

Environmental Studies

Environmental Studies (ES) is a field of study that explores the various and complex relationships between human beings and their environment. Because understanding these relationships benefits from a variety of critical perspectives, the major is interdisciplinary; it includes courses in the humanities, the natural sciences, and the social sciences. As a means of helping students develop the background and skills needed to understand and address environmental issues, the ES program includes components of ecology and environmental systems, the impacts of aesthetic representations of the environment, the history of environmental thought, the role of public policy and ethics in environmental decision-making, the various conceptions of "environment" held by different cultures, and the global nature of environmental problems. To ensure in-depth training in a specific discipline, the ES major also includes a Focus within the major (see below).

Through its Core courses (see below), the ES major provides a unique opportunity for students to organize their General Graduation Requirements around the interdisciplinary study of a broad and multifaceted theme: the environment. **Those courses that students may complete toward the General Graduation Requirements are marked with an asterisk (*).** Students interested in the following areas may find the program particularly useful: careers in education, public policy, resource management, public health, public administration, international development, the non-profit sector, or the sciences; graduate study in environmental law or policy, economics, environmental literature, the sciences, or other related disciplines.

Given the interdisciplinary nature of environmental studies, the ES major is unusually large. Therefore, students planning to pursue an ES major should meet with an ES faculty member (listed below) and begin taking courses in the ES Core no later than the start of their sophomore year.

Faculty: Denny Clark (Religion), Peter Craig (Chemistry), Rochelle Johnson (English), Jasper LiCalzi (Politics and Economics), Don Mansfield (Biology), Tim Otter (Biology), Tim Shearon (Psychology), Kathy Seibold (Anthropology), Rob Stacy (English), Scott Truksa (Chemistry), Elizabeth Wakeman (Philosophy), Chris Walser (Biology).

The Environmental Studies Major

Students pursuing an ES major complete all of the "Core" courses, listed below, plus six to eight courses comprising a disciplinary "Focus." Students are encouraged to complete some courses in the Core before beginning coursework toward the Focus. Students should consult an ES advisor for assistance with planning a course of study. Certain "double majors" are not permitted with ES.

The Environmental Studies Minor

Students pursuing an ES minor complete ENV 200, ENV 401, and all of the "Core" courses, listed below, as well as a traditional academic major.

The Environmental Studies Core (30-31 units)

Courses marked with an asterisk (*) can count toward the General Graduation

Requirements.

The Core introduces essential concepts in environmental studies, foundational approaches to the study of the environment, and the specific ways in which environmental studies are practiced in various disciplines. Courses in the core should be taken as early as possible. (See course descriptions in the relevant sections of the catalog.)

- ENV-200 Nature and Culture: Introduction to Environmental Studies

Environment, Ecology, and the Sciences

- *BIO 122 Introduction to Environmental Biology
- *CHE 136, 136L Chemistry of the Environment and Lab

Environment and Natural Systems

- GOG 150 Physical Geography

Analytical and Quantitative Skills (Some foci specify which course a student should complete.)

- *MAT 107 Physical Models in Mathematics **or** *MAT 211 Statistics

Environmental Thought in the United States

- *ENG 299T.9 Visions of Environment

Global Perspectives of Environment

- *ATH 309 Cross-Cultural Approaches to the Environment

Public Policy and the Environment

- *POE 339 Environmental Policy Analysis

Values and the Environment

- choose **one** of the following (as appropriate; see Focus descriptions)
 - *PHI 202.2 Science & the Environment
 - *REL 251 Theology and the Sciences **or** an environmentally-focused literature course

Senior Capstone Integrative Seminar (2 units)

- ENV 401 Senior Capstone

The Focus (18-24 units)

In addition to the following foci, students may design a Focus in consultation with an ES advisor. All self-designed Foci must include in-depth study within a single field or discipline and should contain at least 10 upper-division units. Self-designed Foci must

be approved by the ES program Committee.

Chemistry Focus

Students completing the Chemistry Focus may substitute for CHE 302 either CHE 412-412L (Biochemistry) or CHE 420-420L (Inorganic Chemistry).

Requirements include:

- CHE 141 General Chemistry I & Lab
- CHE 142 General Chemistry II & Lab
- CHE 252 Quantitative Analysis & Equilibrium
- CHE 301 and CHE 302 Organic Chemistry
- and CHE 451 Instrumental Analysis.

Conservation Biology Focus

To complete the Conservation Biology Focus, students must take Math 211 in the ES Core. In addition, to ensure that students have adequate quantitative preparation, they should complete either Math 212 or a course in Geographic Information Systems.

Requirements include:

- BIO 130 Frontiers in Genetics
- BIO 220 Organismal Biology or BIO 230 Cell & Molecular Biology
- BIO 221 Population and Environmental Biology
- BIO 260 Diversity of Life
- BIO 306 Conservation Biology
- One course in Systematics
- One additional course in either ecology or systematics.

Global Studies Focus

Students completing the Global Studies Focus must demonstrate a competency in a foreign language through the intermediate level (i.e., MFL 211-212 (French); MFL 223-224 (German), or MFL 232-233 (Spanish); for other languages, see an ES advisor). Students are also encouraged to complete a course in Geographic Information Systems.

Requirements include:

- HIS 106 The History of World Civilization: Modern
 - POE 120 International Politics
 - POE 261 Introduction to Economics
 - ATH 305 Culture Change & the World System
 - POE 380 International Political Economy
 - Two Regional and National Case Studies.
- Students are encouraged to explore different geographic regions (Latin America, Asia, and Europe) and social science disciplines (anthropology, history, and political economy). Additional Social Sciences courses, winter session classes, winter ACI overseas study trips, or immersion study abroad may satisfy the requirement. Consult with your ES advisor. Choose two courses from:

- ATH 249 Natives of South America
- ATH 253 Contemporary Mexican Society & Culture
- HIS 382 Modern Mexico
- HIS 383 Brazil
- HIS 385 Cuba & the Caribbean
- HIS 345 Modern China
- HIS 384 Modern Japan
- HIS 338 Modern India
- POE 302 Introduction to Asian Politics & Society
- POE 371 Politics in Japan
- POE 372 Politics in China
- HIS 334 19th Century Europe: the Industrial Nation & Its Discontents
- HIS 348 20th Century Europe: the Trials of Modernity
- HIS 350 British Empire 1756-1960
- HIS 353 Modern England

Literature Focus

Students completing the Literature Focus must take PHI 202-02 or REL 251 in the ES Core.

Requirements include:

- ENG 308 Origins & Traditions of the Literature of the United States
- ENG 307 Origins & Traditions in English Literature
- ENG 359 Seminar: Constructing World Literature
- ENG 204 Techniques of Creative Nonfiction
- ENG 325 Introduction to Literary Theory & Criticism
- Two courses from the following (only one of which may have an environmental focus):
 - Any 300-level seminars **or** ENG 220/320 Creative Nonfiction Writing Workshop.

Environmental Studies (ENV)

ENV-200 Nature and Culture: Introduction to Environmental Studies 3.0 cr.

Prereq: WRI 150. An investigation of the relationships among nature, self, and community, with special emphasis given to the interdisciplinary nature of environmental studies. The course is writing-intensive and pursues analysis of environmental issues and concepts. Students interested in the Environmental Studies major should complete this course during their freshman or sophomore years.

ENV-401 Senior Capstone 2.0 cr.

Prereq: senior standing. An integration and synthesis of different disciplinary perspectives as they relate to a specific local or regional environmental issue. Students will bring to the seminar their expertise from their disciplinary foci, pursue independent research, and collaborate on a formal written project. (INDEPENDENT WORK)

ENV-494 Independent Study 1.0 to 3.0 cr.

Fall, winter, spring. Prereq.: permission. A guided research project (library, field, or both) culminating in a research paper written according to program guidelines. May also result in a website, poster, audiovisual presentation or other public report.
(INDEPENDENT WORK)

ENV-497 Environmental Internship 1.0 to 3.0 cr.

Fall, winter, spring. Prereq.: junior standing or permission.. Supervised work in an environmental field in an approved firm, agency or office. A written summary or other product and a seminar are presented at the conclusion of the internship.
(INDEPENDENT WORK)