

ENVIRONMENTAL SCIENCE MINOR

Learning Goals and Outcomes

Goal 1: Students will develop an interdisciplinary understanding of the importance of the environment, the extent to which societal actions impact it, the need for sustainability, and how sustainability can be achieved.

Outcome 1.1: Students will be able to describe the basic environmental challenges facing the world today, their causes, and possible solutions.

Outcome 1.2: Students will be able to describe the scientific, ethical, and moral imperatives behind the need to protect and sustain the environment.

Goal 2: Students will develop a strong foundation in the physical and natural sciences, including environmental science, biology, chemistry, and physics, as well as quantitative skills such as statistics and computation.

Outcome 2.1: Students will be able to explain basic concepts in biology, general chemistry, and physics.

Outcome 2.2: Students will be able to apply quantitative and computer skills such as statistics and Geographic Information Systems to answer research questions and implement solutions.

Goal 3: Students will develop the skills needed for a successful career in Environmental Science, including presentation skills, networking, and familiarity with career paths in the field.

Outcome 3.1: Students will be able to communicate scientific research through written and oral formats.

Outcome 3.2: Students will be able to improve and apply their skills to real-world issues in an internship with environmental professionals.

Requirements

The minor in environmental science requires completion of the following (along with their respective laboratory sections) and three additional courses representing at least two of the course groups (A, B and C).

Code	Title	Hours
BIO 101 & 101L or BIO 151L	Bio I: Cells and Bio I: Cells Lab Phage Lab	4
BIO 102 & 102L or BIO 150L	Bio II: Genetics and Bio II: Genetics Lab Bio I: Cells Lab Phage	4
BIO 201	Bio III: Organismic Biology	4
ENV 106 & 106L or BIO 429 & 429L	Exploring the Earth and Exploring the Earth Laboratory Environmental Science and Environmental Science Lab	4
ENV 102	Environmental Ethics	3
ENV 490	Environmental Sci Internship	3
ENV 390	Environmental Science Seminar (2 semesters)	0

CHM 120 & 120L	General Chemistry I and General Chemistry Lab I	4
CHM 125 & 125L	General Chemistry II and General Chemistry Lab II	4
CHM 210 & 210L	Organic Chemistry I and Organic Chemistry Lab I	4
Three additional courses representing at least two of the following course groups (A, B and C)		9
Group A: Biological Sciences		
BIO 401	Animal Behavior	
BIO 405	Biomechanics	
BIO 409	Ecology	
BIO 413	Plant Physiological Ecology	
BIO 414	Plant Systematics	
BIO 416	Microbiology	
BIO 419	Invertebrate Zoology	
BIO 422	Applied&Environ Microbio	
BIO 423	Evolution	
Group B: Physical Science		
ENV 302	Environmental Geology	
ENV 440	Environmental Toxicology	
CHM 420	Atmospheric Environmental Chem	
CHM 460	Aqueous Environmental Chem	
CHM 215 & 215L	Organic Chemistry II and Organic Chemistry Lab II	
Select one of the following:		
PHY 102 & 102L	General Physics II and General Physics Laboratory II	
PHY 106 & 106L	University Physics II and University Physics Lab II	
Group C: Environmental Studies		
ENV 471	Environmental Law	
ECN 370	Economic Development	
ECN 375	Environmental Economics	
ENG 314	Irish Environmental Writing	
ENG 426	Nature & Environmental Writing	
ENG 433	Environmental Justice	
ENG 434	Climate Change Stories	
GIS 101	Introduction to GIS	
GIS 201	Intermediate GIS	
GIS 172	Urban Economics	
ECN 382	Urban Economics	
GIS 175	Environmental Economics	
HIS 386	American Environmental History	
MGT 212	Organizational Sustainability	
SOC 316	Fair Trade Coffee: Study Tour	
ART 146	Sculpture and the Environment	
ART 177	Photography & Climate Crisis	
THE 339	Darwin, Dogma, and Ecology	
PHL 295	Philosophy of the Environment	
BIO 360	God and Evolution	
Total Hours		43