

SUSTAINABILITY (SUST)

Course information is subject to change. This list may not reflect the most current course offerings or curriculum updates. Please consult your advisor for the latest information.

SUST 2100. Systems Thinking and SDG's. (3 Credits)

This course introduces systems thinking as a framework for understanding complex sustainability challenges, using the United Nations Sustainable Development Goals (SDGs) as an applied context. Students explore interactions among environmental, social, and economic systems and examine how feedbacks, trade-offs, and unintended consequences influence sustainability outcomes. Emphasis is placed on mapping systems, analyzing connections across SDGs, and evaluating real-world case studies. The course develops foundational analytical and critical thinking skills essential for interdisciplinary sustainability study and practice.

SUST 2204. Introduction to Sustainability. (3 Credits)

This course introduces the fundamental concepts and principles of sustainability, emphasizing the interconnected environmental, social, and economic dimensions of contemporary challenges. Students examine key sustainability issues such as climate change, resource use, energy, food systems, equity, and development through interdisciplinary perspectives. The course emphasizes systems thinking, data-informed reasoning, and real-world application, preparing students to critically evaluate sustainability solutions at local, regional, and global scales. SUST 2204 provides a foundation for advanced coursework in sustainability and related fields.

SUST 2204L. Introduction to Sustainability. (1 Credit)

This Lab course complements SUST 2204 and should be taken concurrently. Together these two courses introduce the fundamental concepts and principles of sustainability, emphasizing the interconnected environmental, social, and economic dimensions of contemporary challenges. Students examine key sustainability issues such as climate change, resource use, energy, food systems, equity, and development through interdisciplinary perspectives. The course emphasizes systems thinking, data-informed reasoning, and real-world applications, preparing students to critically evaluate sustainability solutions at local, regional, and global scales. SUST 2204 provides a foundation for advanced coursework in sustainability and related fields.

SUST 3450. Thermodynamics for Sustainability. (3 Credits)

This course introduces the principles of thermodynamics with a focus on their application to sustainability challenges. Students examine energy, entropy, and material flows in natural and human systems, emphasizing energy efficiency, resource use, and environmental limits. Topics include the laws of thermodynamics, energy transformations, heat engines, renewable and nonrenewable energy systems, and the thermodynamic basis of sustainability metrics. The course develops quantitative and conceptual skills needed to analyze energy systems and assess their implications for sustainable technologies, processes, and policies.

SUST 4100. Comm Resilience & Env Justice. (3 Credits)

Prerequisite: SUST 2100 Credit Hours: (3-0-3) This course examines the concepts of community resilience and environmental justice in the context of contemporary environmental and societal challenges. Students explore how environmental risks, climate impacts, and resource distribution affect communities unequally and how resilience is built through planning, governance, and collective action. Topics include environmental justice frameworks, vulnerability and risk assessment, disaster preparedness, climate adaptation, public participation, and policy responses. Through case studies and applied analysis, students evaluate strategies for enhancing resilience while addressing persistent environmental inequities.

SUST 4915. Comm Resilience & Env Justice. (3 Credits)

Prerequisites: SUST 2100, SUST 2204, completion of at least 1 upper division (3000 and above) SUST course Credit Hours: (0-9-3) This course provides students with a supervised, applied learning experience in sustainability through a practicum placement or project. Students work with a community organization, government agency, business, non-profit, or campus initiative to address a real-world sustainability challenge. Under faculty supervision and site mentorship, students apply interdisciplinary sustainability concepts, analytical tools, and professional skills in a practical setting. The course emphasizes project planning, ethical practice, reflection, and professional communication. The practicum culminates in a written report and/or presentation synthesizing academic learning with applied experience.