

## THE FIELD

Natural resources conservation (NRC) is a multidisciplinary field that integrates rigorous academic training in the natural, conservation, and social sciences with hands-on field skills. Students learn about the ecology of terrestrial and aquatic ecosystems, and how these systems can be managed to conserve biodiversity and protect ecosystem functions while providing sustainable benefits to society. As human populations increase and natural resources and habitats become more limited, there is a critical need for conservation professionals trained in natural resources conservation. This major provides students with the academic background and professional training to pursue careers in the rapidly growing field of natural resources and environmental conservation. Students in NRC also gain experience from summer jobs, internships, and cooperative education positions with conservation organizations and the green industry.

The Department of Environmental Conservation offers three undergraduate majors: natural resources conservation (NRC), environmental science (ENVIRSCI), and building and construction technology (BCT).

***A minor in natural resources conservation is available.***

## THE MAJOR

Natural resources conservation at UMass Amherst is one of the most comprehensive academic programs in natural resources and environmental conservation in the United States. The undergraduate program integrates the study of the natural and built environments with the goal of providing comprehensive training and stewardship in conservation and management of natural resources.

Conservation of the Earth's natural resources requires broad knowledge and experience as well as a strong personal commitment to environmental stewardship and sustainability. All NRC majors take a series of foundation courses in conservation, natural and social sciences, physical sciences, and math. Students take specialized courses designed to provide them with the knowledge and skills necessary for entry-level employment, graduate training, and professional certification.

Students must select one of six NRC concentrations—wildlife ecology and conservation, fisheries ecology and conservation, forest ecology and conservation, urban forestry and arboriculture, water resources, and environmental conservation. The environmental conservation concentration enables students to, with support of advisors, customize a focused program of study in one of the many areas of the environment and conservation not directly covered by other concentrations in the NRC major.

Wildlife ecology and conservation provides students with the essential conservation science education to assess, conserve, and protect wildlife populations and land and water environments. This concentration provides much of the courses required to qualify graduates for professional certification by The Wildlife Society; see advisors for details.

Fisheries ecology and conservation provides students with the essential conservation science education in the biology and ecology of fish and other aquatic animals as well as the freshwater and marine ecosystems in which they reside. This concentration provides the training and coursework required to qualify for professional certification by the American Fisheries Society. Forest ecology and conservation focuses on all aspects of the conservation and management of the forest vegetation that covers 40 percent of the Earth's land surface. This concentration is nationally accredited by the Society of American Foresters.

Urban forestry and arboriculture involves the management of trees in cities and suburbs, where more than 80 percent of people in the U.S. live. This concentration provides the training and coursework required to qualify for professional credentials through examination by both the Massachusetts Arborist Association and the International Society of Arboriculture.

Water resources engages students to develop a systems-based and interdisciplinary approach to understanding ecologically sound and economically efficient water management policies and programs. The Stockbridge School of Agriculture offers an associate of science degree (two years) in arboriculture and community forestry.

## **HONORS**

Students may pursue honors opportunities within the major. For more information, contact the honors program director, Anne Averill (413-545-1054, [averill@eco.umass.edu](mailto:averill@eco.umass.edu)).

## **STUDY ABROAD**

Majors are encouraged to study abroad if it supports their academic and career goals. Students should contact the International Programs Office (413-545-2710, [umass.edu/ipo](http://umass.edu/ipo)) and work closely with their academic advisors to choose the appropriate courses in preparation.

## **CAREER OPPORTUNITIES**

Broad academic training in the sciences and mathematics in combination with specialized training within the NRC major prepares students for professional employment in local, state, or federal government, in nonprofit conservation organizations, with environmental consulting firms and the green industry, in multinational corporations and investment firms, or as self-employed conservationists. A wide variety of careers exist in natural resources conservation: professional foresters and plant ecologists; wildlife and fisheries technicians and biologists; park managers and rangers; naturalists, environmental educators, and outdoor recreation specialists; watershed scientists; water and land use planners and managers; environmental lawyers, policy makers and conservation law enforcement officers; computer mappers; and conservation consultants. Students are also well prepared for graduate training programs that prepare them for careers as research scientists, environmental administrators and policy makers, lawyers, and educators. An education in natural resources conservation provides students with the tools and knowledge to live a more sustainable life and to be a strong advocate for sound environmental stewardship.

## **COLLEGE OF NATURAL SCIENCES**

The College of Natural Sciences unites the life, environmental, computational, and physical sciences on campus. Students take advantage of a range of inquiry-based classroom and laboratory experiences, hands-on undergraduate research opportunities, multidisciplinary and cross-departmental education and research initiatives, and a variety of science student organizations. In addition, they are encouraged to develop strong written and oral communication skills, as well as leadership and problem-solving abilities.

Office: 225 Holdsworth Natural Resources  
Phone: 413-545-2665  
Website: [eco.umass.edu](http://eco.umass.edu)