

Environmental Resiliency (ENRE)

Courses

ENRE 51103. Adaptive Leadership. 3 Hours.

The sustainability movement requires knowledge of Earth and social systems, and strong adaptive leadership skills. Adaptive leadership is needed when taking on an adaptive challenge, sometimes called a "wicked problem." Wicked problems have no clear and obvious solution. Adaptive leadership is an ability to lead when there is no clear and obvious solution. These skills are needed in businesses, organizations, and in communities in order to sustain ourselves or create the resiliency we seek. (Typically offered: Irregular)

ENRE 51203. Foundations of Environmental Resiliency. 3 Hours.

An introduction to the concepts and strategies centered on resilience as it relates to the built and natural environment. Concepts include systems thinking, socio-ecological frameworks, Panarchy, and resilience frameworks, and diagnostics. Strategies include foundations of sustainability science and policy with ideas about dynamic environmental events and adaption methods. Case study investigations provide a summative and formative conclusion to course activities. This is a required course for the MS in Environmental Resiliency. (Typically offered: Irregular)

ENRE 51303. Science Communication for Executives. 3 Hours.

Overview of current best practices for science communication to corporate and executive level leadership focusing on ESG metrics. Companies face primarily structural challenges when pursuing long-term targets and communication is key to effectively allocating internal resources and reporting transparent progress. This course will give students the skills to assess the best approaches for their organization and role to convey the urgency of climate change and communicate essential milestones for tracking success. Through case studies and mock corporate-level communication projects to the class, students will have opportunities to practice the skills they learn and be ready to implement them in their current or future ESG role. (Typically offered: Irregular)

ENRE 52103. Leadership is Convening, Do You Know How to Convene?. 3 Hours.

Convening is leadership, especially when taking on an adaptive challenge, meaning a challenge that has no clear or immediate solution, including such complex challenges as sustainability and resiliency. The ability to bring people together and effectively impact the way that they see the world around them requires very specific skills in managing and communicating with the people that you are trying to mobilize. This class will explore the mindsets, techniques, and methods that enable strong stakeholder engagement so that leaders can create sustainability and resiliency movements inside organizations. (Typically offered: Irregular)

ENRE 52203. You Cannot Manage What You Do Not Measure. 3 Hours.

This class will look at developing and using frameworks to help track, assess, and manage energy, water, biodiversity, waste, and more across their businesses and supply chains. The tools are out there, but are you using them in ways that truly make a difference? And, are you using measurement as a way to drive leadership in sustainability and resiliency? (Typically offered: Irregular)

ENRE 52303. Carbon Accounting. 3 Hours.

This course will introduce the concept of carbon accounting and its common applications in the corporate and public sectors. Students will learn the basic principles of accounting for carbon emissions and offsets and will gain experience applying those concepts to an example company's GHG data. The course will also cover popular GHG emission and offset standards and reporting platforms, in addition to GHG capture, storage, and removal technologies that are currently being utilized. (Typically offered: Irregular)

ENRE 53103. Working with Stakeholders. 3 Hours.

Environmental professionals in both the private and public sectors regularly make decisions that impact diverse stakeholders. This course will teach strategies for effective stakeholder engagement such as understanding motivations, communicating technical information and uncertainty, and soliciting constructive ideas and feedback. Instructors will share their experiences working with stakeholders and discuss realistic scenarios. Students will learn how to make decisions informed by science and economics that protect the environment and address stakeholder concerns. (Typically offered: Irregular)

ENRE 53203. Survey of Watershed Hydrology and Water Resource Management. 3 Hours.

This course is designed to be a survey of hydrology and water resources management. Students will be introduced to the fundamental concepts of hydrology, water quantity and availability, and water quality and landmark water quality legislation. Providing students with real life examples is critical to student success in the course. Problem sets will challenge students to demonstrate their ability to understand written problem statements, select appropriate methodologies to apply to given problems. (Typically offered: Irregular)

ENRE 53303. ESG Reporting. 3 Hours.

Overview of current ESG Reporting landscape focusing on benchmarking, communication strategies, and data collection. The course will cover best practices for reporting and utilize case studies to review strategies of organizational approaches to annual improvements. Students will learn the skill to lead, organize, and implement reporting systems that can be applied across industries, from consumer goods to nonprofits. (Typically offered: Irregular)

ENRE 54203. Business and the Environment. 3 Hours.

Business and the Environment is an interdisciplinary course in management that explores the interactions between organizations (including for-profit businesses and non-profit organizations), society, and the environment. Using an applied approach that draws on experiential and service learning exercises related to actual businesses, students will learn how organizations and society influence and are influenced by environmental factors. While it is important to understand how the environment influences organizations and societal members, it is equally important to understand what organizations can do to address environmental issues. (Typically offered: Irregular)

ENRE 54303. Built Environment Certification Systems. 3 Hours.

Introduction to the principles of built places impacting sustainability and resilience to serve as a broad theoretical overview underpinning the building and community rating systems such as LEED, LBC, BREEAM, and others. Students learn about the built environment's impact on global systems, communities of people, and individual health and well-being. Students will learn about water, energy, materials, health and air quality, and the building rating systems. (Typically offered: Irregular)