

**WPI****ROBERT A. FOISIE
SCHOOL OF BUSINESS**

MBA & MS concentrations in Sustainability Management

Corporations, non-profits, governmental agencies and municipalities are hiring individuals with the skills and commitment to meet the challenges of balancing people, planet, and profit. Future leaders need a broad set of competencies including sustainability, environmental and change management. The Foisie School of Business offers a concentration in *Sustainability Management* to prepare you with the management skills and knowledge to enable you to work cross-functionally with diverse stakeholders to achieve optimal performance economically, environmentally and socially.

The concentration in Sustainability Management is available to students earning a MBA, MS degrees in Management (MSMG) and MS in Operations Analytics and Management (MSAOM). The concentration in Sustainability Management is offered as both a full- and part-time program. Courses are held primarily in the evenings, and the degrees can be completed without daytime courses. The concentration is designed to enable part-time students to maintain full-time employment while enrolled in the program.

MASTER OF SCIENCE IN MANAGEMENT (MSMG):

Required Business Core (5):

- BUS 500 Business Law, Ethics and Social Responsibility
- ETR 500 Entrepreneurship and Innovation
- FIN 500 Financial Information and Management
- OBC 500 Group and Interpersonal Dynamics in Complex Organizations
- OIE 500 Analyzing and Designing Operations to Create Value

Required Sustainability Core (1):

- BUS 598 SP TOP: Introduction to Sustainability Management

Electives (choose 3):

- BUS 546 Managing Technological Innovation
- BUS 598 SP TOP: Globalization, Social Responsibility and Organizational Strategy
- ETR 593 Technology Commercialization: Theory, Strategy and Practice
- MIS 576 Project Management
- OBC 537 Leading Change
- BUS 598 SP TOP: Energy Management

- OIE 598 SP TOP: Sustainable Operations & Supply Chain Management
- 1 course may be selected from outside of the FSB with advisor approval

Capstone (1):

- BUS 598 SP TOP Sustainability Consulting Projects

MASTERS OF SCIENCE IN OPERATIONS ANALYTICS & MANAGEMENT (MSOAM):

8 required courses (24 credits): Students must take 6 required courses from the following list and 2 from the two groupings provided below. Any request for substitution should be directed to the Director of Business Programs and must be approved by the instructor of the course the student is looking to replace.

- OBC 500 Group and Interpersonal Dynamics in Complex Organizations
- OIE 500 Analyzing and Designing Operations to Create Value
- OIE 541 Operations Risk Management
- OIE 544 Supply Chain Analysis and Design
- OIE 552 Modeling and Optimizing Processes
- OIE 554 Global Operations Strategy

Choose 1 (the other may be used as an elective)

- MIS 500 Innovating with Information Systems
- MIS 571 Database Applications Development

Choose 1 (the other may be used as an elective)

- OIE 555 Lean Process Design
- OIE 558 Designing and Managing Six-Sigma Processes

4 elective courses (12 credits) from the following list:

- BUS 522 Global Business Experience
- BUS 546 Managing Technological Innovation
- BUS 597 Internship
- BUS 598 SP TOP: Introduction to Sustainability Management
- BUS 598 SP TOP Sustainability Consulting Projects
- BUS 598 SP TOP: Energy Management
- MIS 573 System Design and Development
- MIS 576 Project Management
- MIS 581 Information Technology Policy and Strategy
- MIS 582 Information Security Management
- MIS 583 User Experience Applications
- MIS 584 Business Intelligence
- OBC 501 Interpersonal and Leadership Skills
- OBC 533 Negotiations
- OBC 536 Organizational Design

- OBC 537 Leading Change
- OIE 548 Productivity Management
- OIE 553 Global Purchasing and Logistics
- OIE 557 Service Operations Management
- OIE 598 SP TOP: Sustainable Operations & Supply Chain Management

Note 1: Students can take courses as electives in other graduate degree programs such as Computer Science, Data Science, Manufacturing Engineering, Math/Statistics, System Dynamics and others based on their own interest and strength; but need to get approval from their academic advisors before taking the courses beyond the above list. There may be additional Special Topics courses* (see below) added to the MSOAM elective list in areas such as health care management and sustainability that have solid market demand.

MASTER OF BUSINESS ADMINISTRATION (MBA):

Required courses (10):

- ACC 503 Financial Intelligence for Strategic Decision-Making
- BUS 500 Business Law, Ethics and Social Responsibility
- ETR 500 Entrepreneurship and Innovation
- FIN 500 Financial Information and Management
- FIN 501 Economics for Managers
- MIS 500 Innovating with Information Systems
- MKT 500 Marketing Management
- OBC 500 Group and Interpersonal Dynamics in Complex Organizations
- OBC 501 Interpersonal and Leadership Skills
- OIE 500 Analyzing and Designing Operations to Create Value

Pre-Capstone/Capstone Projects (2):

- BUS 501 Integrating Business Concepts to Lead Innovation (Pre-Capstone Experience)
- BUS 517 Graduate Qualifying Project (GQP) (Capstone Experience)

Required Sustainability Core (2):

- BUS 598 SP TOP: Introduction to Sustainability Management
- BUS 598 SP TOP Sustainability Consulting Projects

Electives (choose 2):

- BUS 546 Managing Technological Innovation
- BUS 598 SP TOP: Globalization, Social Responsibility and Organizational Strategy
- ETR 593 Technology Commercialization: Theory, Strategy and Practice
- MIS 576 Project Management
- OBC 537 Leading Change
- BUS 598 SP TOP: Energy Management
- OIE 598 SP TOP: Sustainable Operations & Supply Chain Management
- 1 course may be selected from outside of the FSB with advisor approval

SUSTAINABILITY MANAGEMENT ELECTIVE COURES:

BUS 598: SP. TOP: INTRO. TO SUSTAINABILITY MGMT. – SPRING 2016

This course introduces students to the business case for and management basics of Sustainability in corporations including: integration with business strategy, operations and the culture. Students will learn about the relationship of Sustainability to: economic and social drivers, including triple bottom line, services, product design, manufacturing, office operations, information technology, purchasing and suppliers as well as innovation and entrepreneurship. The course focuses on practical application of knowledge and skills by extensive use of case studies enhanced by insights from guest speakers and experience with decision-making processes related to Sustainability capital projects. Students will gain a sound understanding of: high performance building design to save energy, water and reduce waste, management's role in fostering sustainable practices, how to measure, account for and report environmental and social impacts plus marketing strategies to promote sustainability results.

BUS 598: SP. TOP: ENERGY MANAGEMENT – SPRING 2016 On-line

This course covers a broad spectrum of energy management topics important to future business managers and leaders including: energy management strategies for business, governmental regulations, incentives and resources, European Union energy policies and programs including carbon credits and related markets. We will study energy efficiency practices as they relate to ISO 50001 Energy Management Systems, the U.S.Green Building Council (USGBC), Leadership in Energy & Environmental Design (LEED), High performance buildings, data centers, renewable energy sources and smart grid. Special focus will be on energy management for financial and Corporate Social Responsibility benefits from the perspective of CEOs, CFOs, COOs and CSOs. The course is conducted based the principle of learning by doing. Student teams work with a corporation, non-profit or municipality conduct an energy audit and develop and present an energy management plan.

OIE 598: SP. TOP: SUSTAINABLE SUPPLY CHAIN & OPERATIONS MANAGEMENT – SPRING 2016

This course is intended to provide students with understanding the intra- and inter-organizational implications of environmental practices and policies. The role of organizational operational and supply chain management functions, activities, tools and methods and their relationship to the natural environment will be introduced and discussed. At the end of the course a successful student should be able to: grasp the scope of general operations and supply chain management and environmental sustainability as they relate to the firm, be able to relate to the manners in which management may respond and collaborate/cooperate with suppliers, customers, and various other stakeholders influencing and influenced by operational and supply chain activities from practical and theoretical case studies and able to evaluate various factors and understand tradeoffs in management decisions as they pertain to environmental operations and supply chain management.

BUS 598 SP TOPIC: SUSTAINABILITY CONSULTING PROJECTS – FALL 2015

This course imparts knowledge and consulting skills for planning sustainability projects for organizations including: small businesses, non-profits or local townships.

‘Sustainability Project’ refers to a student team working with a client developing and delivering a customized, Sustainability Actionable Plan (SAP) with the goals of reducing operating costs, minimizing the environmental footprint and improving environmental sustainability. Typical areas of focus include: energy efficiency, water conservation, waste reduction, supply chain management, green IT, transportation, a process for organizational change as well as key performance indicators to enable measurement and reporting. Opportunities are identified and initiatives developed in collaboration with the client for both short term and long term; e.g., capital investment projects. Each SAP recommends a process to capture cost savings in order to fund future projects; i.e., a Sustainability Capital Reserve. Deliverables include a customized SAP and a presentation to engage and inspire the stakeholders; i.e., the leadership team and staff. Upon completion, the client is asked to complete a brief Client Satisfaction Survey to help evaluate the team’s performance.