

Environmental Studies

Director: Stefan Schnitzer, Ph.D.

The major and minor offer interdisciplinary studies on issues related to the environment. Students take core and elective courses that address the environment from a wide range of fields, including biology and ecology, chemistry and physics, theology and ethics, economics, political science, sociology, anthropology and history. The major is ideal for students who intend to pursue a career that focuses on the environment (e.g., environmental management, restoration, mitigation, consulting, policy, economics), or who intend to pursue graduate or professional school in environmental science, law, business, policy, economics, philosophy, theology or ethics.

The specific learning outcomes for graduates of the Environmental Studies major are to:

- understand the basic organization of ecosystems and their response to environmental factors
- quantitatively analyze scientific and economic data related to the environment
- have a fundamental understanding of the social, economic, political, and historical components that influence the decision-making process with respect to the environment
- understand philosophical and ethical aspects of environmental issues
- gain practical experience working on environmental issues via internships
- understand and synthesize the study of the environment from the perspective of multiple disciplines

Environmental Studies Major

The goal of the major is to provide a comprehensive and in-depth education in environmental studies, which includes the study of the ecology of natural ecosystems and the processes by which humans influence, exploit, evaluate, value, mitigate and restore their environment. Students learn to understand and address pressing environmental issues through an interdisciplinary approach. Students complete 15 required courses (45-46 credits) and three elective courses (9-10 credits) that cover subjects from the sciences, social sciences, humanities and engineering.

Required courses

BIOL 1001	General Biology 1	3
BIOL 1002	General Biology 2	3
BIOL 2401	Ecology	3
MATH 1700	Modern Elementary Statistics ¹	3
PHYS 1009 or CHEM 1080	Earth and Environmental Physics Chemistry in the World	3-4
Required Experimental Biology course - choose one of the following:		3
BIOL 3402	Experimental Ecology and Field Biology	
BIOL 3802	Experimental Microbiology	
BIOL 4403	Tropical Ecology in Panama	
INES 4987	Environmental Studies: Applying the Internship Experience (or approved research experience)	3
INES 4997	Capstone in Environmental Studies	3
Required Economics courses		9
ECON 1103	Principles of Microeconomics	
ECON 1104	Principles of Macroeconomics	
ECON 4016	Environmental and Natural Resource Economics	
Required Political Science courses		6
POSC 2601 or POSC 2201	International Politics American Politics	
POSC 4193	Environmental Politics and Policy	
Required Environment and Society courses		6
ANTH 2203	Human Geography	
SOCI 3720 or SOCI 3750 or HIST 3800	Environment and Society Food, Water and Society Environmental History: Ecology and Society in the Modern World	
Elective courses: Choose three not previously completed courses from the following, including at least two upper division courses. ²		9-10
Environment and Society		
SOWJ 4700	Global Aid and Humanitarianism	

COMM 4330	Health, Science and Environmental Communication
ENGL 4775	Literature and Place
ENGL 4765	Material Cultures
HIST 3800	Environmental History: Ecology and Society in the Modern World
PHIL 3350	Philosophy of the Environment
SOCI 3750	Food, Water and Society
or SOCI 3720	Environment and Society
THEO 4440	Foundations of Ecological Ethics
Environmental Science and Anthropology	
BIOL 3404	Evolutionary Biology
BIOL 3406	Plant Biology
BIOL 3801	Microbiology
BIOL 4401	Advanced Ecology
CHEM 1080	Chemistry in the World
or PHYS 1009	Earth and Environmental Physics
PHYS 1007	Survey of Meteorology
ANTH 2201	Human Evolutionary Process
or ANTH 1201	Introduction to Biological Anthropology
ANTH 3153	Demography
ANTH 4144	The Rise of Agriculture
ANTH 4245	Archaeology of Complex Societies
ANTH 4316	Culture Change and Development
Political Science	
POSC 4216	American Public Policy
POSC 4221	Interest Group Politics
POSC 4331	Politics and Regulation
POSC 4661	The Political Economy of Development
Economics	
ECON 3003	Intermediate Microeconomic Analysis
ECON 4012	Urban and Regional Economics
ECON 4047	Development Economics
Engineering	
CEEN 3510	Environmental Engineering
CEEN 4515	Environmental Chemistry
CEEN 4550	Water Resources Planning and Management
CEEN 4715	Sustainable Engineering

Total Credit Hours

54-56

¹ MATH 4720, MATH 4740, PSYC 2001 or SOCI 2060 can be substituted to fulfill this requirement.

² Additional courses may be counted as electives with permission of the program director.

Environmental Studies Minor

The goal of the minor is to provide an overview of environmental studies, which includes the study of the ecology of natural ecosystems and the processes by which humans influence, exploit, evaluate, value, mitigate and restore their environment. Students learn to understand and address pressing environmental issues through an interdisciplinary approach. Students complete three required courses (9-10 credits) and four elective courses (12-13 credits) that cover subjects from the sciences, social sciences and humanities.

Required courses

BIOL 1001	General Biology 1	3
BIOL 2401	Ecology	3
PHYS 1009	Earth and Environmental Physics	3-4
or CHEM 1080	Chemistry in the World	

Elective courses (choose one from each category, excluding those completed as required courses) and a fourth from any category

12-13

Category 1: Environmental Science

BIOL 3402	Experimental Ecology and Field Biology
BIOL 3802	Experimental Microbiology
BIOL 4401	Advanced Ecology
BIOL 4403	Tropical Ecology in Panama
CEEN 3510	Environmental Engineering
CEEN 4515	Environmental Chemistry
CEEN 4550	Water Resources Planning and Management
CEEN 4715	Sustainable Engineering
CHEM 1080 or PHYS 1009	Chemistry in the World Earth and Environmental Physics
PHYS 1007	Survey of Meteorology

Category 2: Anthropology/Sociology

ANTH 2203	Human Geography
ANTH 3153	Demography
ANTH 4316	Culture Change and Development
SOCI 3720	Environment and Society
SOCI 3750	Food, Water and Society
SOWJ 4700	Global Aid and Humanitarianism

Category 3: Economics/Policy/Humanities

COMM 4330	Health, Science and Environmental Communication
ECON 4016	Environmental and Natural Resource Economics
ECON 4047	Development Economics
HIST 3800	Environmental History: Ecology and Society in the Modern World
PHIL 3350	Philosophy of the Environment
POSC 4193	Environmental Politics and Policy
POSC 4216	American Public Policy
POSC 4661	The Political Economy of Development
THEO 4440	Foundations of Ecological Ethics

Total Credit Hours

21-23