



- The **Human Resources Director** who must look at the long-term impact of today's labor decisions on the welfare of the community
- The **Product Manager** who must figure out a new paint technology that reduces greenhouse gas emissions or evaluate existing packaging processes against today's sustainability standards

### **A Curriculum Tailored by Some of the Country's Most Innovative Green Companies**

The Sustainable Management degree was crafted in close partnership with the companies that are leading the way in sustainability such as Johnson Controls, Ford Motor Company, Eastman Kodak, Quad Graphics, FedEx, SC Johnson, Kohl's, Veolia Environmental Services and Modine Manufacturing.

"Johnson Controls continually seeks highly qualified, educated and skilled individuals to fill a number of key positions, and we look to the University of Wisconsin System to help educate and train the residents of the state," said Judith Mouton, Education Program Manager, Renewable Energy Solutions at Milwaukee, Wisconsin's Johnson Controls. "I have reviewed a draft of the curriculum and believe that the knowledge and competencies that students gain from this degree will be useful in the ever-growing sustainability job market."

"There's a clear connection between education level and economic stability," said UW-Extension Dean David Schejbal. "We knew we needed 21st century degrees that prepared students to make a positive impact on the state while moving their own careers forward. That's what the Sustainable Management degree does. And we're the first major university to offer undergraduate students this option."

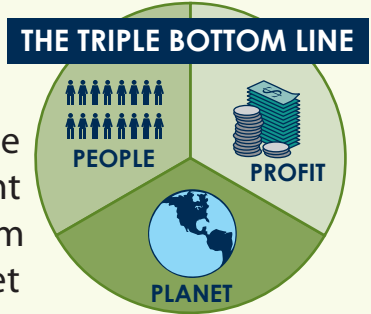
To Gregory P. Trudeau, Chair of the Department of Business and Economics at the University of Wisconsin - Superior, this degree couldn't come at a better time. He said, "Those of us who remember the '70s oil crunch and the green movement it spawned are glad to see these issues coming up again." Trudeau added, "But this time we realize the problem is wider and deeper – and the interest at the corporate level is unprecedented. The reality is that green is here to stay. And we're answering with the skills our business partners need."

The 21-course, 63-credit degree is unique in that it's the first online degree to combine the full resources of four nationally recognized campuses with a minimal carbon footprint and the personal flexibility that online learning has always offered. Courses are available and accessible wherever there's an Internet connection. Classes begin Fall 2009. For more information or to complete an application, visit <http://sustain.wisconsin.edu>.

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# HOW A GREEN DEGREE WORKS

The Sustainable Management degree takes the theories of sustainability and makes them applicable to current and future occupations. A core component of the curriculum is the concept of the Triple Bottom Line – the consideration of profit, people and planet in equal parts.

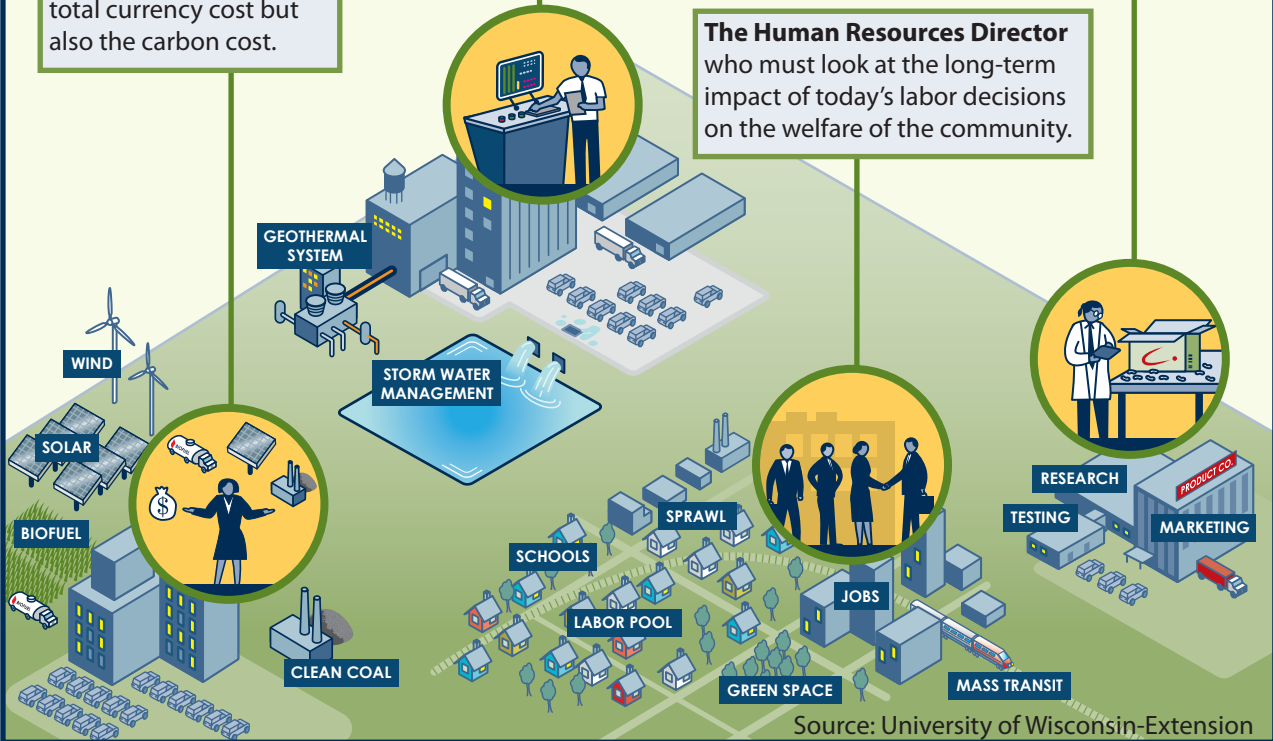


**The Facilities Manager** who has to compare the costs of solar panels to clean coal to biofuels to determine not only the total currency cost but also the carbon cost.

**The Plant Manager** who must manage storm water run-off in an environmentally sensitive way and also install geothermal systems that use the Earth's temperature to heat and cool the plant.

**The Product Manager** who must figure out a new paint technology that reduces greenhouse gas emissions or evaluate existing packaging processes against today's sustainability standards.

**The Human Resources Director** who must look at the long-term impact of today's labor decisions on the welfare of the community.



Source: University of Wisconsin-Extension

# FACT SHEET

## GREEN COLLAR CAREERS

### What is a Green Collar Manager?

A Green Collar manager understands the inseparable connections between profit, science, and community. He or she is able to improve profit margins by producing new products in ways that significantly reduce costs associated with global warming, energy, water, and negative social impacts. Green Collar managers must understand the Triple Bottom Line impacts of practices ranging from purchasing to logistics and transportation to supply chain management; and they must be able to adjust business practices to better meet the future needs of business in the green economy.

### What are the Green Collar career opportunities for graduates?

The new degree is a springboard to a variety of career paths in sustainability. The green economy is a focus of the new economic recovery plan that the Obama Administration announced. That means the creation of thousands of new jobs in emerging technologies. It also means new environmental incentives will be available for existing businesses. These factors put new demands on existing positions within businesses to understand and implement sustainability initiatives. Chances are the job that you have or the job that you want will have to address some aspect of sustainability soon.

According to the Blue-Green Alliance in Wisconsin, there are 304,000 jobs that could see job growth or wage increases in the Green Economy.

Some of the positions impacted by a Green Economy include:

Wind Power	Environmental engineers, iron and steel workers, millwrights, sheet metal workers, machinists, production managers, first-line production supervisors
Mass Transit	Civil engineers, rail track layers, electricians, welders, metal fabricators, engine assemblers, bus drivers, and supervisors
Building Retrofitting	Electricians, heating and air conditioning installers, carpenters, roofers, construction managers, building inspectors
Biofuels	Chemical engineers, chemists, chemical equipment operators, agricultural workers, forestry supervisors, agricultural inspectors

Source: [www.bluegreenalliance.org/gjfa](http://www.bluegreenalliance.org/gjfa)

**What's the size of the job market?**

National job forecasts suggest that the need for employees who understand Sustainable Management will increase over the next 5-10 years. The Bureau of Labor Statistics data estimate a 28% increase in environmental science and protection technicians. Environmental engineering positions are expected to increase 16% by 2016. Environmental scientist and specialist jobs are expected to increase 15%; geologists, geographers and hydrologists positions are expected to grow by 24% combined. While these employment titles 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.

**How will the Sustainable Management degree help the Green Collar workforce?**

With the nation transitioning to a green economy and the American Clean Energy and Security Act of 2009 promising millions of clean energy jobs, this fast-track program helps deliver the green jobs skills the nation's most progressive companies are demanding. Because this is a degree completion program, students who already have an associate's degree can graduate in as little as two years.

**How practical is this program considering the current economic outlook?**

Because the University of Wisconsin-Extension and four UW campuses partnered with 13 of the country's most progressive companies, the program teaches the skills that are most in demand. This hands-on, problem-solving degree takes the theories of sustainability and makes them tangible in the business setting. Because of this innovative, highly interactive and fluid model, a lesson learned on Monday night can be implemented on the factory floor or in the office board room on Tuesday morning. In addition, the coursework focuses on case studies and examples from some of the companies leading the way in sustainability such as Lands' End in Dodgeville, Briggs & Stratton in Wauwatosa and Alliant Energy in Madison.

**How does the new degree help the nation's displaced and unemployed retool?**

Just like the information age radically transformed business over the last two decades, energy conservation, social responsibility and environmental concerns are promising an even more radical shift in how businesses operate for this decade. Displaced and unemployed workers now have a chance to retool. And through this program, they can continue to balance family and other responsibilities while getting the education they need to compete.

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# FACT SHEET

## SUSTAINABLE MANAGEMENT DEGREE

### **What is the Bachelor of Science in Sustainable Management?**

The Bachelor of Science in Sustainable Management degree is a new cutting-edge, online, undergraduate degree completion program that combines resources of five University of Wisconsin System institutions: UW-Extension, UW-Parkside, UW-River Falls, UW-Stout and UW-Superior.

### **Why was the Sustainable Management Degree developed?**

This degree equips students with the leadership skills they need to become Green Collar managers. It's the flagship degree created under the UW Colleges and UW-Extension Division of Continuing Education, Outreach and E-Learning's Adult Student Initiative (ASI): a program established in 2007 to meet the needs of Wisconsin by increasing the number of baccalaureate degree holders.

### **What are some of the courses?**

Courses include *Marketing for a Sustainable World*, *Triple Bottom Line Accounting for Managers*, *Energy for Sustainable Management*, *Natural Resource Management*, and others.

### **How was the degree created?**

The degree was crafted in close partnership with companies now leading the way in sustainability. Ford Motor Company, for example, offered interdisciplinary educational materials with modules on environmental sustainability and global economics. This degree provides a practical, hands-on approach to teaching core competencies of the Triple Bottom Line, an approach that treats profit, people and planet equally. UW-Extension also worked with the Department of Natural Resources, other government agencies, and University of Wisconsin faculty to build a curriculum with 21 courses in the 63-credit degree.

### **Who are some of the faculty?**

One of the reasons this curriculum developed so quickly is the passion for sustainability each member of the project holds. Faculty belong to many local and national sustainability associations, have built high-efficiency homes for their own families, and many even raise their own food using sustainable practices – they truly walk the walk.

John Skalbeck is Associate Professor of Geosciences and Director of the Environmental Studies Program at the University of Wisconsin-Parkside. He has served on the Chancellor's Task Force on Environmental Stewardship and has been involved in the development of the REC and CEDAR environmental education centers in Racine and Kenosha. He also started the Parkside Student Environmental Club. The club recently finished a fundraiser to buy and install solar panels on campus, and they installed rain gardens on campus to control run-off.

Gregory P. Trudeau, Chair of the Department of Business and Economics and Professor of Accounting at the University of Wisconsin–Superior, serves as chairman of the board for a local financial institution with assets approximating \$150 million. He is working with a publisher on a textbook for Triple Bottom Line accounting and recently presented at a conference in the Czech Republic on the potential accounting requirements for carbon trading.

Eric Sanden, Environmental Studies Professor at the University of Wisconsin–River Falls, has long been an advocate for smart growth in lieu of urban sprawl. He is frequently sought after as a peer reviewer of articles for ecology journals and has edited textbooks on natural resource management. Professor Sanden is a member of the Wilderness Society and a member of the American Planning Association. He served as faculty co-advisor to the Resource Management Club and the Land Use Planning Club. Professor Sanden even grows a sizable portion of his own food using organic vegetable gardens in his yard.

Kevin McDonald, Marketing Professor at the University of Wisconsin–Stout is a UW Wisconsin Teaching Scholar. His efforts to engage students in a learning experience that makes a positive difference in their personal and professional lives has earned him significant teaching awards throughout his 20-year career. Professor McDonald is a Kellogg Executive Scholar through the Kellogg School of Management. He recently remodeled his home for greater energy efficiency.

### **Why an online degree?**

The unique degree is the first to combine the full resources of four nationally recognized campuses with a minimal carbon footprint and the personal flexibility that online learning offers. All courses are available online and are accessible through an Internet connection, allowing students the ability to set their study schedules to match their busy lives. UW-Extension has tailored the entire degree to meet the needs of adult and non-traditional students with a team of faculty familiar with online students. The degree includes an online writing lab, webcams and Skype access for students and faculty, and e-book options to streamline the textbook process.

### **Who can enroll in the program?**

Because this is a degree completion program, any student who already has an associate's degree or about 60 credits of prior college credit can apply directly for admission. The program looks to serve the adult student who needs to earn a 4-year degree to move up into the management ranks or needs to retool his or her education to transition into a more in-demand career. Students who have little or no prior college credit and are entering as freshman may begin at any UW campus, online, or face-to-face.

### **How do students choose between the 4 campus programs?**

Because the Bachelor of Science in Sustainable Management is a collaborative degree offered by the four campuses, students across the country can apply to the program through their preferred home campus— UW-Parkside, UW-River Falls, UW-Stout, or UW-Superior.

Each campus awards a Bachelor of Science degree, but the home campus becomes the student's business center for issues like financial aid and tuition. The participating campus colleges are:

Parkside: College of Arts and Sciences

River Falls: College of Agriculture, Food and Environmental Sciences

Stout: College of Management

College of Science, Technology, Engineering and Mathematics

Superior: Department of Business and Economics

### **What is sustainability?**

The World Commission on Environment and Development defined sustainability as meeting the needs of the present without compromising the ability of future generations to meet their own needs.

### **What is the Triple Bottom Line?**

The **Triple Bottom Line** captures an expanded spectrum of values and criteria for measuring organizational (and societal) success: economic, ecological and social—in other words: people, planet, profit. This new degree is one of the first undergraduate management degrees to look beyond the traditional profit and loss statements to the new Triple Bottom Line standard of business success. Students will learn how to balance decisions on the criteria of profit, people and planet to maximize financial results while minimizing environmental and social risks for the company.

### **What other institutions offer a "green degree"?**

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, offering masters and doctoral programs, and several other universities have begun to build departments and programs in similar areas. What continues to distinguish the University of Wisconsin degrees from all others, however, is the unique focus on undergraduate degrees for adult and nontraditional students, its online mode of delivery, and its multi-institutional, cross-disciplinary support. It is truly a unique model.

### **What are the competencies, and how were they identified?**

The core competencies were identified by the business partners who joined the UW in forming the Sustainable Management Program. These companies pointed out that very few undergraduate programs--and none at the top tier institutions--focus specifically on developing informed leaders who understand both the business and the science of sustainability issues:



Technical competencies

- 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. Looking beyond CO2 is important
- 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 competencies

- 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

**What does the Adult Student Initiative mean for Wisconsin growth?**

A 2006 report by the U.S. Census Bureau revealed that Wisconsin is 6th in the nation for associate degree holders but 35th for bachelor's degree holders. According to UW System President Kevin Reilly, the benefits of having more advanced degree holders in Wisconsin communities are significant: If Wisconsin had the same percentage of baccalaureate degree holders as Minnesota, and the same per-capita income average, it is estimated Wisconsin taxpayers would take home an additional \$25 billion in personal income.

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# FACT SHEET

## NEW PROGRAM GETS POSITIVE RESPONSE FROM INDUSTRY

"Any career, regardless of place in an organization, is going to be enhanced by skills that integrate people, planet and profits in the actions taken to accomplish organizational goals." - *Mark McDermid, Cooperative Environmental Assistance Bureau Director, Wisconsin Department of Natural Resources, Madison, Wis.*

"When I first wrote letters to CEOs asking if they would be interested in helping us craft a curriculum for teaching the Triple Bottom Line, the response was overwhelming. One of them literally told me, 'You create this program, and we'll hire the first graduate!'" - *David Schejbal, Dean, UW-Extension, Madison, Wis.*

"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." - *Marisa M. Michaud, Research Analyst, Eduventures, Inc., Boston, MA.*

"Johnson Controls continually seeks highly qualified, educated and skilled individuals to fill a number of key positions, and we look to the University of Wisconsin System to help educate and train the residents of the state. I have reviewed a draft of the curriculum and believe that the knowledge and competencies that students gain from this degree will be useful in the ever-growing sustainability job market." - *Judith Mouton, Education Program Manager, Renewable Energy Solutions, Johnson Controls, Milwaukee, Wis.*

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## BIO

### **DEAN DAVID SCHEJBAL**

Continuing Education, Outreach and E-Learning  
University of Wisconsin-Extension

“Dean Schejbal really deserves the credit for bringing this program together. He’s an excellent facilitator and absolutely passionate about sustainability.”

– *Greg Trudeau, Chair of the Department of Business and Economics at UW-Superior*

David Schejbal is a leading advocate for sustainability education. In the 1990’s while at Northwestern University, Schejbal developed and team-taught an unusual course in the use of water in the American Southwest. For most of the academic year, students and faculty explored the social, political, and economic implications of inhabiting and farming in the desert. Part of the course was taught in Glen Canyon and the Four Corners region.

While at the University of Illinois at Urbana-Champaign, Schejbal co-chaired the Campus Sustainability Committee and was a member of the Environmental Council. He also served as one of the principal investigators on Team Illinois, the University’s Solar Decathlon team: an international, Department of Energy-sponsored competition in which student and faculty teams design sustainable houses that operate independently of the energy grid. Selected houses are then displayed on the Mall in Washington, D.C.

When he joined the University of Wisconsin-Extension in 2007, Schejbal made sustainability a primary focus. He brought together the strengths of four University of Wisconsin campuses--UW-Parkside, UW-River Falls, UW-Stout and UW-Superior—to craft a degree completion program to educate leaders for the green economy. He worked with faculty and business leaders to identify core competencies that green economy managers need to help their businesses become and remain truly sustainable. The team developed an exciting, new curriculum that focuses on systems thinking: bringing together an understanding of scientific, policy, and business principles so that graduates can fully contribute to their companies’ bottom lines.

David Schejbal earned a bachelor of arts degree in philosophy from Iowa State University and master’s and doctoral degrees in philosophy from the University of Connecticut. He has taught courses in environmental ethics and environmental policy, is a member of the Council of Environmental Deans and Directors (CEDD), and serves on the board of the University Continuing Education Association (UCEA).

From a personal sustainability standpoint, Schejbal recently finished building a multi-fuel, high efficiency home, and he makes a strong effort to reduce consumption in all areas of his life.