

# **Department of Earth and Environmental Science**

## **Sustainability**

*Listed below are the requirements for the minor in Sustainability along descriptions of Sustainability courses. Requirements and course descriptions are taken from the 2020-2021 University of Mount Union Undergraduate Catalog. For the most up to date information and descriptions of all university courses see the latest undergraduate catalog on the University's web page.*

The minor in sustainability is designed to provide students with an understanding of and ability to utilize sustainability as a lens for systems thinking in any discipline. Sustainability is a balance of dependent systems to provide for the continued function and equilibrium of the planet's natural systems with those of society. Sustainability focuses on our economic, environmental, and social systems to 'sustain' the planet for future generations. Sustainability perspectives and practices are emerging as essential tools to have in today's ever-changing world. This minor will serve as a compliment to any major and provide skills that can be directly applied to students' professional and personal practices in the future. Mount Union undergraduate students in this minor will learn the ethical, practical, and innovative approaches used to balance the need for human consumption and development with environmental, economic, and social equity.

### **Requirements for the Minor in Sustainability**

Required Sustainability Courses	Semester Hours
SUS 100      Introduction to Sustainability	2
SUS 400      Sustainability Seminar	4

Choose at least 4 credit hours from the following environment related courses:

BIO 220	Ecology	4
BIO 230G	Conservation Biology	4
BIO 315	Physiological Ecology	4
BIO 321	Aquatic Ecology	4
BIO 322	Ecotoxicology	2
CHE 210	Environmental Chemistry	4
CHE 212	Introduction to Green Chemistry	4
ECE 330	Environmental Engineering	4
EME 445	Energy Generation and Utilization: Sustainable Practices	2
ENV 210V	Hydrology and Water Resources	4
or		
GEO 210V	Hydrology and Water Resources	4
ENV 350	Case Studies in Environmental Science	4

Choose at least 8 credit hours from the following Socio-Economics courses (No more than 4 credit hours can come from courses with the same prefix):

ECN 105S	Introduction to Economics	4
ECN 200S	Introduction to Microeconomics	4
EDU 315G	Multicultural Education	4
EGE 320G	Global Engineering	4
ENG 335	Literature and Human Rights	4
PHL 290V	Environmental Ethics	4
PHL 291	The Wilderness	4
POL 245G	Comparative Political Systems	4
POL 315V	Public Policy	4
POL 316V	Environmental Politics: Pollution, Sustainability and Climate Change	4
POL 340G	Global Competition: The Dynamics of International Political Economy	4
POL 348	Problems of Developing Nations	4
PSJ 150H	Introduction to Peacebuilding and Social Justice	4
PSJ 300V	Building Community, Building Peace	4
PHL 350	Social Responsibility and Personal Well-Being	4
REL 340V	Christian Social Ethics	4
SOC 200	Contemporary Social Issues	4

SOC 220	The Many Faces of Poverty	4
Total		18

Note: Many of the courses in the lists of electives above have prerequisites. Students must satisfy all prerequisites before taking these courses. Students can only count up to 4 semester hours from their major toward the sustainability minor.

## Sustainability Course Descriptions

### **SUS 100      Introduction to Sustainability**

This course will examine what is meant by the term sustainability and will provide foundational knowledge of the principles of sustainable development as a possible way to balance social, environmental, and economic equity. This course will draw upon a diverse set of case studies and issues of concern from around the world to illustrate the complexity of sustainability issues and their implicit trade-offs. These include but are not limited to: poverty, hunger, education, industry and resource use and availability, responsible consumption and production, affordable and clean energy, biodiversity impacts, planetary degradation, climate change, and local community-government partnerships. 2 semester hours.

### **SUS 400      Sustainability Seminar**

This course will provide students the opportunity to demonstrate a cohesive body of knowledge was developed through the progression of the minor. It will enhance the student's ability to connect the core concepts and theories of sustainability to their specific disciplines. This course will require collaboration among the interdisciplinary group of students to apply systems thinking and problem-solving to an identified sustainability issue. The students will be required to research the identified issue, identify appropriate partners and stakeholders, and formulate a plan or solution that is a synthesis of equitable economic growth, social well-being, and thriving natural systems. Prerequisite: SUS 100 and an additional 8-credit hours of approved electives, or permission of instructor. 4 semester hours.