

Environmental Studies (ENVS)

- Environmental Studies is an interdisciplinary major in which students may earn a BA or BS degree depending on how the general education natural science requirement is satisfied, the focus courses chosen, and the nature of the senior capstone project.

Chair

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Professors

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Requirements for the Major in Environmental Studies

A student must complete the seven core Environmental Studies requirements (below), select and fulfill the requirements for a BA or BS track, and complete an individualized focus of ENVS study for a total of 30-41 semester hours depending on the student's track and ENVS focus.

Requirements for the Major, Bachelor of Arts Degree

ENVS 101	Introductory Seminar in Environmental Studies (with lab)	4
ENVS 201	Introduction to Environmental Social Science	3
ENVS 202	Introduction to Environmental Humanities	3
ENVS 203	Introduction to Environmental Science (with lab)	4
ENVS 348	Developing the Capstone Proposal	1
ENVS 449	Senior Capstone Project	3
ENVS 450	Environmental Studies Senior Seminar	3
Select at least nine credit hours of ENVS Focus Courses ¹		9
Total Hours		30

Requirements for the Major, Bachelor of Science Degree

Select one course from the following:		3 to 4
COSC 201	Modeling & Simulation	
ENVS 240	Quantitative Environmental Methods & Models (with lab)	
MATH 201	Modeling & Simulation	
Required Courses		29
ENVS 101	Introductory Seminar in Environmental Studies (with lab)	
ENVS 150	Introduction to Earth System Science (with lab)	
ENVS 151	Analyzing & Modeling Earth Systems (with lab)	
ENVS 201	Introduction to Environmental Social Science	
ENVS 202	Introduction to Environmental Humanities	

ENVS 203	Introduction to Environmental Science (with lab)	
ENVS 348	Developing the Capstone Proposal	
ENVS 449	Senior Capstone Project	
ENVS 450	Environmental Studies Senior Seminar	
Select three ENVS focus courses, at least two of which are laboratory science courses. ¹		11 to 12
Total Hours		43-45

¹ Focus courses emphasizing environmental issues are chosen on an individual basis from an approved list. Students should work in close consultation with their academic adviser. Two of the three focus courses must be at the 300-level or higher. For students on the BS track, two of the three focus courses should be laboratory science courses.

ENVS Focus Courses

ANTH 225	Human Ecology	3
ANTH 311	Ecological Anthropology	3
ANTH 314	Prehistory and History of Native American Culture in the Southeast	3
ARTS 357	Shaping Space: Environmental Art & Installation	3
BIO 241	Introduction to Biostatistics	3
BIO 305	Conservation Biology	3
BIO 313	Plants & Ecosystems	3
BIO 314	Plant & Ecosystems (with lab)	4
BIO 322	Biology of the Vertebrates	3
BIO 323	Biology of the Vertebrates (with lab)	4
BIO 370	Field Biology (with lab)	4
BIO 372	Field Botany (with lab)	4
BIO 382	Ecology (with lab)	4
BIO 383	Ecotoxicology	3
BIO 385	Marine Biology	3
BIO 386	Freshwater Biology (with lab)	4
BIO 399	Evolution	3
BIO 497	Case Studies in Environmental Issues	3
BUS 350	Business and the Environment: The Sustainable Enterprise	3
CHEM 224	Environmental Chemistry (with lab)	4
ECO 333	Environmental Economics	3
ECO 334	Economics of Property Rights	3
ECO 336	Economics of Native Americans	3
ECO 338	Water: Law, Economics and Policy	3
ENVS 240	Quantitative Environmental Methods & Models (with lab)	4
ENVS 312	US Environmental Policy	3
ENVS 317	US Environmental History	3
ENVS 320	Field Experience: Environmental Humanities & Social Sciences	1
ENVS 326	Introduction to Environmental and Nature Writing	3
ENVS 327	Major Themes in Environmental Writing	3

ENVS 330	Art & Earth: Materials, Processes, and Perceptions (with lab)	4
ENVS 332	Hydrology & Water Resources (with lab)	4
ENVS 333	Environmental Geology (with lab)	4
ENVS 336	Climate Change (with lab)	4
ENVS 341	Health & the Environment	3
ENVS 400	Regional Environmental Problems (with lab)	4
GEOG 201	Introduction to Geography	3
GEOG 280	Selected Topics in Geography	1 to 4
GEOG 480	Advanced Topics in Geography	1 to 4
HIST 317	The American Frontier	3
HIST 386	History of Science	3
HUM 475	Independent Study in Interdisciplinary Learning Communities	3
INTL 382	Global Issues	3
INTL 423	NGOs in World Politics	3
MLLC 223	Modern Languages Seminar in Global Perspectives: Different Identities, Common Destinies	3
PHIL 215	Environmental Ethics	3
PHIL 223	Philosophy of Science	3
PHIL 225	Science and Religion	3
PSY 300	Learning & Adaptive Behavior (with lab)	4
REL 325	Religion, Literature & the Environment	3
SOC 302	Environmental Sociology	3

Requirements for the Minor

ENVS 101	Introductory Seminar in Environmental Studies (with lab)	4
ENVS 201	Introduction to Environmental Social Science	3
ENVS 202	Introduction to Environmental Humanities	3
ENVS 203	Introduction to Environmental Science (with lab)	4
ENVS 450	Environmental Studies Senior Seminar	3
Total Hours		17

Environmental Studies

ENVS 101. Introductory Seminar in Environmental Studies (with lab). 4 Hours.

This foundational seminar introduces students to interdisciplinary approaches in contemporary environmental issues. The seminar considers key environmental issues, bringing cultural, scientific, historical, political, social, and economic perspectives to bear on each. The course is arranged thematically, with units on topics such as tropical deforestation, global warming, energy use, and resource depletion. This course will also investigate local environmental issues, study relevant scientific findings, explore the interactions of human communities with non-human nature, and probe the ecological, cultural, and ethical implications of these interactions.

ENVS 150. Introduction to Earth System Science (with lab). 4 Hours.

Students will develop knowledge of Earth system components -- atmosphere, hydrosphere, lithosphere, biosphere, and exosphere -- with emphasis on their connections and interactions. They will use and integrate approaches of disciplinary sciences and mathematics to investigate physical and behavioral properties of Earth system components, as well as considering the human and social context (anthroposphere) in which environmental problems develop as the system is stressed. Students will develop skills in observation, investigation, analysis, team interaction and communication through field and laboratory experiences.

ENVS 151. Analyzing & Modeling Earth Systems (with lab). 4 Hours.

Students will build on knowledge of Earth systems acquired in ENVS 150 by continuing to focus on how different earth systems (lithosphere, hydrosphere, atmosphere, biosphere) interact to create the environments in which we live and the ways people affect and are affected by these environmental systems. This course will explore four contemporary environmental issues: Peak oil and the viability and sustainability of alternative energy solutions; surface water pollution and protection; causes and effects of climate change; and over population and the limits to growth. Students will also complete a team-based research project.

Prerequisite: ENVS 150 with a minimum grade of D.

ENVS 201. Introduction to Environmental Social Science. 3 Hours.

Environmental Social Science is an interdisciplinary and cross-cultural investigation into the impact of society on the environment and the environment's impact on society. The class will be organized around case studies from Asia, Oceania, Africa, Europe and the Americas. It will look at local, national and international environmental issues ranging from the ecological toll of regional industries and agricultural practices to the environmental costs of economic globalization, from water pollution and soil depletion in communities to global warming.

Prerequisite: ENVS 101 with a minimum grade of D.

ENVS 202. Introduction to Environmental Humanities. 3 Hours.

This course is an introduction to the interdisciplinary study of environmental issues in the humanities, including philosophy, art history, literature, film, history and religion. Through the study of the ways in which the environment is represented in literature, art, and film, we will attempt to understand the central role that human environmental perceptions have played and continue to play in creation of both sustainable and unsustainable relations with nature.

Prerequisite: ENVS 101 with a minimum grade of D.

ENVS 203. Introduction to Environmental Science (with lab). 4 Hours.

This course will be an introduction to the application of the scientific method to the study of the environment. It will focus on the interdependence of ecological systems, the sources of energy and cycles of resources in a variety of environments, and the forces affecting environmental change.

Prerequisite: ENVS 101 with a minimum grade of D.

ENVS 240. Quantitative Environmental Methods & Models (with lab). 4 Hours.

Students will develop quantitative and environmental literacy by analyzing real-world environmental situations and problems with the use of mathematics and statistics accessible to students with an intermediate algebra background. Students will learn how to use dynamic systems and geographical information systems to model and understand natural and social processes relevant to environmental issues and policy decisions.

Prerequisite: ENVS 101 with a minimum grade of D.

ENVS 280. Selected Topics in Environmental Studies. 1 to 4 Hours.

Selected topics in Environmental Studies at the introductory or intermediate level.

ENVS 312. US Environmental Policy. 3 Hours.

This course will provide an overview of environmental politics and policy in the United States. Students will explore public policy concepts and instruments and discuss how their application impacts environmental quality. Students will gain a strong grasp of American environmental problems, the ways people have (or have not) dealt with them, and what possibilities lie ahead in American environmental policy.

Prerequisite: ENVS 201 with a minimum grade of D or GOV 202 with a minimum grade of D.

ENVS 317. US Environmental History. 3 Hours.

This course will provide an overview of environmental history, focusing on the United States. Americans have shaped nature and been shaped by it? how has this relationship changed over time? Students will engage with key historical themes and perspectives, their roles in various eras of American history, and how they have shaped the world in which we now live. Required readings will support students' efforts to understand different interpretations of historic events and environmental problems. Students' written work will reflect their understanding of these perspectives and themes as well as the development of their own perception of environmental history.

Prerequisite: ENVS 201 with a minimum grade of D.

ENVS 320. Field Experience: Environmental Humanities & Social Sciences. 1 Hour.

Conjoining two focus courses in Environmental Studies into a learning community, this course engages students with central issues in American environmental history and literature. The learning community will embrace multiple perspectives on literature and the environment and examine how themes have changed and endured over time. It includes a weekly day-long field experience through various locales in the Carolinas.

Prerequisite: ENVS 201 with a minimum grade of D and ENVS 202 with a minimum grade of D.

Corequisite: ENVS 317 AND ENVS 327.

ENVS 326. Introduction to Environmental and Nature Writing. 3 Hours.

Serves as an introduction to the canon of American environmental/nature writing and will also develop in beginning students the practice of reflective writing. The course will introduce a familiarity with common themes, motifs, and characteristics of the genre. Readings will include short excerpts and a detailed study of a book-length work of environmental/nature writing.

Prerequisite: ENVS 101 with a minimum grade of D.

ENVS 327. Major Themes in Environmental Writing. 3 Hours.

This course examines major themes/metaphors (such as ecology, holiness, food chains etc.) in full texts from the important texts in the tradition of environmental writing.

Prerequisite: ENVS 202 with a minimum grade of D.

ENVS 330. Art & Earth: Materials, Processes, and Perceptions (with lab). 4 Hours.

Students will learn about geological and botanical origins of art materials through lecture, experimentation, and field experiences. Perceptions of nature will be addressed through review of artistic works. Students will present an artistic work of their own in a public forum.

Prerequisite: ENVS 203 with a minimum grade of D.

ENVS 332. Hydrology & Water Resources (with lab). 4 Hours.

A survey of water resource sciences including introductions to surface water (hydrology), ground water (hydrogeology), aquatic chemistry, and fresh water ecology. Use of quantitative models to describe and predict surface and ground water flow. Field and laboratory investigation of water distribution and quality.

Prerequisite: ENVS 203 with a minimum grade of D.

ENVS 333. Environmental Geology (with lab). 4 Hours.

The application of geological principles to understanding and solving problems associated with environment. Major environmental problems are associated with humankind's relationships with mineral and energy resources, water resources and geologic hazards. Laboratories will focus on small-scale research projects and field investigations.

Prerequisite: ENVS 203 with a minimum grade of D.

ENVS 336. Climate Change (with lab). 4 Hours.

Climate change examines the past, present, and future from an earth systems perspective. The scientific evidence of climate change will be examined along with dynamic models of climate systems. Scientific predictions of climate change will also be examined in addition to social, political, and economic perspectives on global warming.

Prerequisite: ENVS 203 with a minimum grade of D.

ENVS 341. Health & the Environment. 3 Hours.

Students will demonstrate knowledge and understanding of the relationship between the environment and humans along with the impact each has on the health of the other. Human health as impacted by the environment will be the main focus. This focus will include primarily physical health but will also address psychological, emotional and spiritual health. Human activities that result in environmental factors that in turn affect human health will be addressed. Junior or senior class standing required.

ENVS 348. Developing the Capstone Proposal. 1 Hour.

A seminar course required of all Environmental Studies majors in either the fall or spring term of their junior year. Bi-weekly meetings will guide students through the process of exploring, focusing and defining their individual area of concentration and developing a detailed capstone proposal. The proposal will be for their capstone project to be conducted in ENVS 449. Proposal development will be a group process involving critical discussion and peer review. By the end of the seminar, each student will have a finished proposal.

ENVS 400. Regional Environmental Problems (with lab). 4 Hours.

An interdisciplinary elective in which advanced students blend knowledge and interest from their major fields with the methodology and perspectives of earth science to understand regional environmental systems and problems. The course is designed as a bridge between the cultures of the scientist and the humanist.

ENVS 449. Senior Capstone Project. 3 Hours.

This course will require students to complete a substantial project in Environmental Studies.

Prerequisite: ENVS 348 with a minimum grade of C.

ENVS 450. Environmental Studies Senior Seminar. 3 Hours.

The final course required for majors and minors will focus on a particular environmental problem or topic. Guest speakers will address facets of the assigned problem or topic over the course of the semester. The seminar will meet for discussion on days when speakers are not scheduled.

Prerequisite: ENVS 201 with a minimum grade of D and ENVS 202 with a minimum grade of D and ENVS 203 with a minimum grade of D and ENVS 449 with a minimum grade of D.

ENVS 480. Advanced Topics in Environmental Studies. 0 to 4 Hours.

Selected topics in Environmental Studies at an advanced level.

Geography

GEOG 201. Introduction to Geography. 3 Hours.

A study of the fundamental concepts of geography and of how the natural environment (where people live) affects how people live.

GEOG 280. Selected Topics in Geography. 1 to 4 Hours.

Selected topics in Geography at the introductory or intermediate level.

GEOG 480. Advanced Topics in Geography. 1 to 4 Hours.

Selected topics in Geography at the advanced level.