Environmental Studies

Bachelor of Arts in Environmental Studies
Undergraduate Minor in Environmental Studies
Master of Arts – Environmental Studies (http://catalog.uis.edu/graduate-students/cpaa/environmentalstudies/ma) (offered on campus and online)
Master of Science – Environmental Sciences (http://catalog.uis.edu/graduate-students/cpaa/environmentalstudies/ms)
Graduate Certificate (http://catalog.uis.edu/graduate-students/cpaa/environmentalstudies/#certificatetext)

www.uis.edu/ens/
Email: ens@uis.edu
Office Phone: (217) 206-6720
Office Location: PAC 309

Departmental Goals and Objectives
The goal of the Department of Environmental Studies is to enhance society’s ability to create an environmentally-acceptable future. The undergraduate curriculum is designed for students to gain an understanding of approaches to balancing social and economic needs with environmental realities. Students will acquire knowledge and skills based on three broad learning outcomes:

1. competency in scientific concepts when studying the environment;
2. capacity to critically examine environmental issues and apply contributions from the natural sciences, social sciences, and the humanities for understanding and resolution of environmental issues and concerns; and
3. ability to demonstrate and integrate knowledge of natural resource policy, regulations, and the current issues in natural resource management.

Advising
Students are expected to meet with an ENS advisor before beginning the major or minor. At that meeting, the student and advisor will prepare a course plan to ensure that all requirements will be met.

For students pursuing the B. A. in Environmental Studies, ENS 251 and ENS 271 should be taken as early as possible because these courses establish a foundation on which subsequent courses will build. ENS 451 must be taken during one of a student’s last two semesters, and can only be taken after successful completion of ENS 251, ENS 271, and at least five electives.

Grading Policy
To complete the B. A. degree, students must earn at least a C in each of the four required courses, and a C average (2.0 GPA) in the elective courses.

To complete the minor, students must earn at least a C in both of the two required courses (grades of C- or lower will not be accepted), and a C average (2.0 GPA) in the elective courses.

The Bachelor’s Degree
To earn a Bachelor of Arts in Environmental Studies, students must complete four core courses and seven elective courses with a minimum of two courses from each focus area. Of the elective courses, a minimum of four must be at the 400 level; two of the remaining electives must be either 300 or 400 level. In addition, students must complete all general education requirements in the UIS undergraduate curriculum. Up to nine semester hours of lower-division courses may be transferred from an accredited institution; the decision to accept transferred hours will be made on an individual basis by the department. Students are expected to meet with an ENS advisor soon after declaring the major.

Degree Requirements
Core Course Requirements
ENS 251 Introduction to Environmental Sciences 3
ENS 271 Introduction to Sustainability 3
ENS 451 Undergraduate Capstone 3
ENS 476 ECCE: Environmental Ethics 3-4

List of focus areas and appropriate electives
The 100- to 300-level elective courses listed below are each three credit hours. Undergraduate students enrolling in 400-level courses listed as “three or four hours” must enroll in the three-credit hour section. 400-level courses counted toward an undergraduate degree cannot be taken again and counted for credit toward a graduate degree.

Environmental Policy/Law/Planning
ENS 301 Environmental Justice in America
ENS 304 Mapping our Physical and Social World
ENS 401 Environmental Justice: Science, Policy, and Activism
ENS 403 Transportation: Problems and Planning Procedures
ENS 404 Fundamentals of Geographic Information Systems
ENS 419 Environmental Law
ENS 446 ECCE: Population and Public Policy
ENS 449 Agricultural Politics & Policy
ENS 485 Environmental Policies: Water Quality
MPH 486 ECCE: Solid and Hazardous Wastes Policy

Environmental Social Sciences/Humanities
ENS 101 Women and the Environment
ENS 201 Literature and the Environment
ENS 311 ECCE: Global Change in Local Places
ENS 331 ECCE: Evolution and Creationism
ENS 411 ECCE: Environmental Education
ENS 412/422 HIS 459 World Environmental Thought
ENS 418/438 HIS 438 American Environmental History
ENS 421 Environmental Economics
ENS/SOA 422 ECCE: Environmental Sociology
ENS 448 Sustainable Food Systems
ENS 461 ECCE: Geopolitics: Geographical Aspects of International Affairs
ENS 471 Culture and Conservation
ENS 475 Global Political Ecology
ENS 479 Writing and the Environment
<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>ENS 481</td>
<td>Forest Policy &amp; Management</td>
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<td>ENS 488</td>
<td>ECCE: China's Environment and the World</td>
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### Environmental Sciences

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<tbody>
<tr>
<td>ENS 151</td>
<td>Earth Science</td>
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<tr>
<td>ENS 262</td>
<td>Environmental Physical Geography</td>
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<tr>
<td>ENS 405</td>
<td>Fundamentals of Remote Sensing</td>
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<tr>
<td>ENS 425</td>
<td>Ecological Issues</td>
</tr>
<tr>
<td>ENS/BIO 444</td>
<td>Aquatic Ecology</td>
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<tr>
<td>ENS/BIO 445</td>
<td>Biology Of Water Pollution</td>
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<tr>
<td>ENS 447/ CHE 431</td>
<td>Environmental Chemistry</td>
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<tr>
<td>ENS 463</td>
<td>Our Changing Climate</td>
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<td>ENS 464</td>
<td>Palaeoecology</td>
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<td>ENS 465</td>
<td>Water Resources and Society</td>
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<td>ENS 468</td>
<td>Environmental Geology</td>
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<td>ENS 472</td>
<td>Urban Environments</td>
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<td>ENS 477</td>
<td>Renewable Energy</td>
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<td>BIO 371</td>
<td>Principles Of Ecology</td>
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<td>CHE 361</td>
<td>ECCE: Global Greening for a Sustainable Future</td>
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<td>CHE 363</td>
<td>ECCE: Energy and the Environment</td>
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**Total Hours:** 34

With approval of a student petition that specifies the elective category, students may count up to four hours of ENS 440 Topics in Environmental Studies.

### Environmental Studies Minor

To earn a minor in Environmental Studies, students must complete a minimum of 16 credit hours, which includes two core courses and a minimum of three elective courses. Students are required to take at least three elective courses. At least one elective must be at the 400-level. No more than two electives may be taken from any one of the categories listed below. The Department of Environmental Studies may approve up to seven semester hours of lower- and upper-division transfer credits toward the undergraduate minor in Environmental Studies. Students are expected to meet with an ENS advisor before beginning the minor.

#### Required Core Courses

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<tr>
<td>ENS 251</td>
<td>Introduction to Environmental Sciences</td>
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<tr>
<td>ENS 271</td>
<td>Introduction to Sustainability</td>
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The 100- to 300-level elective courses listed below are each three credit hours. Undergraduate students enrolling in 400-level courses listed as “three or four hours” must enroll in the three-credit hour section. 400-level courses counted toward an undergraduate degree cannot be taken again and counted for credit toward a graduate degree.

#### Environmental Policy/Law/Planning

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<td>Mapping our Physical and Social World</td>
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<tr>
<td>ENS 401</td>
<td>Environmental Justice: Science, Policy, and Activism</td>
</tr>
<tr>
<td>ENS 403</td>
<td>Transportation: Problems and Planning Procedures</td>
</tr>
<tr>
<td>ENS 404</td>
<td>Fundamentals of Geographic Information Systems</td>
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**Total Hours:** 16

With approval of a student petition that specifies the elective category, students may count up to four hours of ENS 440 Topics in Environmental Studies.
Courses

**ENS 101. Women and the Environment. 3 Hours.**
This course will examine how gender has influenced environmental movements in both developed and developing countries over the past three decades. Emphasis will be placed on the role of women in environmental protection, health, and justice movements. Students in this course will understand why women, along with other oppressed groups, experience environmental damages disproportionately and why the well-being of the natural environment is a feminist issue. Course Information: This course fulfills a general education requirement at UIS in the area of Comparative Societies Social Sciences.

**ENS 151. Earth Science. 3 Hours.**
This course introduces the physical processes and materials on our planet including natural resources, natural disasters, and climate. Understanding the dynamics that make up Earth and the discoveries leading to this understanding allows us to grasp the impact the Earth has on society and our impact on the Earth. Course Information: This course fulfills a general education requirement at UIS in the area of Physical Science without a Lab.

**ENS 201. Literature and the Environment. 3 Hours.**
Explore and examine the historical chronology of principle American and European literature addressing the relationship between humans and the natural environment. Course Information: This course fulfills a general education requirement at UIS in the area of Humanities.

**ENS 251. Introduction to Environmental Sciences. 3 Hours.**
Basic processes and dynamics of ecosystems and development of societal values pertinent to earth resources. Major environmental questions examined, along with options and implications involved in resolution. Course Information: This course fulfills a general education requirement at UIS in the area of Life Science without a Lab (IAI Code: L1 905).

**ENS 262. Environmental Physical Geography. 3 Hours.**
The physical elements of the landscape are examined with attention focused on climate and weather, the water balance, landforms, soils and vegetation. Interrelationships between the various environmental elements and their influence on the changing natural landscape are noted. A variety of environmental problems are examined. Course Information: This course fulfills a general education requirement at UIS in the area of Physical Science without a Lab (IAI Code: P1 909).

**ENS 271. Introduction to Sustainability. 3 Hours.**
The course will introduce students to the concept of sustainability and examine the ways in which human systems and human agency can impact environmental conditions. We will analyze this concept and consider a number of different definitions, applications and critiques. Students will develop knowledge of sustainability from several viewpoints within the social and natural sciences. The course will also demonstrate how humans can take actions to reverse environmental harm and improve sustainability.

**ENS 301. Environmental Justice in America. 3 Hours.**
Evaluates environmental justice as a public policy by exploring issues of inequities and discrimination resulting from use and abuse of the environment through human settlement, industrial facility siting, and environmental rules and regulations.

**ENS 304. Mapping our Physical and Social World. 3 Hours.**
In this course, students will begin to explore the ways in which we map our world and our reasons for doing so. The course covers basic mapping concepts and includes the creative and analytical elements of map development. Students will have the opportunity to explore various mapping technologies, learn how data for maps are acquired and analyzed in our digital world, and discover applications for use in the social and natural sciences.

**ENS 311. ECCE: Global Change in Local Places. 3 Hours.**
This course will examine environmental transformations in a global perspective. In doing so, we will seek to understand how changes in global social systems and environmental systems are interrelated. A major focus will be on the processes of “globalization” in the modern world system, and examining the ways in which it relates to environmental issues, with an emphasis on social justice. The course will help us to develop a deeper understanding of the ways that global social processes affect diverse communities throughout the world by focusing on environmental change, and in return how these changes in ecological systems affect communities and social life. We will explore a number of environmental transformations and locations developing an interdisciplinary analysis that draws on the social and natural sciences. Course Information: This course fulfills an Engaged Citizenship Common Experience requirement at UIS in the area of Global Awareness.

**ENS 331. ECCE: Evolution and Creationism. 3 Hours.**
Examines the controversy over teaching creationism in public schools. Addressing the problem from several perspectives including the natures of science and religion and the characteristics of creationism and scientific evolution. Also addressed are the issues of public policy, First Amendment rights and the courts’ decisions. Course Information: This course fulfills an Engaged Citizenship Common Experience requirement at UIS in the area of ECCE U. S. Communities.

**ENS 381. Foundations of Environmental Policy. 3 Hours.**
Introduces the major frameworks of US Environmental Policy. Examines the trajectory of environmental policy development from its inception to the present considering aims, means, successes, and persistent as well as emergent challenges. International environmental policy and selected examples from non-US national contexts are also addressed.

**ENS 401. Environmental Justice: Science, Policy, and Activism. 3,4 Hours.**
This course investigates connections between environmental quality and social justice in U.S. and international contexts. Does pollution pose unfair risks to some groups more than others? Do humans have moral obligations toward animals or ecosystems? Does global climate policies help or hurt locals? Students will explore such questions and ways people work to solve them.

**ENS 403. Transportation: Problems and Planning Procedures. 3,4 Hours.**
Primary attention is given to the American metropolitan transportation problem. Basic transportation planning methodologies are presented and transportation energy efficiency is evaluated. Case studies on transportation problems are presented.

**ENS 404. Fundamentals of Geographic Information Systems. 4 Hours.**
Introduction to the concepts and tools of geographic information system and science. Emphasizes basic concepts of design and application of GIS in a variety of fields. Hands-on experience with GIS software.
ENS 405. Fundamentals of Remote Sensing. 4 Hours.
The main objective of this course is to introduce students to the principles and techniques necessary for applying remote sensing to diverse issues in natural resources. The course emphasizes a hands-on learning environment with theoretical and conceptual underpinnings in both aerial and satellite remote sensing. Primary focus will be placed on digital image interpretation, analysis, and processing for a broad range of applications.

ENS 411. ECCE: Introduction to Environmental Education. 4 Hours.
Presents an overview of environmental education content and strategies for teaching all levels of students about the environment. Students will explore identification, evaluation, and application of instructional resources including K-12 environmental education.
Course Information: This course fulfills an Engaged Citizenship Common Experience requirement at UIS in the area of ECCE U.S. Communities.

ENS 412. World Environmental Thought. 4 Hours.
Examines human reactions to natural surroundings in a variety of cultural contexts, including ancient Chinese, Hindu, African, Native American, and Judeo-Christian. Compares and contrasts attitudes concerning the value of wilderness and the exploitation of natural resources. Considers the problem of understanding nature and our relationship with nature as human beings. Course Information: Same as HIS 459.

ENS 415. Undergraduate Research. 1-4 Hours.
Advanced investigation of specific interaction between people and environment. Course Information: Student must have permission of the faculty member under whom the work will be done. Substantial research paper required.

ENS 418. American Environmental History. 4 Hours.
Study of the American land that examines human attitudes toward both the wilderness and the quest for resources and the actual use and abuse of the natural world. Beginning with the 16th century, the course focuses on the conflicting advocacies of exploitation, preservation, and conservation. Course Information: Same as HIS 438.

ENS 419. Environmental Law. 4 Hours.
Surveys the major federal statutes and regulatory schemes relating to environmental quality; analyzes and compares the contrasting approaches to regulation that have been used. Focuses on the interaction of law and policy and considers the roles of Congress, the regulatory agencies, and the courts in defining and implementing environmental mandates. Course Information: Same as LES 419, MPH 419, and PSC 419.

ENS 420. Key Concepts and Cases in Environmental Law. 3-4 Hours.
Examines classic and contemporary cases in environmental law, with attention to social, political, and ecological context as well as legal reasoning. Students will investigate how environmental issues are framed by US constitutional provisions, and linked through legal mobilization with a diverse range of concerns, including natural resource use, private property, religious culture, and economic development. The course will conclude by considering instances of environmental legal mobilization.

ENS 421. Environmental Economics. 4 Hours.
Basic theoretical tools necessary to examine current environmental problems from an economic standpoint. Covers externalities, cost assignment, and environmental problems associated with economic growth.
**ENS 451. Undergraduate Capstone. 3 Hours.**
This is the culminating course in the environmental studies BA degree and must be taken during a student's final undergraduate year. The course will integrate knowledge from the diverse areas of environmental thought. It will bring together important program themes and apply knowledge, competencies and skills acquired throughout the program. The central project for the course is an independent research paper or other approved product that will document the student's ability to incorporate the knowledge from the program and apply it to an original project. Course Information: Prerequisite: ENS 251 and ENS 271.

**ENS 461. ECCE: Geopolitics: Geographical Aspects of International Affairs. 3,4 Hours.**
Examines strategic geopolitical issues; problems relating to food, natural resources, population change, and technological development will be evaluated regarding international development. Addresses global issues from a geographic perspective. Course Information: This course fulfills an Engaged Citizenship Common Experience requirement at UIS in the area of Global Awareness.

**ENS 463. Our Changing Climate. 3,4 Hours.**
Examines processes that cause the earth's climates to change. Focuses on the role of humans as active and passive agents of climatic change. Future potential ecosystem and landscape changes are discussed. Course Information: This course fulfills a general education requirement at UIS in the area of Physical Science without a Lab.

**ENS 464. Paleoecology. 4 Hours.**
Paleoecology is the study of the interaction of organism with one another and with the physical surroundings in the geologic past. In addition to an introduction of methodology, this course will emphasize the practical aspects of using paleoecology to understand current and future conditions in light of environmental change.

**ENS 465. Water Resources and Society. 4 Hours.**
Beginning with a historical perspective on human use and influence of water, this course samples the basics of the hydrologic cycle and water science, worldwide water quality and quantity issues, and water laws and the subsequent conflicts, both domestic and international.

**ENS 468. Environmental Geology. 4 Hours.**
Relationships between humans and the geological environment, using examples from Midwestern natural history as case studies. Topics include geologic principles, ground water, energy, minerals, mining, pollution, and preparation of decisions on the geologic environment.

**ENS 471. Culture and Conservation. 3,4 Hours.**
Protected areas are a key part of a global strategy to conserve biodiversity, but ecological goals are sometimes undermined by social and political conflict. This course will explore strategies for better integrating local communities (and "culture") in protect areas management to improve the social and environmental sustainability of conservation initiatives.

**ENS 472. Urban Environments. 3,4 Hours.**
This course questions the idea that cities are places where nature is absent. It will investigate cities from ecological and social science perspectives by exploring the role of nature in urban development, the implications of urban activities on local and distant ecosystems, and the social values that guide urban practices and sustainability.

**ENS 475. Global Political Ecology. 3,4 Hours.**
This course explores political ecology by focusing on human relationships with things including coffee, CO2, garbage, lawns, French fries, and sea turtles. It also presents concepts and methods to help you explain current socio-environmental phenomena and the messy multi-level connections between things, people, knowledge, and power dynamics in a globalized world.

**ENS 476. ECCE: Environmental Ethics. 3,4 Hours.**
Introduces students to the multidisciplinary nature of environmental ethics, major philosophical issues and arguments within the growing field of environmental ethics, and the application of environmental ethics to environmental issues and problems. Course Information: This course fulfills an Engaged Citizenship Common Experience requirement at UIS in the areas of Global Awareness.

**ENS 477. Renewable Energy. 3,4 Hours.**
This course provides an overview of renewable energy, including technologies such as passive and active solar thermal, photovoltaics, wing turbines, hydropower, biomass, and alternative transportation options. Students will learn about the basics of energy, energy conservation strategies, energy-efficient design principles, grid design, politics of energy, and energy related careers.

**ENS 479. Writing and the Environment. 4 Hours.**
Writing intensive author workshop which explores literary perceptions of environment in theme and style of the nature genre.

**ENS 481. Forest Policy & Management. 3,4 Hours.**
This course provides a survey of historical and current U.S. forest management policies and the effects of those policies on management practices. Students will also explore the contributions of public perceptions of forest and scientific understandings of forest systems to developments in forest management policies and to changes in management practices.

**ENS 483. Environmental Policies: National Environmental Policy Act. 4 Hours.**
Examine the history and design of the National Environmental Policy Act (NEPA). Evaluate contemporary critiques of NEPA and learn best practices for improved environmental planning through NEPA.

**ENS 485. Environmental Policies: Water Quality. 4 Hours.**

**ENS 488. ECCE: China’s Environment and the World. 3,4 Hours.**
This course examines the historical, cultural, and institutional contexts of environment change and actions in China. The course also assesses the interplays of drivers and processes at multiple levels - local to global - that shape China’s environment, past and present, and what those challenges mean for the future of the world. Course Information: This course fulfills an Engaged Citizenship Common Experience requirement at UIS in the area of Global Awareness.

**ENS 499. Undergraduate Tutorial. 1-6 Hours.**
Intended to supplement, not supplant, regular course offerings. Students interested in a tutorial must secure the consent of the faculty member concerned before registration and submit any required documentation to him or her.

**ENS 501. Land Use and Environmental Planning. 4 Hours.**
Examines land use and environmental planning principles and practice. Methods of preparing an effective land use and environmental plan including analysis, formulation of policies, planning tools and techniques, and plan evaluation are discussed.
ENS 503. Advanced GIS Applications. 4 Hours.
Advanced techniques and applications of geographic information system. Topics covered include GIS data structure, data analysis, GPS data acquisition, geodatabase, GIS modeling, and Geo-statistics.

ENS 505. Historic Environmental Preservation. 4 Hours.
Preservation policies and their applications in planning are considered. History of preservation movements and of American architecture and landscapes are examined, as well as current preservation technologies. Case studies of the politics and economics of preservation. Field work required. Course Information: Same as HIS 505.

ENS 510. Thesis. 1-4 Hours.
NOTE: If the thesis is not completed by the time four hours are accrued in continuing enrollment, students must register for ENS 511 for zero credit hours (one billable hour) in all subsequent semesters until the thesis is completed. Course Information: May be repeated to a maximum of 4 hours. Prerequisite: ENS 553.

ENS 511. Thesis Continuing Enrollment. 0 Hours.
Refer to NOTE in course description for ENS 510. Course Information: May be repeated.

ENS 515. Graduate Research. 1-4 Hours.
Advanced investigation of specific interaction between people and environment. Student must have permission of the environmental studies department faculty member under whom the work will be done. Substantial research paper required for credit, maximum of four hours may be applied toward M.A. or M.S. degree.

ENS 520. Graduate Project. 1-4 Hours.
NOTE: If the project is not completed by the time four hours are accrued in continuing enrollment, students must register for ENS 529 for zero credit hours (one billable hour) in all subsequent semesters until the project is completed. Course Information: May be repeated to a maximum of 4 hours. Prerequisite: ENS 553.

ENS 529. Graduate Project Continuing Enrollment. 0 Hours.
Refer to NOTE in course description for ENS 520. Course Information: May be repeated.

ENS 530. Internship. 1-4 Hours.
Course Information: May be repeated up to 4 time(s).

ENS 540. Topics in Environmental Studies. 1-4 Hours.
Intensive study of a current environmental issue. Description of topic for a given semester will be stated in the course schedule. Course Information: May be repeated if topics vary.

ENS 542. Ecosystem Management. 4 Hours.
Introduces the history of ecosystem management, provides the biological and ecological background necessary for ecosystem management, and incorporates various human dimensions to implement such knowledge for effective ecosystem management. Class sessions will combine lectures, discussions, group case study, and field trips. Course Information: Prerequisite: Ecology, conservation biology, or permission of instructor.

ENS 544. Concepts of Ecology Laboratory. 1 Hour.
Field and lab-based analysis of basic ecological principles and concepts applicable at scales ranging from individuals to ecosystems. Course Information: Co-requisite: ENS 546.

ENS 545. Comparative Cultural Ecology. 4 Hours.
Examines diverse human cultures through comparative analysis of human interaction with the natural environment. Explore human-ecological interaction and its theoretical development.

ENS 546. Concepts Of Ecology. 3 Hours.
Introduces basic ecological principles and concepts, structures and functions of ecological systems, habitat analysis with focus on terrestrial ecosystems, and collection and analysis of data. Course Information: Corequisite: ENS 544. Laboratory work required.

ENS 550. Capstone Closure. 4 Hours.
Application of fundamentals in a professional setting; meets program and campus requirements for master's degree closure. NOTE: If ENS 550 is not completed during the initial four-hour enrollment, students must register for ENS 557 for zero credit hours (one billable hour) each fall and spring semester until the requirements for ENS 550 are completed. Students who complete ENS 550, but earn a No Credit grade, must repeat ENS 550 within one year. A second grade of No Credit will preclude a student from earning an ENS degree. Course Information: Prerequisite: Approved Internship Plan; 28 + hours, including the ENS core.

ENS 551. Environmental Natural Sciences. 4 Hours.
Scientific knowledge required to understand and to solve environmental problems. Basic concepts of earth science, physics, chemistry, biology, and ecology explored to bring the biological and physical world into perspective as an integrated continuum of structures, processes, and functions.

ENS 552. Environmental Social Sciences and Humanities. 4 Hours.
Concepts and methods of sociology, anthropology, history, demography, economics, political science, psychology, geography, philosophy, and literature explored in integrative fashion. Focus on understanding processes, patterns, and alternatives of relationships of society to the biophysical world.

ENS 553. Research Methods in Environmental Studies. 4 Hours.
Prepares students for independent research toward their thesis/project. Course focuses on improving the following skills: critical thinking, environmental research, design, and data analysis. Concept paper for thesis or project developed.

ENS 556. Environmental Issues and the Media. 4 Hours.
This course will examine the media's coverage of environmental issues, as well as the media's influence on cultural context, social understanding of environmental concerns, and environmental policy.

ENS 557. Capstone Closure Continuing Enrollment. 0 Hours.
Refer to NOTE in course description for ENS 550. Course Information: May be repeated. Prerequisite: Instructor approval.

ENS 558. Environmental Policy and Analysis. 4 Hours.
Identify different environmental policy designs used in the management of air, water, and natural resources. Employ discourse analysis to examine strengths, weaknesses, and underlying assumptions associated with different policy design choices.

ENS 559. Natural Resources: Policy and Administration. 4 Hours.
Review the legal and institutional frameworks for managing water, grasslands, forests, wilderness, fish, and wildlife. Identify challenges to effective natural resource policy implementation in the U.S. and highlight emerging policy solutions.
ENS 589. The Public and Environmental Planning. 4 Hours.
Public involvement is a part of many municipal, state, and federal
decision making processes involving the environment. This class
examines the history of public involvement in environmental
decision making, introduces theories of public involvement, and
prepares students to apply best practices for public involvement in
environmental planning. Course Information: Same as PAD 589.

ENS 599. Tutorial. 1-12 Hours.
Intended to supplement, not supplant, regular course offerings.
Students interested in a tutorial must secure the consent of the faculty
member concerned before registration and submit any required
documentation to him or her.