

SUSTAINABILITY, MINOR

Attention to sustainability is a global trend. Sustainability promotes systems thinking and challenges the student to take the long view of any subject by considering the environmental, social and economic effects. Moreover, sustainability has played and will play a critical role in the future workforce. This minor provides students with the opportunity to position themselves strategically in the ever-changing workforce. It challenges students to think systemically and globally, while shaping them to become leaders.

Three core concepts in sustainability shape the minor: science and technology, economics, and social and cultural perspectives. These three are interconnected and serve as guides for the curricular pathways selected by the students in the minor.

The minor in Sustainability is open to students in all majors.

Student Learning Outcomes

1. Identify the principles and core concepts of sustainability and its role within local and global contexts.
2. Explain the socio-cultural, economic, scientific and technological implications of sustainability problems and solutions from a systemic perspective.
3. Synthesize the scientific and technological foundations and socioeconomic impacts of different sustainable alternatives within a local and global context to become agents of change who champion sustainable skills and principles in their communities and organizations.
4. Demonstrate the ability to formulate technical, operational and strategic frameworks for sustainability problems and solutions within local and global contexts.
5. Develop critical and rational thinking skills to understand systems interdependencies and emergent aspects associated with sustainability.
6. Use the scientific method and knowledge transfer processes to assess and select different solutions for sustainability related problems, with local and global contexts.

Outcomes Assessment Activities

- Pre and Post Literacy Assessment: A questionnaire designed to measure sustainability literacy is administered at the beginning of the EN 109 Introduction to Sustainability (2 c.h.) course. The same questionnaire is applied at the beginning of the Sustainability capstone Project Course and gains in knowledge are assessed.
- Skills and Competencies: During the Sustainability Capstone Experience, students are required to design and deploy a sustainability related project that will be used to assess the student learning objectives.

Specific Program Requirements

Course	Title	Credits
EN 109	Introduction to Sustainability	2
CHEM 125	Environmental Science (GT-SC2)	3
EN 489	Senior Capstone in Sustainability	1
Sustainability Electives ¹		15
Total Credits		21

¹ Sustainability electives are to be selected, with approval of the student's adviser, from a list of approved sustainability electives. The electives must include three courses from outside the college of the student's major and two courses from inside the college of the student's major.

Approved Sustainability Electives

ANTH 100 Cultural Anthropology (GT-SS3) (3 c.h.)

BIOL 121 Environmental Conservation (GT-SC2) (3 c.h.)

BIOL 182 College Biology II/Cellular Biology (GT-SC2) (3 c.h.)

BIOL 182L College Biology II/Cellular Bio Lab (GT-SC1) (1 c.h.)

CHEM 125L Environmental Science Laboratory (GT-SC1) (1 c.h.)

ECON 201 Principles of Macroeconomics (GT-SS1) (3 c.h.)

ECON 202 Principles of Microeconomics (GT-SS1) (3 c.h.)

EN 101 Introduction to Engineering (2 c.h.)

ENG 305 Technical and Scientific Report Writing (3 c.h.)

EPER 104 Desert Orientation (2 c.h.)

EPER 105 Canyon Orientation (2 c.h.)

GEOG 101 Physical Geography (3 c.h.)

GEOG 102 Cultural Geography (3 c.h.)

GEOG 103 World Regional Geography (GT-SS2) (3 c.h.)

PHIL 201 Classics in Ethics (GT-AH3) (3 c.h.)

POLS 201 International Relations (GT-SS1) (3 c.h.)

POLS 340 Public Policy (3 c.h.)

POLS 445 Economic Development (3 c.h.)

SOC 248 Environmental Sociology (3 c.h.)

Senior Capstone Experience

This course allows the student to bring together interdisciplinary knowledge to:

- Synthesize and apply sustainability principles and concepts to the student's major;
- Synthesize and apply sustainability principles and concepts to disciplines outside of the student's area of study or interest;
- Enhance professional skills as applied to the student's major and the sustainability discipline by demonstrating competencies including research techniques, team building, oral presentations, strategy and policy analysis and development; and
- To prepare to obtain professional certifications and future jobs.

It is expected that the student will apply the acquired knowledge, competencies and skill set in a community-based setting (through experiential education) and demonstrate the ability to effect positive change around a sustainability issue.

Sustainability Capstone Project Prerequisites

The Capstone Project will be open to students who have declared a minor in Sustainability and have completed the core requirements and at least 75% of the minor's electives. It is preferred that this capstone experience be taken in the senior year, after all other minor requirements have been met.