

NATIONAL UNIVERSITY

SCHOOL OF ENGINEERING AND COMPUTING

MASTER OF SCIENCE IN SUSTAINABILITY MANAGEMENT



Balance Economics and Environmentalism for Better Businesses

In the Master of Science in Sustainability Management program, you'll learn methods and theories of sustainability from both a business and practical engineering perspective. The program will address the modern contradictions between the natural world, the community, and the profitability of businesses. While exploring the topic of sustainability, you'll learn to incorporate social, ecological, and economic conditions with the goal of reconciling the needs of the present generation without compromising the needs of future generations.

Building on a comprehensive introduction, you'll apply sustainability concepts to managerial ideas and practices with perspectives that include risk assessment, life cycle, lean supply chain, firm excellence, and innovation. You'll find ways to combine engineering and sustainability concepts in energy, environment, watershed, and buildings. Career options with this degree include project manager, sustainability manager, analyst, design professional, engineer, environmental consultant, resource manager, and others.

Program highlights:

- Entire program can be completed online

- Apply science and methodology to evaluate sustainability concepts
- Use environmental awareness when designing, manufacturing, and managing processes
- View engineering and management problems through a lens of sustainability
- Make economic, environmental, and socially sound decisions
- Evaluate the impact of products, processes, and activities through their life cycles
- Cultivate professional, legal, and ethical decision-making skills

UCSD Transfer Agreement

Students who have completed the Professional Certificate in Sustainable Business Practices at UCSD Extension, can apply up to nine (9)* units of credit toward the requirements of earning a Master of Science in Sustainability Management at National University. To learn more, visit extension.ucsd.edu/sustainable or call National University's Division of Extended Learning at 800-628-8648 ext. 8600

LEARN MORE TODAY

Contact an Admissions Advisor
(855) 355-6288



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MASTER OF SCIENCE IN SUSTAINABILITY MANAGEMENT

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This blended program prepares students for the industrial revolution of the 21st century. There is no doubt that we need to re-think our way of living, producing and consuming in order to eliminate the current contradictions between the natural world, the community and the profitability of businesses. In fact, many corporations, cities, states and countries are introducing new policies and programs from an emphasis on pollution control to pollution prevention to sustainable practices. Sustainability in the sense that programs do incorporate all social, ecological and economic conditions, as well as, the general principle of meeting the needs of the present generation without compromising the ability of future generations to meet their own needs.

This program is designed to provide methods and theories appropriate to the study of sustainability from business perspectives to practical engineering. After a comprehensive interdisciplinary introduction to sustainability, students are exposed to managerial key ideas and practices with sustainable perspectives: risk assessment, life cycle, lean supply chain, firm excellence and innovation. Students are also exposed to combine engineering and sustainability concepts into the management practices of energy, environment, watershed and buildings. The strength of the program comes from its engineering and management blended nature, as well as its theoretical and practical approach.

Career Tracks

After completing the MS in Sustainability Management degree, students can enter the job market or pursue further higher educational degrees. Possible types of jobs include: Project Manager, Sustainability Manager, Sustainability Analyst, Sustainable Design Professional, Engineer, Environmental Consultant, Sustainability Consultant, Energy Efficiency Analyst, Operations Manager, Development Specialist, Resource Manager, etc. Students interested in continuing, their educational careers can pursue doctoral degrees in sustainability, management, sustainable development, natural resources and sustainability, or other related doctoral degrees.

UCSD Partnership Eligibility

National University and University of California San Diego Extension have formed a partnership that allows UCSD Extension Sustainable Business Practices Certificate graduates to test out of two classes in National University's MS Sustainability Management program. This agreement is only available to UCSD Extension students who meet the following criteria:

- A bachelor's degree from an accredited university
- Complete a college-level statistics class with a grade of C or better
- Maintain an overall B average in UCSD Extension's sustainability certificate.
- Complete and submit a copy of the official UCSD Extension Sustainable Business Practices Certificate to National University.

If an UCSD Extension student meets the criteria above, National University will:

Provide students with a fee-based exam that will, upon passing with a score of 80% or higher, substitute for SUS 601 Introduction to Sustainability.

Provide students with a fee-based exam that will, upon passing with a score of 80% or higher, substitute for SEM 605 Energy Management.

For additional information, please contact the Office of Extended Learning 858-642-8600.

Program Learning Outcomes:

Upon successful completion of this program, students will be able to:

- Apply scientific knowledge and methods required to evaluate sustainability concepts and systems.
- Design, manufacture, and manage processes in an environmentally conducive manner.
- Analyze engineering and management problems in their social and environmental context.
- Develop economic, environmental, and social sound sustainable decisions.
- Evaluate the impact of products, processes, and activities through life cycle assessment.
- Develop written communication skills required for this profession.
- Demonstrate professional, legal, and ethical responsibility in decision making practices.

Degree Requirements:

To receive a Master of Science in Sustainability Management, students must complete 49.5 quarter units of graduate level credit. A total of 9.0 quarter units of graduate credit may be granted for equivalent graduate work completed at another institution, as it applies to this degree, and provided the units were not used in earning another advanced degree. Students should refer to the section in the graduate admission requirements for specific information regarding application and evaluation.

Program Prerequisites

(1 course; 4.5 quarter units)

Candidates for the program must possess a Bachelor's degree in engineering, engineering technology, sciences, business, management or a closely related area from an accredited university. Interested students from other disciplines may be admitted to the program but may be required to complete additional courses. Non-degree students will not be allowed to enter this program. For those who have a general non-science and non-engineering degree, admission is based on relevant experience and the completion of the following program prerequisite:

MTH 210 Probability and Statistics
Prerequisite: Accuplacer test placement evaluation, or MTH 12A, and MTH 12B

CSC 220 * Applied Probability & Stats.
Prerequisite: MTH 215

* This course may be waived if its equivalent has been completed at the undergraduate level with a grade of "C" or better.

Core Requirements

(11 courses; 49.5 quarter units)

SUS 601 Introduction to Sustainability

SUS 602 Enterprise Excellence
Prerequisite: CSC 220 or permission from lead faculty.

SUS 603 Sustainable Innovation

SEM 604 Life Cycle and Risk Assessment

SEM 605 Energy Management

SEM 606 Environmental Management

SEM 607 Watershed Management

SEM 608 Sustainable Buildings

SUS 604 Sustainable Supply Chain

SEM 610A Project I

Prerequisite: SEM 606, SEM 607, SEM 604, SEM 605, SEM 608, SUS 604, SUS 602, SUS 603, SUS 601

SEM 610B Project II

Prerequisite: SEM 610A