

MAJOR IN ENVIRONMENTAL STUDIES AND ENVIRONMENTAL SCIENCE - ENVIRONMENTAL STUDIES CONCENTRATION

The Environmental Studies Concentration is for students who are interested in environmental planning, regulation and policy, environmental health and educating others about environmental issues. Students interested in environmental sustainability are also typically Environmental Studies students. Environmental Studies tracks include Environmental Policy and Management, Environmental Geography, Environmental Health, Informal Environmental Education and Environmental Directed Studies.

Requirements

Along with completing the common required courses, students in the Environmental Studies Concentration complete additional units as they complete one of five tracks. The tracks are:

- Environmental Geographical Analysis
- Environmental Policy/Management
- Environmental Health
- Directed Environmental Studies
- Informal Environmental Education

All students in the program will complete the required courses establishing the scientific principles and mathematical skills needed as a foundation for more specialized study. They also will complete additional courses in the social sciences, an upper-level internship or research course and additional course work appropriate to the selected track.

Common Required Courses

Code	Title	Units
Natural Sciences		
BIOL 200 & 200L	BIOLOGY I: INTRODUCTION TO CELLULAR BIOLOGY AND GENETICS [LECTURE] and BIOLOGY I: INTRODUCTION TO CELLULAR BIOLOGY AND GENETICS [LAB]	4
BIOL 206 & 206L	BIOLOGY II: INTRODUCTION TO ECOLOGY AND EVOLUTION [LECTURE] and BIOLOGY II: INTRODUCTION TO ECOLOGY AND EVOLUTION [LAB]	4
CHEM 104	INTRODUCTION TO ENVIRONMENTAL CHEMISTRY ¹	4
GEOL 121	PHYSICAL GEOLOGY	4
Mathematics and Statistics		
MATH 119 or MATH 211	PRE-CALCULUS ² / CALCULUS FOR APPLICATIONS	3-4
Select one of the following:		3-4
MATH 231	BASIC STATISTICS	
MATH 237	ELEMENTARY BIostatISTICS	
GEOG 375	QUANTITATIVE METHODS IN GEOGRAPHY	

ECON 205	STATISTICS FOR BUSINESS AND ECONOMICS I	
Additional Writing Course		
ENGL 318 or GEOG 383	TECHNICAL AND SCIENTIFIC WRITING / NATURAL RESOURCES AND SOCIETY: A GEOGRAPHIC PERSPECTIVE	3
Environmental Geography, Ethics and Health		
GEOG 101	PHYSICAL GEOGRAPHY	3
GEOG 410	ENVIRONMENTAL GEOGRAPHY	3
HLTH 451	INTRODUCTION TO ENVIRONMENTAL HEALTH	3
PHIL 255	ENVIRONMENTAL ETHICS	3
Total Units		37-39

Environmental Geographical Analysis Track

Code	Title	Units
Required Courses		
ECON 201	MICROECONOMIC PRINCIPLES	3
ECON 375 or ECON 376	ENVIRONMENTAL ECONOMICS / NATURAL RESOURCE ECONOMICS	3
POSC 103 or POSC 207	AMERICAN NATIONAL GOVERNMENT / STATE GOVERNMENT	3
Select one of the following:		3
ENVS 411	WATER POLICIES OF THE UNITED STATES	
ENVS 420	ENVIRONMENTAL POLICY AND SUSTAINABLE MANAGEMENT	
ENVS 425	SCIENCE AND POLICY OF THE CHESAPEAKE BAY RESTORATION	
Geography Requirements		
GEOG 221	INTRODUCTION TO GEOSPATIAL TECHNOLOGY	3
GEOG 232	INTRO TO GEOGRAPHIC INFORMATION SCIENCE	4
GEOG 321	INTRODUCTION TO REMOTE SENSING AND PHOTOGRAMMETRY	3
GEOG 481	ENVIRONMENTAL IMPACT ANALYSIS	3
Select one of the following:		3
ENVS 482	ENVIRONMENTAL RESEARCH	
ENVS 485	ENVIRONMENTAL INTERNSHIP	
ENVS 491	SENIOR SEMINAR	

Electives
Select two additional courses, one from any Environmental Studies track AND one from any Environmental Science and Studies track

Total Units **34-35**

Environmental Policy / Management Track

Code	Title	Units
Required Courses		
ECON 201	MICROECONOMIC PRINCIPLES	3
ECON 202	MACROECONOMIC PRINCIPLES	3
ECON 375 or ECON 376	ENVIRONMENTAL ECONOMICS / NATURAL RESOURCE ECONOMICS	3
POSC 103	AMERICAN NATIONAL GOVERNMENT	3

or POSC 207	STATE GOVERNMENT	
Select one of the following:		3
ENVS 411	WATER POLICIES OF THE UNITED STATES	
ENVS 420	ENVIRONMENTAL POLICY AND SUSTAINABLE MANAGEMENT	
ENVS 425	SCIENCE AND POLICY OF THE CHESAPEAKE BAY RESTORATION	
Select one of the following:		3
ENVS 482	ENVIRONMENTAL RESEARCH	
ENVS 485	ENVIRONMENTAL INTERNSHIP	
ENVS 491	SENIOR SEMINAR	
Electives		
Select five of the following (additional prerequisites may be required):		15-16
ANTH 343	RESOURCE WARS OF THE 21ST CENTURY	
ANTH 370	TOPICS IN ANTHROPOLOGY ³	
BIOL 306	HUMAN ECOLOGY AND SUSTAINABILITY	
ECON 326	ECONOMIC DEVELOPMENT	
ECON 337	PUBLIC FINANCE	
ECON 351	URBAN ECONOMICS	
ECON 375	ENVIRONMENTAL ECONOMICS (if not taken as required)	
ECON 376	NATURAL RESOURCE ECONOMICS (if not taken as required)	
ECON 470	ADVANCED TOPICS IN ECONOMICS ³	
ENGL 401	GRANT AND ADVOCACY WRITING	
GEOG 412	GEOGRAPHIES OF CONSUMPTION AND WASTE	
GEOG 419	CLIMATE CHANGE: SCIENCE TO POLICY	
GEOL 301	SUSTAINABILITY AND THE USE OF NATURAL RESOURCES	
HLTH 310	INTRODUCTION TO PUBLIC HEALTH	
HLTH 311	CHRONIC AND COMMUNICABLE DISEASE	
PHIL 319	SCIENCE, TECHNOLOGY & VALUES	
POSC 304	POLITICS OF METROPOLITAN GROWTH AND CHANGE	
POSC 305	URBAN GOVERNMENT AND POLITICS	
POSC 470	SPECIAL TOPICS IN POLITICAL SCIENCE ³	
POSC 481	SEMINAR IN AMERICAN GOVERNMENT AND PUBLIC POLICY ³	
POSC 482	SEMINAR IN COMPARATIVE POLITICS ³	
WMST 345	WOMEN, ENVIRONMENT, AND HEALTH	
Select one additional elective from any Environmental Science and Studies track		3-4

Total Units **36-38**

Environmental Health Track

Code	Title	Units
Required Courses		
ECON 201	MICROECONOMIC PRINCIPLES	3
ECON 375	ENVIRONMENTAL ECONOMICS	3
or ECON 376	NATURAL RESOURCE ECONOMICS	
POSC 103	AMERICAN NATIONAL GOVERNMENT	3
or POSC 207	STATE GOVERNMENT	

Select one of the following: 3

ENVS 411	WATER POLICIES OF THE UNITED STATES
ENVS 420	ENVIRONMENTAL POLICY AND SUSTAINABLE MANAGEMENT
ENVS 425	SCIENCE AND POLICY OF THE CHESAPEAKE BAY RESTORATION

Select one of the following: 3

ENVS 482	ENVIRONMENTAL RESEARCH
ENVS 485	ENVIRONMENTAL INTERNSHIP
ENVS 491	SENIOR SEMINAR

Electives

Select five of the following: 15-16

BIOL 327	DANGEROUS DISEASES
GEOG 232	INTRO TO GEOGRAPHIC INFORMATION SCIENCE
GEOG 329	GEOGRAPHIES OF HEALTH
GEOG 385	POPULATION GEOGRAPHY
or SOCI 329	DEMOGRAPHY
GEOG 411	STUDIES IN NATURAL HAZARDS
GEOG 470	SPECIAL TOPICS IN GEOGRAPHY ³
HLTH 310	INTRODUCTION TO PUBLIC HEALTH
HLTH 311	CHRONIC AND COMMUNICABLE DISEASE
HLTH 333	FOOD SAFETY SCIENCE
HLTH 350	URBAN FOOD SYSTEMS
HLTH 407	VIOLENCE PREVENTION FOR HEALTH EDUCATORS
HLTH 435	INTRODUCTION TO EPIDEMIOLOGY
POSC 481	SEMINAR IN AMERICAN GOVERNMENT AND PUBLIC POLICY ³
WMST 345	WOMEN, ENVIRONMENT, AND HEALTH

Select one additional elective from any Environmental Science and Studies track 3-4

Total Units **33-35**

Directed Environmental Studies Track

All students selecting this track should, in consultation with their adviser, develop a coherent course of study that includes six electives.

Code	Title	Units
Required Courses		
ECON 201	MICROECONOMIC PRINCIPLES	3
ECON 375	ENVIRONMENTAL ECONOMICS	3
or ECON 376	NATURAL RESOURCE ECONOMICS	
POSC 103	AMERICAN NATIONAL GOVERNMENT	3
or POSC 207	STATE GOVERNMENT	

Select one of the following: 3

ENVS 411	WATER POLICIES OF THE UNITED STATES
ENVS 420	ENVIRONMENTAL POLICY AND SUSTAINABLE MANAGEMENT
ENVS 425	SCIENCE AND POLICY OF THE CHESAPEAKE BAY RESTORATION

Select one of the following: 3

ENVS 482	ENVIRONMENTAL RESEARCH
ENVS 485	ENVIRONMENTAL INTERNSHIP

ENVS 491	SENIOR SEMINAR
Electives	
Select five of the following: 15-16	
ANTH 343	RESOURCE WARS OF THE 21ST CENTURY
ANTH 370	TOPICS IN ANTHROPOLOGY ³
BIOL 306	HUMAN ECOLOGY AND SUSTAINABILITY
ECON 326	ECONOMIC DEVELOPMENT
ECON 337	PUBLIC FINANCE
ECON 351	URBAN ECONOMICS
ECON 375	ENVIRONMENTAL ECONOMICS (if not taken as required)
ECON 376	NATURAL RESOURCE ECONOMICS (if not taken as required)
ECON 470	ADVANCED TOPICS IN ECONOMICS ³
ENGL 401	GRANT AND ADVOCACY WRITING
ENVS 432	SPECIAL TOPICS IN ENVIRONMENTAL SCIENCE AND STUDIES
ENVS 471	INDEPENDENT STUDY IN ENVIRONMENTAL SCIENCE AND STUDIES
ENVS 491	SENIOR SEMINAR ³
GEOG 221	INTRODUCTION TO GEOSPATIAL TECHNOLOGY
GEOG 232	INTRO TO GEOGRAPHIC INFORMATION SCIENCE
GEOG 319	SOILS AND VEGETATION
GEOG 323	CARTOGRAPHY AND GRAPHICS I
GEOG 329	GEOGRAPHIES OF HEALTH
GEOG 377	METEOROLOGY
GEOG 383	NATURAL RESOURCES AND SOCIETY: A GEOGRAPHIC PERSPECTIVE (if not taken as required)
GEOG 385	POPULATION GEOGRAPHY
GEOG 393	TRANSPORTATION AND INFRASTRUCTURE PLANNING
GEOG 405	COMPREHENSIVE PLANNING
GEOG 411	STUDIES IN NATURAL HAZARDS
GEOG 412	GEOGRAPHIES OF CONSUMPTION AND WASTE
GEOG 413	SEVERE AND HAZARDOUS WEATHER
GEOG 414	GIS APPLICATIONS
GEOG 416	ADVANCED REMOTE SENSING: DIGITAL IMAGE PROCESSING AND ANALYSIS
GEOG 419	CLIMATE CHANGE: SCIENCE TO POLICY
GEOG 465	ADVANCED TECHNIQUES IN GIS
GEOG 470	SPECIAL TOPICS IN GEOGRAPHY ³
GEOG 471	GEOSPATIAL TECHNOLOGIES SPECIAL TOPICS
GEOG 481	ENVIRONMENTAL IMPACT ANALYSIS
GEOG 484	LAND USE PLANNING
GEOG 495	DIRECTED READNGS IN GEOGRAPHY ³
GEOG 496	INDEPENDENT STUDY IN GEOGRAPHY ³
GEOL 301	SUSTAINABILITY AND THE USE OF NATURAL RESOURCES
HLTH 435	INTRODUCTION TO EPIDEMIOLOGY

HLTH 491	HEALTH DIRECTED READINGS ³
PHIL 319	SCIENCE, TECHNOLOGY & VALUES
PHIL 380	PHILOSOPHICAL TOPICS ³
POSC 304	POLITICS OF METROPOLITAN GROWTH AND CHANGE
POSC 305	URBAN GOVERNMENT AND POLITICS
POSC 375	PUBLIC ADMINISTRATION
POSC 470	SPECIAL TOPICS IN POLITICAL SCIENCE ³
POSC 481	SEMINAR IN AMERICAN GOVERNMENT AND PUBLIC POLICY ³
POSC 482	SEMINAR IN COMPARATIVE POLITICS ³
SOCI 329	DEMOGRAPHY
WMST 345	WOMEN, ENVIRONMENT, AND HEALTH
Select one additional elective from any Environmental Science and Studies track 3-4	
Total Units	33-35

Informal Environmental Education Track

Code	Title	Units
Required Courses		
BIOL 205	GENERAL BOTANY	4
BIOL 207	GENERAL ZOOLOGY	4
BIOL 301	FIELD AND NATURAL SCIENCE	3
or BIOL 304	NATURAL HISTORY INTERPRETATION AND PUBLIC ENVIRONMENTAL EDUCATION	
BIOL 402	GENERAL ECOLOGY	4
or BIOL 435	PLANT ECOLOGY	
ENVS 485	ENVIRONMENTAL INTERNSHIP	3
SCIE 380	TEACHING SCIENCE IN THE SECONDARY SCHOOLS	3
Select Sequence 1 or Sequence 2:		6
Sequence 1		
ECON 201	MICROECONOMIC PRINCIPLES	
ECON 375	ENVIRONMENTAL ECONOMICS	
or ECON 376	NATURAL RESOURCE ECONOMICS	
Sequence 2		
POSC 103	AMERICAN NATIONAL GOVERNMENT	
or POSC 207	STATE GOVERNMENT	
Select one of the following:		
ENVS 411	WATER POLICIES OF THE UNITED STATES	
ENVS 420	ENVIRONMENTAL POLICY AND SUSTAINABLE MANAGEMENT	
ENVS 425	SCIENCE AND POLICY OF THE CHESAPEAKE BAY RESTORATION	
Electives		
Select three of the following:		10-12
BIOL 306	HUMAN ECOLOGY AND SUSTAINABILITY	
BIOL 353	INVERTEBRATE ZOOLOGY	
BIOL 432	VASCULAR PLANT TAXONOMY	
BIOL 455	FISH BIOLOGY	
BIOL 456	ORNITHOLOGY	
BIOL 458	MAMMALOLOGY	
BIOL 461	ENTOMOLOGY	

BIOL 467	HERPETOLOGY
ENVS 382	ENVIRONMENTAL EDUCATION AND SERVICE LEARNING IN THE TROPICS
GEOG 319	SOILS AND VEGETATION
GEOL 305	ENVIRONMENTAL GEOLOGY
Total Units	37-39

- ¹ The requirement of CHEM 104 may also be satisfied by successful completion of CHEM 131, CHEM 131L, CHEM 132, and CHEM 132L (8 units total).
- ² The requirement of MATH 119 or MATH 211 may also be satisfied by successful completion of MATH 273 or MATH 274.
- ³ Acceptable topics related to environmental science and studies. Please contact the Environmental Science and Studies program director for approval.

Four-Year Plan of Study

Sample Four-Year Plan

The selected course sequence below is an example of the simplest path to degree completion. Based on course schedules, student needs, and student choice, individual plans may vary. Students should consult with their adviser to make the most appropriate elective choices and to ensure that they have completed the required number of units (120) to graduate.

Freshman

Term 1	Units Term 2	Units
BIOL 200 & 200L (Core 8)	4 BIOL 206 & 206L	4
CHEM 104 (Core 7)	4 ECON 201 (Core 6)	3
MATH 119 or 211 (Core 3)	4 GEOL 121	4
Core 1 (or Core 2)	3 Core 2 (or Core 1)	3
	Core 13	3
	15	17

Sophomore

Term 1	Units Term 2	Units
GEOG 101	3 ECON 375 or 376	3
POSC 103 or 207	3 PHIL 255	3
Track Requirement	3 Track Requirement	3
Select one of the following:	3-4 Track Requirement	3
MATH 231	Core 5	3
MATH 237		
GEOG 375		
ECON 205		
Core 4	3	
	15-16	15

Junior

Term 1	Units Term 2	Units
POSC Environmental Upper-Level	3 ENGL 318 or GEOG 383 (Core 9)	3
Track Requirement	3 HLTH 451	3
Track Requirement	3 Track Requirement	3
Core 10	3 Track Requirement	3
	Core 11	3
	12	15

Senior

Term 1	Units Term 2	Units
Select one of the following:	3 Track Requirement (if needed) / Elective	3
ENVS 482	Track Requirement (if needed) / Elective	3
ENVS 485	Track Requirement (if needed) / Elective	3
ENVS 491	Track Requirement (if needed) / Elective	3
GEOG 410	3 Core 14	3
Track Requirement	4	
Track Requirement	3	
Core 12	3	
	16	15

Total Units 120-121

Learning Outcomes

1. Apply their knowledge of the sciences and the scientific method to collect, analyze and interpret data that they have collected or to critique the methods used by others to collect, analyze and interpret data.
2. Identify the cultural, economic, geographic and/or political facets of environmental problems/situations and relate their understanding of these components to particular situations.
3. Relate the theoretical background materials presented in natural science, social science or humanities courses to specific current environmental problems/dilemmas.
4. Students will display competency in essential skills required of a college graduate by reading, interpreting, analyzing and evaluating written discourse.
5. Students will display competency in essential skills required of a college graduate by researching a topic, develop an argument and organize supporting details (ILTC).