

Environmental Studies

Interdisciplinary

Faculty

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Bruce L. Hardy
Assistant Professor of Anthropology

David E. Harrington
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Andrew J. Kerkhoff
Assistant Professor of Biology and Mathematics

Robert A. Mauck
Assistant Professor of Biology

George E. McCarthy
Professor of Sociology (on leave)

Ronald E. McLaren
Professor Emeritus of Philosophy

Wade H. Powell
Associate Professor of Biology (on leave)

Joan L. Slonczewski
Professor of Biology

J. Kenneth Smail
Professor Emeritus of Anthropology

David N. Suggs
Professor of Anthropology

Stephen E. Van Holde
Associate Professor of Political Science

Note: Additional faculty teaching courses approved for credit toward the concentration constitute its extended faculty. Consult a program codirector for a list.

The Environmental Studies Concentration provides an interdisciplinary framework for understanding the interactions of individuals, societies, and the natural world. The concentration brings together the different perspectives of the humanities, life sciences, physical sciences, and social sciences. The academic program is enhanced by the 400-acre Brown Family Environmental Center (BFEC). The BFEC, within walking distance of campus, features a wide range of natural and managed habitats and includes part of the Kokosing River (one of Ohio's State Scenic Rivers). In addition, Kenyon encourages students to think in more global terms through affiliations with the School for Field Studies (which provides classes in Australia, British West Indies, Costa Rica, Kenya, and Mexico), and the Organization for Tropical Studies, as well as through off-campus study opportunities like the Duke University Marine Laboratory and the Semester in Environmental Science at Woods Hole. Our goals are to increase basic knowledge in the relevant subjects and to learn techniques for evaluating complex issues, especially those with both technological and social components.

The implications of our interaction with the environment extend well beyond either natural or social sciences, however, as ethics and aesthetics are integral to those interactions. Consequently, the Environmental Studies Concentration integrates many traditional academic disciplines. In addition, the concentration can be integrated with a major in international studies, an interdisciplinary program.

The Curriculum

The environmental studies program consists of four components: a one-semester introductory course, ENVS 112 (.5 unit); three semester courses in "core" subjects (biology, chemistry, and economics, for 1.5 units); a selection of 1.5 units (three courses) from affiliated courses in at least two departments; and a one-semester capstone seminar, ENVS 461 (.5 unit). The concentration requires a total of 4 units. Affiliated courses are offered in anthropology, biology, chemistry, economics, philosophy, physics, political science, religious studies, and sociology.

In the listings that follow, the ♦ symbol designates a course particularly appropriate for first-year students or for upperclass students new to the environmental studies curriculum.

Concentration Requirements

Required Environmental Studies Courses: 1 unit

- ♦ ENVS 112 (.5 unit) Introduction to Environmental Studies
- ENV 461 (.5 unit) Seminar in Environmental Studies

Core Courses in Environmental Studies: 1.5 units

- ◆ BIOL 112 (.5 unit) Evolution and Ecology
- ◆ CHEM 108 (.5 unit) Solar Energy (CHEM 121 or 122 can serve as a replacement.)
- ◆ ECON 101 (.5 unit) Principles of Microeconomics and Public Policy

Elective Courses for Environmental Studies: 1.5 units selected from the following courses

Anthropology courses

- ◆ ANTH 111 Introduction to Biological Anthropology
- ANTH 220 Anthropology of Food
- ANTH 324 Biocultural Adaptations
- ANTH 333 Old World Archaeology
- ANTH 357 Anthropology of Development
- ANTH 392 Human Ecology

Biology courses

- BIOL 228, 229 Ecology and Ecology Laboratory
- BIOL 251 Marine Biology
- BIOL 272 Microbial Ecology
- BIOL 352, 353 Aquatic Systems Biology and Aquatic Systems Laboratory

Chemistry courses

- CHEM 231, 232 Organic Chemistry I and lab
- CHEM 341 Instrumental Analysis

Economics courses

- ECON 336 Environmental Economics
- ECON 342 Economics of Regulation
- ECON 345 Economic Analysis of Politics and Law
- ECON 347 Economics of the Public Sector

Environmental Studies

- ◆ ENVS 150 Environmental Geology
- ENVS 253 Sustainable Agriculture
- ENVS 291 Field Experiences in Environmental Outreach
- ENVS 300 Geographic Information Science

Philosophy courses

- ◆ PHIL 110 Introduction to Ethics
- PHIL 115 Practical Issues in Ethics

Physics course

- ◆ PHYS 108 Geology

Political science courses

- PSCI 361 Globalization
- PSCI 362 Haves and Have Nots: Development and Developing Countries
- PSCI 363 Global Environmental Politics
- PSCI 480 Science and Politics

Religious studies course

- RLST 481 Religion and Nature

Sociology course

- SOCY 233 Sociology of Food

Because careful course selection is necessary to achieve specific objectives, students are urged to consult as early as possible with a program codirector and other faculty members in the Environmental Studies Concentration.

First-Semester Courses

Special Topic: Field Experiences in Environmental Outreach

- ENVS 291 (.13 unit)
Heithaus

In "Field Experiences," students will examine special topics in environmental science, obtaining subject knowledge so that they can lead educational experiences for elementary school classes visiting the Brown Family Environmental Center at Kenyon College. Students will participate in two workshops at the beginning of the semester and then participate in at least five programs for visitors. Participants will keep a journal and submit a final report on their experiences and evaluations of the effectiveness of the programs. Prerequisites: ENVS 112 or BIOL 112 or equivalent and permission of instructor.

Sustainable Agriculture

- ENVS 253 (.5 unit)
Dean-Otting

The purpose of the course is to introduce students to the principles of sustainable agriculture through hands-

on experience on local farms and through readings of current literature. As such, this course is a combination of fieldwork and seminar-style discussion. Work on the farm will be varied, determined by the seasons and farm projects underway. In addition, students will be taken to the local producers livestock auction and visit other agricultural locations as the time and season allows. Students can expect to handle animals, clean barns, harvest crops, plant crops, prepare farm products for market, build and repair fence, bale hay, feed animals, and work with, repair, or clean equipment and buildings and other activities as needed. Readings will be drawn from relevant books, current environmental literature, and topical news items. Discussions will be student-led and will combine readings with experiences in the field. There are no pre-requisites for this course. However, students must have available in their academic schedule five continuous hours one day per week to spend working at a local organic farm (travel time will be in addition to these five hours). Students will also participate in a weekly 1.5-2 hour seminar discussion of assigned readings. In 2007 the course will have a number of readings from religious studies related to agriculture. Participation is limited to 8-10 students, and permission of the instructor is required. Preference will be given to upper-class students.

Geographic Information Science

- ENVS 300 (.5 unit)
Holdener

This course is for all students interested in learning about how Geographic Information Science (GIS) is used to analyze geographic data, model spatial processes, and make informed decisions. The course will particularly benefit students who are looking to incorporate GIS into their research with Kenyon faculty members. Following a review of maps and cartographic principles, the emphasis of the course will shift to the nature of computer-based geographic information and the ways in which

information technologies are used to perform geographic analyses. Lectures will introduce fundamental concepts such as scale and resolution, the nature of spatial data and the structure of GIS data and files, constructing GIS queries, and GIS data attributes and modeling operators. A series of laboratory case studies will present real-world applications of GIS while offering students opportunities to apply the fundamental concepts discussed in lectures. Prerequisites: sophomore standing or above and permission of the instructor.

Individual Study

ENVS 493 (.5 unit)
Staff

Students conduct independent research under the supervision of one of the faculty members affiliated with the concentration. Prerequisites: permission of instructor and one of the concentration codirectors.

Second-Semester Courses

Introduction to Environmental Studies

ENVS 112 (.5 unit)
Fennessy, Mauck

This course examines contemporary environmental problems, introducing the major concepts pertaining to human interactions with the environment. We will explore both local and global scales of this interaction. Course topics include basic principles of ecology, the impacts of human technology, the roots of our perceptions about and reactions to nature, the social and legal framework for responding to problems, and economic issues surrounding environmental issues. We will discuss methods for answering questions regarding the consequences of our actions and especially focus on methods for organizing information to evaluate complex issues. The format of the course will be three-quarters discussion and lecture and one-quarter “workshop.” The workshops will include field trips, data collection, and application of computer modeling. This

course counts as a biology course for the purpose of diversification. No prerequisites.

Seminar in Environmental Studies

ENVS 461 (.5 unit)
Hardy

The intention of this capstone seminar is to draw together and apply the concepts learned in earlier courses in the environmental studies concentration. The focus of the course will be on case studies of natural-resource management, with specific topic areas to be determined. In this strongly interdisciplinary effort, we will explore ecological, economic, social, and legal issues that influence how people exploit natural resources and whether that exploitation is sustainable. Students will be expected to develop and communicate their understanding of the complex and inseparable relationships of human need and environmental management. Prerequisites: junior or senior standing and ENVS 112. Enrollment limited.

Individual Study

ENVS 494 (.5 unit)
Staff

Students conduct independent research under the supervision of one of the faculty members affiliated with the concentration. Prerequisites: permission of instructor and one of the concentration codirectors.