

Environmental Science

Program Overview

The Environmental Science program consists of biology, chemistry, geology and physics. A senior research project gives our students the opportunity to explore complex scientific problems and arrive at meaningful conclusions. In addition to a strong science foundation, the program includes courses in computational science, public policy, technical writing, sustainability, and environmental research methods, all of which are designed to help students understand the underlying causes of many environmental problems and introduce students to the business and government systems in which they will work.

Careers and Placement

An environmental science degree from Capital University can lead to a career in a wide variety of settings or to additional studies in graduate school. Many businesses and industries employ environmental scientists to provide consulting services, to design and operate pollution remediation and health and safety activities, and to ensure regulation compliance. The field of environmental protection includes opportunities in solid and hazardous waste management, air and water quality management, and environmental restoration and remediation. Natural resource management includes job areas such as forest, parks, water, fisheries, wildlife management, and land conservation. Other environmental sciences specialize in environmental law, community planning, policy analysis, or environmental education in both governmental and private sectors. New job categories and definitions originate yearly as the field continues to expand.

Experiential Learning

Our department actively provides opportunities through field courses, allowing students to study biology and environmental science topics, experience indigenous cultures, and become involved in service to the broader community. These are typically offered every 1-2 years, and recently have included trips to Costa Rica, Ecuador, the Galapagos, and the Bahamas. A hands-on internship or research opportunity in a business, government agency, or volunteer organization is also available to round out each student's training.

Facilities

Eight laboratories and a two-story greenhouse in the Battelle Hall of Sciences are used for environmental teaching and research. State-of-the-art laboratory components allow students to analyze genetic materials from samples grown in controlled conditions or from samples collected in the field, while the molecular biology laboratory has equipment to perform DNA fingerprinting analyses and a real time qPCR system. Capital's Primmer Outdoor Learning Center in the Hocking Hills region is a 74-acre property with seven ecosystems, including a 15-acre wetland, a secondary growth deciduous woodlot, and restored prairie habitats. This is used by students and faculty for research and service projects focused on ecological restoration, biological conservation, and environmental sustainability.



What Our Grads Are Doing Now:

Wildlife Manager

Pollution Specialist

Waste Management

Forestry Specialist

Environmental Consultant

Graduate Studies

You'll Be Prepared To:

- Demonstrate a working knowledge of the traditional core of environmental science
- Read and explain information published in scientific research articles
- Use physical sciences, mathematics, and computational techniques to conduct research and solve problems in environmental science
- Use scientific methods to analyze and evaluate knowledge
- Think critically about scientific information
- Communicate research findings orally and in writing to a variety of audiences

Environmental Science

Four Year Sample Curriculum

First Year, Fall

Foundations of Biology
Chemical Principles
Calculus
Workshop Seminar
Signature Learning

First Year, Fall

Foundations of Biology
Chemical Principles
Sustainability Seminar
Signature Learning
Elective

Second Year, Fall

Environmental Science
Physical Geology
Organic Chemistry
Statistics
Tree Conservation Research

Second Year, Fall

Organic Chemistry
Computational Science
Public Policy
Invasive Species Seminar
Signature Learning

Third Year, Fall

Chemical Analysis
Research Methods
Physics
Language
Carbon Research

Third Year, Fall

Physics
Foreign Language
Writing in the Professions
Sustainability Seminar
Signature Learning

Fourth Year, Fall

Ecology
Internship
Research Capstone
Signature Learning
Elective

Fourth Year, Fall

Field Studies
Internship
Research Capstone
Signature Learning
Elective

All courses subject to availability and advisor approval. All undergraduates must demonstrate that Signature Learning goals have been met.

CapGreen

Program Specific Organizations

Life Science Organization



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Learn More



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