiter who works with employers to encourage employers to support the education of their employees, especially focusing on underrepresented minorities. CEOEL is also maintaining ethnic information from COBE data that will allow CEOEL to market specifically to ethnic audiences. And the Sustainable Management Advisory Board now being formed will work closely with employers to encourage employers to support their employees (many of who are individuals of color) to return to school.

The Sustainable Management Advisory Board will also support the diversity efforts of this program by having as some of its members representatives from minority-owned businesses whose input will be sought to ensure that this program reaches out to students of color and other under-represented groups.

Through these efforts adult and nontraditional students of color and underrepresented student populations will be informed and encouraged to enroll in the Sustainable Management program.

Ensuring that diverse student populations enter the Sustainable Management program is important, but equally important is providing the support services that students need to feel comfortable and able to succeed. The CEOEL student advisor/coach will work closely with students to identify barriers to their success to either help them overcome those barriers directly or to point them to campus and other resources that will be of assistance to them. CEOEL will maintain online student communities that will allow individuals from diverse ethnic background

to connect with other students over both cultural similarities and over programmatic interests to help build points of commonality and understanding. Simply put, an essential goal of this program is to increase both the access for diverse audiences to this degree and the success of those students once they enter the program. To ensure that this goal is met, one of the areas of assessment focuses on diversity. (See Assessment section, pp. 29-30.)

In addition to the above, the curriculum includes an international dimension that stresses the importance of understanding cultural and ethnic differences, social justice, and cultural inclusivity so that students gain an understanding of the multicultural dimensions of sustainability and the ways in which the triple bottom line is interpreted differently by different cultures. For example, SMGT 435 International Development and Sustainability focuses on the historical roots of the idea of development, economic theories of growth and their implications for sustainability, and interrelationships between population growth, food security, poverty, inequality, urbanization, technological change, international trade and environmental change at local, regional and global scales. Similarly, In SMGT 230 Triple Bottom Line Accounting for Managers, the international concept will be addressed by looking at international companies that currently implement some of the measures regarding the sustainable issues at hand (more prevalent internationally than locally). From these, students will apply the concepts to the companies with which they are involved (employed or associated in some manner). Other courses that incorporate elements of social justice, inclusivity, and multicultural perspectives include SMGT 235 Economics in Society and Sustainability, SMGT 325 Natural Resource Management, SMGT 332 Economics and Environmental Sustainability, and SMGT 360 Environmental and Sustainability Policy.

Collaboration

By design, the Sustainable Management Bachelor of Science Degree will be a highly collaborative degree. For students who do not have an associate's degree or the requisite foundational 60 credits, UW Colleges will provide online classes for students to complete those requirements. UW Colleges has worked with UW-Parkside, UW-River Falls, UW-Stout, and UW-Superior to identify prerequisites for the first 60 credits that students will have to have prior to being admitted to the Sustainable Management degree, and UW Colleges will offer all prerequisites online. The four comprehensive partner campuses will jointly develop, approve, and offer the Sustainable Management curriculum. Each campus will offer 5-6 courses in the fall and spring once the degree is fully operational, and all four campuses will share equally in the academic oversight of the degree. Extension will provide administrative support, financial investment, fiscal management, and student services for all partner campuses. Although students will choose a home institution from which to receive the degree, all four partner campuses will approve all 21 courses in the degree so that from a student's perspective moving from one course to another will be as seamless as if all courses were offered by one institution. All partners will share equally in net revenues relative to the number of courses they offer in the program.

Outreach

The entire Sustainable Management Bachelor's Degree is an outreach effort by the four UW campuses and UW-Extension. The program is designed to maximize access by being delivered

online; robust student services help ensure that nontraditional students receive the support they need to succeed in the program; and the business sector has been and will continue to be engaged in helping to shape the curriculum and its continued evolution.

Wisconsin businesses have been engaged to develop internship opportunities for students in the Sustainable Management Bachelor's Degree. In addition, those businesses are involved in helping to create direct school-to-work paths so that students who enroll in the program have opportunities for internships and eventually for full-time employment. Furthermore, businesses have been encouraged to create scholarships for their employees who choose to enroll in this program and to contribute to an adult student scholarship pool.

Delivery Method

The entire Sustainable Management Bachelor's Degree will be offered online. Since this program consists of the second 63 credits of a 123 credit bachelor's degree, students may complete the first 60 credits of general education in face-to-face, blended, or online formats through UW campuses.

4. Need

The Green Economy is the newly emerging, global, economic epoch. Although job forecasts are still in the early stages, the following information suggests that the need for individuals with the kinds of competencies that the Sustainable Management degree is designed to instill in students is becoming significant and will grow a great deal over the next 5-10 years.

Although the employment opportunities below are not identified specifically as *environmental management* positions, graduates of the Sustainable Management program will be likely to find employment in these areas, as well as in a number of others. It is important to note that the Sustainable Management program will target an emerging market for which very little data exists.

Bureau of Labor Statistics data estimates a 28% increase in environmental science and protection technicians. Wisconsin occupational projections are similar. Environmental engineering positions are expected to increase 16.1% by 2016; Environmental Engineering technician positions are expected to increase by 12.5%; environmental scientist and specialist jobs are expected to increase 15.3%; geologists, geographers, and hydrologists positions are expected to grow by 24.4% combined.

Although graduates of the Sustainable Management degree will not be environmental engineers or geologists per se, they will have broad topical knowledge of these fields, and they will be able to serve as informed managers of the businesses and enterprises in the green economy.

The following information is based on the report "Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World". That report is based on the United Nations Environment Program (UNEP), as part of the Green Jobs Initiative jointly mounted by UNEP, the International Labor Organization (ILO), the International Organization of Employers (IOE) and the International Trade Union Confederation (ITUC). It is produced by the Worldwatch Institute, with technical assistance from the Cornell University Global

Labor Institute, for UNEP.

- Energy supply – renewable sources of energy: more than 2.3 million green jobs have been created in recent years in this sector; however, these only supply 2 per cent of the world’s energy. The wind power industry employs some 300,000 people, the solar PV sector an estimated 170,000, and the solar thermal industry more than 600,000
- Energy efficiency, particularly in buildings and construction is one of the areas with the highest potential to reduce greenhouse-gas emissions and to create jobs in the process. Some 4 million direct green jobs based on improving energy efficiency already exist across the economy in the United States and in certain European countries.
- Transportation is the lifeblood of the globalized economy. While efforts are being made to reduce the footprint of cars, public transport systems offer lower emissions and more green jobs. Some 250,000 jobs in the manufacture of fuel-efficient, low-pollution and low-emissions cars can be considered green,
- Recent reports put the number of recycling and remanufacturing jobs in the United States alone at more than 1 million.
- The global market for environmental products and services is projected to double from \$1,370 billion per year at present to \$2,740 billion by 2020. A reliable early indicator of this shift is the surge in the flow of venture capital into clean technologies. In the United States this currently constitutes the third largest sector after information and biotechnology. The United States clean-tech start-ups alone might generate 400,000–500,000 jobs in the coming years.

A new Center for American Progress (CAP) report finds that in a study of 12 states, there are people that work in jobs that could be “green jobs”. And collectively, across the country this is over 14M people, or nearly 10% of the U.S. work force.

In addition to the above, recently organized labor has become actively engaged in working to “green” the manufacturing industry. At a February 2009 meeting of labor leaders in Washington, D.C., the focus of the conference was on green jobs. The IBEW (International Brotherhood of Electrical Workers) is actively engaged in this effort, and the National Joint Apprenticeship Committee has already developed a noncredit, industry curriculum for electrical workers. The Associated General Contractors are also working on developing a curriculum and green jobs certification program, and many Operating Engineers already work in the solar panel industry, in ethanol, and in alternative fuel plants.

The Obama administration and many members of Congress recognize the importance of energy independence, water conservation, and climate control, and a significant federal focus is taking shape on how to increase the sustainability of the U.S. while creating thousands of new jobs in the process.

A Lack of University Programs

The above data suggests significant and growing opportunities in green jobs. University curricula lag significantly behind the rapid growth in the green industry, and the Sustainable Management degree for which this Authorization is requested will be the first online degree of its kind.

Programs Outside Wisconsin

Seven undergraduate degrees that bring together sustainability and business were found at U.S. colleges and universities.

Sustainable Business Degree, Aquinas College, Michigan
<http://www.aquinas.edu/sb/>

Bachelor of Science: Business Green and Sustainable Enterprise Management, University of Phoenix
http://www.phoenix.edu/online_and_campus_programs/degree_programs_description.aspx?progversion=1784&location=-1&zipcode=

Bachelor of Science in Business, Green Mountain College, Poultney, Vermont
http://www.greenmtn.edu/business_economics.aspx

Bachelor of Science in Business/Environmental Management, Green Mountain College, Poultney, Vermont
http://www.greenmtn.edu/business_economics.aspx

Bachelor of Science in Business Management with a Specialization in Sustainable Business, Stonybrook, Southampton
http://www.stonybrook.edu/sb/southampton/business_major.shtml

B.S. Degree in Sustainable Business (Interdisciplinary), Catawaba College (NC)
<http://www.catawba.edu/academic/sustainablebusiness/majors.asp#sbiz>

B.A.S (Bachelor of Applied Science) in Sustainable Management, St. Petersburg College (To begin in 2009) <http://www.spcollege.edu/bachelors/techmain.php?program=techmain>

Other related efforts: The University of Michigan's Erb Institute currently offers a Global Sustainable Enterprise MBA/MS. Students enrolled in the University of Michigan's Program in the Environment and Ross School BBA program are also increasingly expressing interest in business and sustainability. In response to this demand, the Institute offers an undergraduate course on Global Enterprise and Sustainable Development. The Institute is actively developing new curriculum, action-based learning experiences and student support opportunities at the undergraduate level. <http://www.erb.umich.edu/Education/Masters/MBA-MS/>

<http://www.erb.umich.edu/Education/Undergrad/>

In 1997, Ball State University (Muncie, Indiana) established an innovative approach to sustainability through an interdepartmental program entitled "Clustered Academic Minors in Environmentally Sustainable Practices." As of 2001 (last update of their Web site), the program

included five minors in Environmental Policy, the Environmental Context for Business, Environmental Contexts in Health Care, Sustainable Land Systems, and Technology & the Environment. <http://www.bsu.edu/cluster/index.html>

The cluster program is part of the Center for Energy Research/Education/Service (CERES) <http://www.bsu.edu/ceres/>

The Graduate Diploma in Sustainable Management provides an opportunity to acquire expertise in the field of sustainable management from Anaheim University's Kisho Kurokawa Green Institute. Students take six graduate-level sustainable management courses, including two customized capstone project courses. Each course is six weeks long making it possible to finish the program in under nine months. The Diploma is offered 100% online.

<http://www.anaheim.edu/content/view/611/658/>

The School for Sustainability was established at Arizona State in 2007. It offers master's and doctoral degrees only. <http://schoolofsustainability.asu.edu/>

Programs in Wisconsin

UW System

- An electronic search on keywords was done when possible of course catalog pdfs posted on the UW System website.
- Keyword searches were also done on general campus websites.
- Keywords: sustainability, sustainable, social responsibility, green

UW Two Year Campuses

- Keyword search on course catalog for all colleges: one result in a science course. <http://www.uwc.edu/academics/catalog/courses.pdf>

UW-Eau Claire

- BS in Environmental Public Health
- Environmental Economics course
- One of the campuses targeted by Gov. Doyle to become energy self sufficient by 2012

UW-Green Bay

- Business: keywords in Business & Its Environment course <http://sis.uwgb.edu/WebCatalog/catalog.asp?COURSE=BUS%20ADM&edate=06/30/2008;>
- Environmental Policy & Planning Degree: <http://www.uwgb.edu/catalog/undrgrad/EPP.htm>
- Economics of Sustainability course ECON 412
- Website called Toward Environmental Sustainability: <http://www.uwgb.edu/envsustain/about.html>
- One of the campuses targeted by Gov. Doyle to become energy self sufficient by 2012

UW-La Crosse

- Keyword search on course catalog: sustainable in School of Education mission; environmental studies and health education courses

UW-Madison

- Business: 600 Environmental Strategy and Sustainability; 601 Systems Thinking and Sustainable Business;
- Risk Management & Insurance: 650 Sustainability, Environmental and Social Risk Management.
<http://www.wisc.edu/pubs/ug/05business/courses.html>

UW-Milwaukee

- No mention of keywords in School of Architecture and Urban Planning course titles, although there are faculty who are very interested in the topic.
- Website search on keywords brought up Center for Environmental Sustainability at the School of Continuing Education, and lectures, especially from Center for Urban Transportation Studies.

UW-Oshkosh

- UW-Oshkosh Campus Sustainability Plan
On October 2nd, 2006 Chancellor Wells established a campus sustainability team and charged it with the responsibility of developing and integrated Campus Sustainability Plan (CSP) which would guide the University in an effort to be a leader in responsible environmental stewardship, education, outreach and research.
<http://www.uwosh.edu/assets/announcement/sustainability/>
- One of the campuses targeted by Gov. Doyle to become energy self sufficient by 2012

UW-Parkside

- They do have an Environmental Studies minor
- Keyword search on site did not bring up much that was directly relevant other than meeting minutes for the developing online B.S. in Sustainable Management

UW-Platteville

- Majors: environmental engineering; reclamation, environment and recycling;
Minor: environmental science
- Keyword search of catalog brought up courses in civil engineering, agriculture, geography; social responsibility was mentioned in International Management course description

UW-River Falls

- Sustainable Management: no keywords in course titles
- Majors: Conservation; Environmental Science
- Sustainable Community Development graduate degree: mainly agriculture based

- One of campuses targeted by Gov. Doyle to become energy self sufficient by 2012
- Campus has a Director of Sustainability
- Campus is home to the St. Croix Institute for Sustainable Community Development
- Campus has an administrative/faculty committee titled the Sustainability Working Group

UW-Stevens Point

- Majors: Biology, Conservation, Environmental Science, Natural Resource Management; Minors: Conservation Biology, Ecosystem Management, Environmental Geography, Environmental Law/Enforcement; Environmental Studies, Environmental Communication.
<http://www.uwsp.edu/news/uwspcatalog/Mbusadm.htm>
- Global Environmental Management Education Center (GEM): center for world class curricula and outreach education services in natural resources and environmental management. GEM's purpose is pioneering and applying practical learning methods and technology to solve natural resource problems by linking faculty, students, and citizens worldwide. GEM serves students and stakeholders with curricula and outreach programs that are integrated and international using the tools of technology and communication to solve real world problems. GEM is building hope for the future through its work on sustainability, international programming and leadership development. (Outreach, student enrichment, research) <http://www.uwsp.edu/cnr/gem/>
- One of the campuses targeted by Gov. Doyle to become energy self sufficient by 2012

UW-Stout

- Majors: Applied Science; Minors: Environmental Science, Sustainable Design and Development
- Keywords mentioned in one economics course description.
- "University of Wisconsin-UW-Stout Chancellor Charles W. Sorensen signed the American College and University Presidents Climate Commitment Sept. 12, making the campus a Charter Signatory for the pledge and created a sustainability coordinator in 2008.

UW-Superior

- Major: Environmental Science
- Minor: Physical Environmental Science
- Northern Center for Community and Economic Development: webpage of presentations on various aspects of sustainability; some projects involve sustainability http://www.uwsuper.edu/cee/bed/ncced/recent_presentations.cfm
- Northern Center for Community and Economic Development: Presentation Sustainable Development, Is it Going Mainstream?
<http://www.uwsuper.edu/cee/bed/ncced/upload/Sustainable-Development-Building-Community-Series-2008-2.pdf>
- Stressing sustainable design in campus buildings:
<http://web1.uwsuper.edu/facilities/rscfaq/>

- President's Climate Commitment: Chancellor Erlenbach signed this commitment and created a sustainability coordinator in 2007.

UW-Whitewater

- Management course: Social Responsibility
- Keywords search: in descriptions for courses in geography, philosophy, political science

UW Four Year Campuses offering related degrees or minors:

BS in Environmental Science/Studies

UW Green Bay

UW Oshkosh

UW River Falls

Environmental Studies minor offered

UW Eau Claire

UW La Crosse

UW Madison

UW UW-Parkside

UW River Falls

UW Stout

UW Whitewater

Full-time MBA programs

A search of the schools ranked as having the top 10 sustainable MBA programs by The Aspen Institute's Beyond Grey Pinstripes research (see below) showed that none have an undergraduate green business degree.

Top ten:

Stanford University

The University of Michigan

University of California, Berkeley

University of Notre Dame

Columbia University

Cornell University

Duquesne University

Yale University

New York University

The University of North Carolina at Chapel Hill

In 2007-2008, UW-Madison ranks 33rd in the top 100.

Description of program: <http://www.beyondgreypinstripes.org/rankings/school.cfm?cid=533>

press release: <http://www.bus.wisc.edu/news/0223.asp>

Three MBA programs have deliberately been designed from the ground up to integrate sustainability seamlessly into all courses: Bainbridge Island Graduate Institute off the coast of

Seattle, Presidio World College in San Francisco, and the Green MBA at new college in Santa Rosa, California.

Market Research

A quick scan of undergraduate degrees across the UW System and across the nation shows that there are very few that focus on building competencies in the triple bottom line.

Based on these initial scans, Extension commissioned a market study conducted by Eduventures (a higher education market research firm) to determine if a sustainable management degree from the UW System campuses was viable.

The key findings of the survey were:

“Sustainability-related training and education are in demand nationally. Businesses are increasingly incorporating sustainable practices into their operations, and institutions are recognizing the value of incorporating a sustainability theme into curriculum. Clearly, there are opportunities to capitalize on this trend and offer a unique program that differentiates itself, while remaining at the forefront of the market.”

Potential audiences include:

- Professional and business services
- Trade, transportation, and utilities
- General and operations managers
- Construction managers
- First-line supervisors/managers of construction trade workers and production and operating workers
- Entry- to mid-level management professionals
- Professionals within environmental health and safety positions
- Individuals aspiring to positions as directors of sustainability or sustainability coordinators
- Professionals within the construction, business services, manufacturing, and utilities sectors
- Traditional undergraduate students

The differentiation strategies should include:

- Target non-traditional undergraduate program to working adult students
- Explore nontraditional delivery for the proposed program
- Incorporate general business requirements, but place emphasis on interdisciplinary courses within the sustainable business core requirements to provide greater expertise
- Offer concentration or emphasis area to provide greater specialization and attractiveness to prospective employers such as *green* marketing, environmental management, and public policy

The complete Eduventures market study can be found in Appendix A.

Enrollment

The following projections are based on the assumption that because this is a degree completion program focused on nontraditional and adult students, most students will be enrolled part-time. It is assumed that on average students will register for two to three courses in fall and spring and one or two courses in the summer term.

The table below is a conservative enrollment estimate. It is likely that actual enrollments will be higher.

Based on retention rates in other UW online management programs, the retention rate in the Sustainable Management program is expected to be around 85%.

Year	Implementation	2 nd year	3 rd year	4 th year	5 th year
New students	53	106	88	62	59
Attrition (15%)	(8)	(16)	(13)	(9)	(9)
Continuing students		45	135	210	263
Total enrollments	45	135	210	263	313
Graduating students				40	100

The graduation rate estimate is conservative, since students are expected to be primarily part-time, adult students who may periodically have to stop-out of the program to attend to personal matters.

On-Campus Correlative

Because this is a collaborative online program to which each partner campus contributes 5-6 courses for a total of 21 courses, none of the individual partner campuses will offer this program in a face-to-face format.

5. Assessment and Advising

Assessment

The collaborative nature of this degree as well its interdisciplinary approach to preparing professionals for critical societal issues requires that it be assessed holistically. Therefore, a case study approach will be employed – that is, the use of multiple qualitative and quantitative evaluation methods to measure the attainment of several goals for this particular situation. These methods include but are not limited to course evaluations; interviews and discussions with faculty, academic advisors, students and employers; and surveys from campus Career Services.

The unique nature of this degree requires that both product and process goals of the degree program be assessed. These goals include the following:

- To graduate students with science and business principles for employment and application in organizations and businesses that value the triple bottom line.

- To contribute to the UW Growth Agenda by providing an academic program that enables underserved audiences, particularly adults and persons of color, to complete a degree.
- To collaborate with multiple UW institutions to provide academic services and courses in a convenient format, including distance education delivery methods.

To determine how well the first two goals are met, and how well student are mastering the areas of competence, each course will assess student mastery using methods identified by the instructor – papers, class projects, exams, community-based activities, internships, etc. Students will also complete course evaluations according to the process used at each respective campus. CEOEL will gather this information from each of the participating campuses and lead discussions with the academic advisors and instructors to interpret the data and determine whether students are mastering individual courses as well as program areas of competence. Each course will be reviewed annually for immediate minor revisions. It is expected that each course will undergo major revision every three years.

Student satisfaction and success will also be measured. Each semester CEOEL will collect and monitor data on new enrollments, retention rates, and graduation rates (when available). Since this program is part of the UW Growth Agenda and Adult Student Initiative, pertinent student demographics will also be collected to determine whether the degree is reaching adult students, those who have started degrees at other higher education institutions, and if students are part of a traditionally underserved demographic (as defined by UW System).

Longer-term success of the program, and attainment of the first goal in particular, will be measured by surveying graduates to determine success in securing employment related to their major, and to compile the types of positions that employers have available and that graduates have been able to fill. This data can be gathered through standard and ongoing processes used by each campus' Career Services office and submitted to UW-Extension through the Sustainable Management Bachelor's Degree coordinator on each of the collaborating campuses. In addition, Extension will engage employers annually to comment on the curriculum, and to provide input into the effectiveness of the program to engender the types of competencies in graduates for which this program is designed.

Each campus will appoint an academic director to represent the interests of the campus and its faculty. With facilitation from CEOEL, those academic directors will communicate regularly. A more formal structure that includes semi-annual, 2-day, face-to-face meetings will allow for discussion and interpretation of data on each course and how well students have reached the course objectives. Also, the faculty teaching in the degree will meet annually to discuss the program, its effectiveness as a collaborative degree, how well students are meeting the learning outcomes identified, and related issues.

Program evaluation regarding the collaborative nature of the model will be carried out throughout the first four years of the program to monitor and assess processes critical to the success of a collaborative program among four campuses and UW-Extension, the third program goal. Of special interest will be the financial model, student recruitment and advising, admission and enrollment processes and trends, and curriculum design. Student services, instructional, and business office personnel from each campus have committed to maintaining regular contact at

least annually, to review processes and concerns and to make adjustments as necessary. As mentioned, the academic directors from each of the partner campuses will meet twice per year to review data and the program evaluations in order to make programmatic adjustments as needed. After four years, assuming that the program is successful and running well, the program will be considered to have “matured” and assessment of the collaborative nature of the program will transition to biannual program “check-ins” to ensure that it continues to meet the needs of the partner institutions.

Advising

From the inception of this program, student support and student advising will take priority. A number of measures will be put in place to ensure that students have the support they need to successfully progress through this program, graduate in a timely manner, and gain good employment in Wisconsin. These services include the following.

A full-time advisor or “student success coach” will be dedicated specifically to this degree. The advisor/coach will be housed in Extension, be accessible to students online and via phone, and work in concert with the student services staff on the four partner campuses. The advisor/coach will be responsible for being highly proactive in her interactions with students to help students learn about the program and to connect students to the service areas on the individual campuses to ensure that students can easily access information and support for credit audits and academic advising, registration, financial aid, and related services. The advisor/coach will track students’ progress and check-in with students regularly. She will communicate concerns to faculty and campuses to ensure that small problems are resolved quickly and well before they hamper students’ abilities to succeed in the program.

Extension is also expanding its portfolio of student services and creating an online Learning Community that will serve as a multi-functional “place” for students to go to get support, engage in social networks centered around academic areas, and access services. Through the Learning Community students will be able to use SKYPE video-communication so that online students can speak with and see the advisor/coach. Faculty teaching in the program will also have SKYPE connectivity so that they can hold virtual office hours and engage with students “virtually” face-to-face. In addition, other Learning Community components include online support to students in the form of an online writing lab, online readiness assessment for online learning, online social networking, and direct, online access to other Extension resources such as Cooperative Extension, Public Broadcasting, and Small Business Development Centers. These resources are particularly valuable to adult and nontraditional students who have multiple needs and priorities and might need help not only academically but also for family wellness, broad information, job help, etc.

Access for Individuals with Disabilities

The online bachelor’s degree completion program in Sustainable Management will be ADA accessible. Students with special needs will be directed to work with the disability services offices at their home institutions to work out the best ways to meet their special needs.

6. Personnel

Current Faculty Requirements

Because this will be a collaborative degree shared by four campuses, the burden on faculty at any one campus will be limited. There are 21 courses that comprise the degree completion, so each campus will teach five courses per fall and spring semesters once the program is fully operational. Campuses will also teach summer courses based on student demand. It will take about one and one-half years for all courses to be offered. The 21st course, which is a capstone course, will be rotated among the partners.

Additional Faculty Requirements

Initially, no additional FTE are required because Faculty offering courses will be either on an overload basis or part of load. The partner campuses expect that initial funding from Extension will cover the costs of faculty teaching in this program. As program growth is realized, additional faculty will need to be added. The faculty will be covered by program revenue, and both salary and fringe will be included in planning to ensure full cost recovery. As the program grows, efforts will be made to attract faculty from within the state first, keeping a focus on recruiting faculty from diverse backgrounds who have the academic credentials necessary to meet program needs. In the long term, as the program becomes successful, discussions with CEOEL will determine whether this format of compensation needs to be adjusted.

More specifically, the following FTE resources will be needed and will be reallocated from CEOEL and partner campuses.

	Year 1	Year 2	Year 3
Faculty	4.625	6.375	6.250
Acad. Staff	2.500	2.750	2.250
Classified	0.500	0.500	0.500
Total	7.625	9.625	9.000

Faculty

In FY9-10 existing faculty resources for the Sustainable Management degree are 4.625 FTE as follows:

- 1.0 FTE for academic program directors. This FTE is distributed among the partner campuses. Each campus receives 0.25 FTE for a program director position.
- 1.75 FTE for course content development. This FTE will be distributed among the four partner campuses. Each campus will receive 0.125 FTE per course per campus for development. These allocations are needed only during the first two years of the program, i.e. during the program development phase.
- 1.875 FTE for course instruction. This FTE is distributed among the partner campuses. Each campus receives 0.125 FTE per course taught, 15 courses will be taught in the first year of the program.

In FY10-11 existing faculty resources will increase to 6.375 FTE based on 36 courses to be offered. The net faculty increase will be 1.75 FTE over FY09-10.

- Academic program directors will remain at 1.0 FTE
- Faculty course content development will decrease from 1.75 to 0.875FTE.

- Faculty course instruction will increase by 2.625 FTE to 4.5 FTE.

In FY11-12 faculty resources will be 6.25 FTE reflecting a 0.125 FTE decrease over FY10-11 as follows:

- Academic program directors will remain at 1.0 FTE.
- Faculty course content development will decrease from 0.875 FTE to 0
- Faculty course instruction will increase by 0.75 FTE to 5.25 FTE.

As the program grows and scales (depending on demand) faculty instructional FTE will increase by 0.125FTE per course section taught.

Academic Staff

In FY9-10 existing academic staff resources for the Sustainable Management degree are 2.5 FTE as follows:

- 1.25 FTE for instructional design and development. These resources are located in Continuing Education, Outreach and E-Learning (CEOEL).
- 1.0 FTE academic advisor/coach for the program located in CEOEL.
- 0.25 FTE for learner services. These resources are located in CEOEL and attend to the call center, technical support, book store, etc.

In FY10-11 existing academic staff resources will increase to 2.75 FTE based on 36 courses to be offered and enrollment growth. The net academic staff increase will be .25 FTE over FY09-10.

- Instructional design and development FTE will decrease by 0.25 FTE to 1.0 FTE.
- 1.0 FTE academic advisor/coach will continue in CEOEL.
- Learner services FTE will increase by 0.5FTE to 0.75FTE.

In FY11-12 academic staff resources will be 2.25 FTE reflecting a 0.5 FTE decrease over FY10-11 as follows:

- Instructional design and development FTE will decrease by 0.75 FTE to 0.25 FTE.
- 1.0 FTE academic advisor/coach will continue in CEOEL
- Learner services FTE will increase by 0.25 FTE to 1.0 FTE.

As the program grows and scales (depending on demand) academic staff FTE will increase by 0.25 FTE per year for learner services.

Classified

In FY9-10 new classified staff resources for the Sustainable Management degree is 0.5FTE. Each campus will receive 0.125 FTE for program support activities. This FTE allocation will remain constant for at least the first three years of the program and will be re-evaluated relative to program growth after that.

7. Academic Support Services

Library Resources

Students will have access to partner campus' online library resources. Additionally, the UW System provides for inter-library transfers within the UW System. Online courses will be

designed to maximize the use of web resources and e-books in the curriculum. Textbooks will be provided by Extension Division of Continuing Education, Outreach and E-Learning (CEOEL) virtual bookstore, MBS. Students may order texts online or via a toll free call.

Library Links for partner campuses:

UW-Stout Library Distance Learning Resources

<http://www.uwstout.edu/lib/de/index.html>

UW Superior Library – Distance Learning Resources

<http://library.uwsuper.edu/distancelearning.html>

UW River Falls

<http://www.uwrf.edu/library/>

UW Parkside

<http://www.uwp.edu/departments/library/>

In addition to traditional UW System library resources, CEOEL will provide online learning resources. Students will be able to utilize the Online Writing Lab (OWL) housed in and staffed by CEOEL. This writing lab serves as a tutorial services for students who need extra writing help. <http://access.wisconsin.edu/owl/>

CEOEL also offers a READI assessment that students may take to evaluate their readiness for online learning. If a student requires additional assistance in a particular area, CEOEL will provide online links to learning resources. <http://uw.readi.info/>

Finally, CEOEL will host a course “How to Take an Online Course” for the purpose of tutoring students new to online learning.

Access to Student Services

Students in the Sustainable Management Bachelor’s Degree will be able to reach the program advisor/coach through several means: Toll free phone number, email, free video/audio internet call via SKYPE, and internet chat. Students in the Madison area may also speak to the advisor/coach in person during regular office hours. The advisor/coach will be available Monday – Friday from 8:00 am - 5:00 p.m. In addition, CEOEL student services for general advising, program information, registration help, etc. are available M.-Th. 8 am - 8 pm; F. 8 am-5 pm; Sa. 8 am - 2 pm; and Su. 2 pm - 8 pm.

Each student will be admitted to the home institution of his/her choice (one of the four partner campuses). Admissions, financial aid, registration, and institution-specific academic advising will be done at the home institution by phone and/or online following similar protocols as for on-campus students.

Students may utilize UW Colleges online placement testing if necessary.

The student advisor/coach in CEOEL will work with students from their initial interest in the program. She will help students through the application process and help student move to a home institution for initial credit evaluation and campus-specific advising. The CEOEL advisor/coach

will track students' general progress throughout the program, working with students to maximize their success and to expedite the time to degree.

Technical Support

Technical support is currently provided 7 days per week between 6:00 a.m. and 1:00 a.m. via email or a toll free call by CEOEL and by Learn@UW. CEOEL provides technical support M-Th 8 am - 9 pm; F. 8 am - 4:30 pm; and Su. 1 pm - 9 pm. Technical support during the remaining hours is provided by Learn@UW. Between 1:00 a.m. and 6:00 a.m. students may leave a voice mail for tech support call back or access the Frequently Asked Questions page or fill out an online ticket request for help.

Additionally, tutorials will be available online through the D2L platform to instruct on basic online course tech support issues. As courses are developed, concerted efforts will be made in the design process to minimize complexity from the user's perspective while proactively working with students to ensure that they can access and use online courses without difficulty.

Technical support is also currently provided by CEOEL to faculty developing courses and teaching in the program. In addition to online and phone support, CEOEL course designers travel to partner campuses to work with faculty to help them develop their courses. CEOEL also holds periodic online course development retreats to inform instructors about emerging technologies and to help them incorporate new technologies into their courses.

Extension will host the D2L instance for this program and monitor related hardware and software.

8. Facilities and Equipment

Capital Resources

This is an online program.

Capital Budget Needs

No additional capital budget needs are anticipated.

Security

All course materials, student submissions, and related materials will be housed on secure servers maintained by Learn@UW. The academic integrity of student submissions and requisite use of learning resources will be monitored by faculty teaching courses in this program, as well as by the advisor/coach dedicated to this program.

9. Finance

	FIRST YEAR		SECOND YEAR		THIRD YEAR	
CURRENT COSTS	#FTE	Dollars	#FTE	Dollars	#FTE	Dollars
Personnel						
Faculty/Instructional Staff	4.625	\$327,500	6.375	\$563,400	6.250	\$730,800
Graduate Assistants						

Non-instructional Academic/Classified Staff	2.500	\$280,750	2.750	\$304,150	2.250	\$339,836
Non-personnel						
Supplies & Expenses						
Capital Equipment						
Library						
Computing						
Other (Define)						
Subtotal	7.125	\$608,250	9.125	\$867,550	8.500	\$1,070,636
ADDITIONAL COSTS	#FTE	Dollars	#FTE	Dollars	#FTE	Dollars
Personnel	0.500	\$20,000	0.500	\$20,000	0.500	\$30,000
Nonpersonnel						
Other - (S&E)*		\$82,500		\$93,000		\$96,000
Subtotal	0.500	\$102,500	0.500	\$113,000	0.500	\$126,800
TOTAL COSTS	7.625	\$710,750	9.625	\$980,550	9.000	\$1,197,436
CURRENT RESOURCES						
General Purpose Revenue (GPR)		\$521,750		\$389,250		\$239,836
Gifts and Grants						
Fees - (PR from Tuition)		\$189,000		\$591,300		\$957,600
Other (Define)						
Subtotal		\$710,750		\$980,550		\$1,197,436
ADDITIONAL RESOURCES						
GPR Reallocation (Specify source)						
Gifts and Grants						
Fees						
Other (Define)						
Subtotal						
TOTAL RESOURCES		\$710,750		\$980,550		\$1,197,436

* S&E is for faculty and instruction support (materials, campus non-FTE resources, etc.) at \$500/course offering, and for statewide marketing and promotion.

Budget Narrative

The Sustainable Management is a collaborative degree among UW-Parkside, UW-River Falls, UW-Stout, and UW-Superior with financial and administrative support from UW-Extension Continuing Education, Outreach & E-Learning (CEOEL). The initial development and launching of the program will be funded by CEOEL Growth Agenda Adult Student Initiative GPR and will migrate to be program revenue cost recovery within five years of its initial launching. CEOEL is underwriting the investment to develop the program's 21 courses and will also fund, UW institutions and CEOEL, program support costs until the program begins to generate revenues in excess of costs. Revenue surpluses will be shared equally amongst the participating partners.

Program revenue is tuition revenue at \$350/credit for FY09-10 and will be the same among all four partner campuses. Students will not be charged any additional fees as part of the program, except for the costs of their books. If students live near their home campus and wish to pay segregated fees for the use of recreational and other facilities, they may do so. However, they will not be required to pay these fees if they do not take advantage of those resources. This tuition rate is based on market demand estimates as well as comparisons with other online programs in the UW System and nationally.

Below is a detail Sustainable Management program budget with revenue and costs assumptions.

	Costs	Year - 1		Year - 2		Year - 3	
		FTEs	Costs	FTEs	Costs	FTEs	Costs
Revenues							
General Purpose Revenues			\$521,750		\$389,250		\$239,836
Program Revenues			189,000		591,300		957,600
			\$710,750		\$980,550		\$1,197,436
Program Investment							
Faculty Content Development	Existing	1.750	\$70,000	0.875	\$35,000	0.000	\$0
CEOEL Course Development	Existing	1.250	189,000	0.750	94,500	0.000	0
		3.000	\$259,000	1.625	\$129,500	0.000	\$0
UW Institution - Program Support							
Program Director	Existing	1.000	\$100,000	1.000	\$100,000	1.000	\$142,800
Faculty Course Instructions	Existing	1.875	157,500	4.500	378,000	5.250	470,400
Faculty Course Instructions S&E	New	0.000	7,500	0.000	18,000	0.000	21,000
Registrar Services	New	0.500	20,000	0.500	20,000	0.500	30,800
Faculty Content Revisions	Existing	0.000	0	0.000	50,400	0.000	117,600
		3.375	\$285,000	6.000	\$566,400	6.750	\$782,600
CEOEL - Program Support							
Academic Program Advisor	Existing	1.000	\$58,000	1.000	\$58,000	1.000	\$83,636
CEOEL Course Revisions	Existing	0.000	0	0.250	50,400	0.250	88,200
Learner Services	Existing	0.250	33,750	0.750	101,250	1.000	168,000
Marketing - Statewide	New	0.000	75,000	0.000	75,000	0.000	75,000
		1.250	\$166,750	2.000	\$284,650	2.250	\$414,836
Total Support Costs		4.625	\$451,750	8.000	\$851,050	9.000	\$1,197,436
Total Investment & Support Costs		7.625	\$710,750	9.625	\$980,550	9.000	\$1,197,436
Net Cash Flow			\$0		\$0		\$0

Revenues

- CEOEL Growth Agenda Adult Student Initiative GPR will be used to underwrite the development of 21 Sustainable Management courses. GPR will also fund program support costs in excess of program revenues.
- Program revenue assumptions:

	<u>Year - 1</u>	<u>Year - 2</u>	<u>Year - 3</u>
Number of Courses Offered	15	36	42
Average Enrollments per Course Section	12	15	20
Average Number Students in Program (12 Cr)	45	135	210
Student Credit Hours	540	1,620	2,520
Tuition per Credit	\$350	\$365	\$380

Program Investment

- Joint development of 21 Sustainable Management courses by faculty and CEOEL over two years, \$388,500.
- Faculty course development of content, .125 FTE and \$5,000 per course.
- CEOEL instructional course design and development, 180 hours and \$13,500 per course.

UW Institution - Program Support

- Program director, .250 FTE, \$25,000 per institution and GPR funded in year 1 and 2. In year 3 and beyond the program director will be program revenue funded with a base salary increase of \$500 per year plus fringe.
- Faculty course instruction will be program revenue funded, .125 FTE, \$7,500 plus fringe per course. Instructional costs will increase \$500 per year.
- Faculty course instruction S&E, \$500 per course.
- Registrar services, .125 FTE, \$5,000 per institution and GPR funded in year 1 and 2. In year 3 and beyond the base salary will be program revenue funded with a \$500 increase per year plus fringe.
- Faculty course revisions to update course content and prepare the course to be offered will be program revenue funded, \$2,000 plus fringe per course.

CEOEL – Program Support

- Academic program advisor, 1 FTE, \$58,000 and GPR funded in year 1 and 2. In year 3 and beyond the academic program advisor will be program revenue funded plus fringe.
- CEOEL course revisions to prepare the course to run in D2L will be program revenue funded, \$1,500 plus fringe per course.
- Learner services, 2.5 hours and \$188.00 per student.
- Marketing, \$75,000 and GPR funded.

Net Cash Flow

- It is projected that the program will be program revenue cost recovery within five years of its initial launching. Revenues in excess of costs will be shared equally amongst the participating partners.

For ten-year budget projections for the Sustainable Management Bachelor's Degree, see Appendix B.

Commitment to Maintain Program

Each partner campus and Extension will review the program annually. Academic directors, faculty, and administrators from all partners will have input into programmatic changes and upcoming needs. Extension, as the fiscal agent for this program, will manage resources to ensure that funds are available to invest in the program as needed. The decision about how to invest in the program will be made collaboratively by all partners.

Extension will continue to provide technical expertise, manage IT services and related equipment and software, and provide financial planning and fiscal oversight.

Each partner campus will be responsible for ensuring that appropriate faculty teach in the program. Extension will work with partner campuses so that courses are developed and updated on a regular schedule that ensures quality. Every online course will be significantly updated every three years. Most courses will require minor updates annually.