

# ENVIRONMENTAL STUDIES

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The mission of environmental studies at Bethel is to guide students in the pursuit of truth about the workings of creation and the human place in it, and to enable them to practice environmental stewardship in lifestyle and profession. Caring for the whole of creation is an immense privilege and responsibility, and we prepare students for this task through a curriculum that integrates knowledge and perspective from a variety of established disciplines (e.g., biology, chemistry, geology, history, political science). Environmental studies combines classroom and laboratory instruction with a variety of field experiences. Students cap their education in environmental studies by designing and conducting a specific research project under the direction of a faculty mentor. Those who complete the program successfully will be prepared for a variety of types of employment (e.g., natural resource conservation, outdoor education, environmental advocacy) or for graduate school. The number of such opportunities is continually increasing as is the need for educated, committed environmental stewards.

## Majors in Environmental Studies

- B.S. in Environmental Science (<http://catalog.bethel.edu/arts-sciences/academic-programs-departments/environmental-studies/environmental-science-bs>)
- B.A. in Environmental Studies (<http://catalog.bethel.edu/arts-sciences/academic-programs-departments/environmental-studies/environmental-studies-ba>)

### ENS104 • Environment and Humanity. 3 Credits.

Introduction to environmental studies. Interrelationships and interactions of humans with the natural environment in which they live. Causes of and potential solutions to environmental problems like overpopulation; pollution of water, air, and soil; extinction of wildlife; and degradation of natural and human ecosystems are examined, using the science of ecology as a knowledge base.  
*Corequisites: Concurrent registration in ENS104D is required. Offered: Fall, spring.*

### ENS104D • Environment Humanity Lab. 1 Credit.

Laboratory experience accompanying ENS104. Includes some outdoor and off-campus investigations.  
*Corequisites: Concurrent registration in ENS104 is required. Offered: Fall, spring.*

### ENS201 • Introduction to Geographic Information Systems. 3 Credits.

An introduction to the science, hardware, and software of mapping geographic locations and analyzing information about those locations. Investigation of remote sensing, GPS data collection, GIS data types, editing GIS data, and spatial data analysis and display, with emphasis on applications to creation stewardship problems.

*Offered: Fall, odd # years. Special Notes: Carries cross-credit in geography.*

### ENS205L • Sustainable Living. 3 Credits.

A multidisciplinary approach to the challenges of living a sustainable life in a complex world. Considers how ecological, ethical, and cultural understandings inform our responsibility for personal and global decisions.

*Prerequisites: GES130 and GES160 (may be taken concurrently) or GES244 (may be taken concurrently).*

*Offered: Spring*

### ENS305K • Transforming Technology: Environmental Perspectives. 3 Credits.

An examination of the pervasive influence of technology in shaping our views, values, society, and environment. Develops ability to critically analyze technology and the social and environmental influences and impacts of technology. Basic concepts of environmental science serve as a focal point, leading to an understanding of the value-laden nature of technology in our modern society and how such technologies and technological artifacts have changed our environments, our social structures, and our values.

*Prerequisites: Laboratory Science (D) course;*

*Mathematics (M) course. Offered: Spring, even # years*

### ENS310K • Human Impacts on Coral Reefs. 4 Credits.

Travels to the Philippines and Hawaii to study exotic coral reefs and associated environmental issues. Coral reefs worldwide are currently subject to severe anthropogenic stress. Allows students to get in the water to see reefs firsthand, to explore the science and human technology relating to coral reefs, and to meet individuals who are working to address environmental problems.

*Prerequisites: Laboratory Science (D) course;*

*Mathematics (M) course. Offered: Interim. Special Notes: Carries cross-credit in biology and general studies.*

### ENS316 • Wildlife Ecology and Management. 3 Credits.

Analysis of terrestrial vertebrate populations, communities, and habitats. Exploration of how these analyses are applied to the manipulation, exploitation, protection, and restoration of animal populations and communities.

*Prerequisites: Two of BIO122/122D, BIO126/127,*

*ENS104/104D; junior or senior standing. Corequisites:*

*Concurrent registration in ENS317 is required. Offered:*

*Spring, even # years. Special Notes: Carries cross-credit in biology.*

## Environmental Studies 2

### **ENS317 • Wildlife Ecology and Management Lab.** 1 Credit.

Laboratory experience accompanying ENS316. Sessions emphasize field investigation of animal populations and habitats with ecological and management techniques.

*Corequisites: Concurrent registration in ENS316 is required. Offered: Spring, even # years. Special Notes: Carries cross-credit in biology.*

### **ENS318KZ • Ecology in the Tropics: Natural History and Future Prospects.** 4 Credits.

Travel in Kenya or Ecuador surveying the land, climate, plants, animals, homes, transportation, and industries, noting especially the impact of human presence. Ecuador includes the Amazon rainforest, Andean cloud forests, volcanic mountains, highlands, towns, cities, and the Galapagos Islands. Kenya includes Nairobi, African savanna, the Rift valley, and Masai Mara.

*Prerequisites: Laboratory Science (D) course; Mathematics (M) course. Offered: Interim. Special Notes: Carries cross-credit in biology and general studies.*

### **ENS330K • Science, Values, and the Making of Environmental Policy.** 3 Credits.

What role do citizens and experts play in the public policy process? Do people approach scientific evidence with competing value perspectives? These questions are examined in order to understand the interplay between key people, institutions, values, and power that is present in a series of environmental policy case studies.

*Prerequisites: Laboratory Science (D) course; Mathematics (M) course. Offered: Fall, even # yrs. Special Notes: Carries cross-credit in political science.*

### **ENS335K • Environmental Ethics.** 3 Credits.

An examination of the intersection of science, society, and technology as it pertains to issues in environmental ethics. The course moves from theory by considering science, society, and technology philosophically, to application by concluding with a major research project on an applied issue in environmental ethics involving scientific data and technological choice.

*Prerequisites: Laboratory Science (D) course; Mathematics (M) course. Offered: Fall, interim. Special Notes: Carries cross-credit in philosophy.*

### **ENS341K • Environmental Writing.** 3 Credits.

As the environmental crisis has deepened, American nature writing has evolved into a richly creative endeavor that explores the complex interactions of nature, technology, and society. Students study environmental writing as a means for valuing biodiversity and for envisioning changes in global policies, applications of technology, and environmental ethics.

*Prerequisites: Laboratory Science (D) course; Mathematics (M) course. Offered: Fall or spring. Special Notes: Carries cross-credit in English.*

### **ENS399 • Introduction to Research.** 1 Credit.

An introduction to research methodology in the biological sciences, with experience in the use of biological literature and an examination of how to distinguish and evaluate different types of scientific writing and presentations. Experience in the development of a research proposal.

*Prerequisites: Major in Environmental Studies or Environmental Science; junior standing. Offered: Fall, spring. Special Notes: Carries cross-credit in Biology.*

### **ENS481 • Internship in Environmental Studies.** 1-4 Credits.

Off-campus field experience working with an environmental organization, business, or governmental agency.

*Prerequisites: Major in environmental studies or environmental science. Offered: Fall, spring, summer*

### **ENS496 • Research in Environmental Studies.** 1 Credit.

An opportunity to become involved in an independent research project of the student's own choosing in some area of environmental studies. Experience in the collection, manipulation, analysis, and portrayal of information and development of skills needed to be effective in environmental research.

*Prerequisites: ENS399. Offered: Fall, spring*

### **ENS498 • Seminar in Environmental Studies.** 1 Credit.

A senior capstone course for environmental studies and environmental science majors centered on a multidisciplinary discussion of current environmental issues in society.

*Prerequisites: ENS496. Offered: Spring*

### **ENS499 • Symposium.** 0 Credit.

Completion of a scientific paper and oral presentation based upon research conducted in ENS496.

*Prerequisites: ENS496. Offered: Fall, spring*

## **Au Sable Institute of Environmental Studies**

Several courses in the environmental area are available during the summer term through the Au Sable Institute of Environmental Studies. Courses offered on a regular basis include: Field Botany, Natural Resources Practicum, Animal Ecology, and Water Resources. See the Au Sable advisor in the Department of Biology for additional course offerings and further details.

## **Creation Care Study Program**

Fall or spring off-campus study is available for students who want to take on the challenge of learning how to care for God's earth and all its creatures. Courses offered include Tropical Ecosystems, God and Nature, and Sustainable Community Development. See the environmental studies program director for additional information.