

## Faculty

Joseph A. Adler  
*Professor of Religious Studies*

Jay Corrigan  
**Codirector, Assistant Professor of Economics**

Scott D. Cummings  
*Associate Professor of Chemistry*

Miriam Dean-Otting  
*Professor of Religious Studies*

M. Siobhan Fennessy  
**Codirector, Associate Professor of Biology**

Bruce Gensemer  
*Professor of Economics Emeritus*

Bruce L. Hardy  
*Assistant Professor of Anthropology (on leave, first semester)*

David E. Harrington  
*Himmelright Associate Professor of Economics*

E. Raymond Heithaus  
*Jordan Professor of Environmental Science*

Eric J. Holdener  
*Visiting Assistant Professor of Physics*

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 of Philosophy Emeritus*

Wade H. Powell  
*Assistant Professor of Biology*

Joan L. Slonczewski  
*Professor of Biology*

J. Kenneth Smail  
*Professor of Anthropology Emeritus*

David N. Suggs  
*Professor of Anthropology*

Stephen E. Van Holde  
*Associate Professor of Political Science (on leave)*

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 Boston University Marine Program. 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
- ENVS 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 and 124 or 125 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

#### **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 292 Demography

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**

### **Introduction to the Theory and Practice of Geographic Information Science (GIS)**

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)  
*Heithaus, 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, one-quarter "workshop." The workshops will include field trips, experience with collecting data, and application of computer modeling. This course counts as a biology course for the purpose of diversification. No prerequisites.

### **Seminar in Environmental Studies: Capstone Seminar**

ENVS 461 (.5 unit)  
*Fennessy*

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.

taste funny? Ultimately, students will use the knowledge gained to decipher and summarize the geologic underpinnings of other events and activities that are significantly geologic in nature.

## **Additional courses available another year include the following:**

#### **Environmental Geology**

ENVS 150 (.5 unit)  
Holdener

This course concentrates on interactions between Earth's physical environment and humans. Understanding the Earth's physical environment provides answers to questions that guide decision-making processes at all levels: individual, business, and all echelons of government, from local, to state, to national. We begin with an exploration of basic environmental concepts, including Earth materials, Earth processes, and Earth systems. Eventually we tackle questions whose answers are significantly geologic in nature. Why do earthquakes and volcanoes occur where they do? Why are some volcanic eruptions relatively safe to watch (from a distance, of course) while others are cataclysmic? Why did this dam fail? Why did this building fall? Why does my tap water