



University of Vermont

# A Closer Look at Environmental Sciences



College of Agriculture  
and Life Sciences

## Environmental Sciences Program

<http://pss.uvm.edu/ENSC/>

### Program Requirements

#### GENERAL

- Intro Plant Science
- Microbiology
- Ecology
- World Food, Population & Development
- Agricultural Ethics

#### BASIC SCIENCES

- Intro Biology
- Inorganic Chemistry
- Organic Chemistry
- Intro Soil Science
- Calculus
- Statistics

#### ENVIRONMENTAL SCIENCE CORE

- Intro Environmental Science
- Global Environmental Assessment
- Pollutant Movement through Air, Land and Water
- Recovery and Restoration of Altered Ecosystems
- Watershed Assessment

#### ADVANCED TRACKS --ONE ONLY

- Agriculture and the Environment
- Conservation Biology and Biodiversity
- Ecological Design
- Environmental Analysis and Assessment
- Environmental Resources
- Water Resources

If you are eager to make a difference in the quality of the environment, the Environmental Sciences major is for you. UVM is a leading university in the area of the environment and we offer a major that combines a base in science with the practical hands-on experience needed to identify, analyze and solve environmental problems. Students completing this major will have the technical abilities and, just as important, the creativity and sensitivity to slow further degradation of our natural resources and loss of biological diversity.

### What Will I Study?

The Environmental Sciences major, offered jointly by the College of Agriculture and Life Sciences and the Rubenstein School of Environment and Natural Resources, has been designed to encourage an appreciation of the integration of science and society. The curriculum offers a strong foundation in the basic sciences and advanced knowledge in the environmental sciences. You'll meet with your advisor to tailor a curriculum that fits your own needs. It's flexible: students can select an upper-level track and gain in-depth experience by focusing on a specific area of the environmental sciences.

As a student enrolled in the major, you must complete the basic distribution requirements of the College of Agriculture and Life Sciences plus interdisciplinary core courses. Then you may choose among many course in the biological, physical and environmental sciences throughout the university to meet the requirements of the major.

Upper-level students select one of six areas for advanced concentration: Agriculture and the Environment, Conservation Biology and Biodiversity, Ecological Design, Environmental Analysis and Assessment, Environmental Resources, and Water Resources.

### Exciting Research and Field Experience

Faculty research in the College of Agriculture and Life Sciences has a strong orientation toward applied environmental science. This provides a solid basis for course work and undergraduate research, focusing on both terrestrial and aquatic systems. As an undergraduate, you'll have the chance to work closely with faculty on important research, such as the effects of atmospheric pollutants on ecosystems.

Finally, students have the opportunity for experiential learning during internships with government agencies, private industry or nonprofit organizations. For example, students have worked on projects on the sustainability of agriculture, sponsored by Ben and Jerry's Ice Cream. A full-time internship coordinator in the Rubenstein School of Environment and Natural Resources works to offer a broad range of such internships to students in the school and in the College of Agriculture and Life Sciences.

## Looking to the Future

The demand for environmental scientists has increased dramatically in recent years. Both the recognition of environmental problems and the regulations governing water and air quality have created an enormous demand for people with strong basic and applied scientific backgrounds. Consulting firms and non-governmental agencies employ our graduates to work on multidisciplinary teams addressing a wide variety of environmental problems. Other students have joined state and federal regulatory agencies charged with implementing and enforcing environmental regulations. Others still have gone onto graduate studies in diverse areas of environmental science.

## Faculty and Area of Expertise

### Teaching Faculty

Alan W. McIntosh, PhD	MICHIGAN STATE UNIVERSITY; Natural Resources, Aquatic Toxicology
Donald S. Ross, PhD	UNIVERSITY OF VERMONT; Soil and Environmental Chemistry
W. Breck Bowden, PhD	NORTH CAROLINA STATE UNIVERSITY; Watershed Science and Planning
William Keeton, PhD	UNIVERSITY OF WASHINGTON; Forest Ecology and Sustainable Forestry
Leslie Morrissey, PhD	OREGON STATE UNIVERSITY; Remote Sensing, GIS, Water Resources
Mary C. Watzin, PhD	UNIVERSITY OF NORTH CAROLINA; Aquatic Ecology and Ecotoxicology

### Advising Faculty in the College of Agriculture and Life Sciences

Donald S. Ross, PhD, Program coordinator	UNIVERSITY OF VERMONT; Dept. of Plant & Soil Science
James P. Hoffman, PhD	UNIVERSITY OF WISCONSIN; Dept. of Botany and Agricultural Biochemistry
Jane Molofsky, PhD	DUKE UNIVERSITY; Dept. of Botany and Agricultural Biochemistry