

The Department of Engineering

Sustainable Engineering Minor

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About:

Sustainability: Development that meets the needs of the present without compromising the needs of future generations.

This cross-disciplinary Sustainable Engineering minor prepares students as engineers to confront complex sustainability challenges in the 21st century.

This minor is open to Engineering students only. Students may pursue either the Sustainability Studies minor or the Sustainable Engineering minor, but not both.

Program Learning Objectives:

1. Understand humanity's impact on Earth and the nexus of human and environmental processes in the Anthropocene (current geological age).
2. Define holistically the scope of sustainability through the lens of conceptual frameworks including the triple bottom line and the UN Sustainable Development Goals (SDGs).
3. Approach complex problems in the intersection of engineering and sustainable development through the application of whole-systems thinking through a life-cycle lens and with consideration of the interconnected STEEP (social, technological, economic, environmental, and political) dimensions of sustainability challenges.
4. Apply, on a conceptual level, life-cycle analysis as a tool to evaluate the environmental impacts of engineered products, services, and the built environment.
5. Apply circular design principles to identify opportunities to rethink engineered products, services and infrastructure and the systems surrounding them in advancing a transition from a linear to a circular economy.
6. Articulate the role of the engineering profession and one's chosen engineering discipline in contributing to sustainable solutions as part of interdisciplinary teams.

Requirements:

The Sustainable Engineering minor requires a total of six courses (18 credits), two of which are required, four of which are elective courses (two Humanities and/or Policy electives, and two Technology electives)

Two Required Courses:

Course	Title	Credits
SUSE 2110	Sus Eng: Risk & Opportunities	3
SUSE 2111	Sus Eng: LCA & Circular Econ	3

Humanities and/or Policy Electives:

Electives are subject to change. Electives may be added to this list at the discretion of the College of Engineering.

Select two courses from the list below:

Course	Title	Credits
	Humanities Electives	3
	Policy Electives	3

Technology Electives:

Up to two of the Technology Electives from within a student's major can be counted toward the minor.

Electives are subject to change. Electives may be added to this list at the discretion of the College of Engineering.

Select two from the list below:

Course	Title	Credits
	Technology Electives	3