



DEPARTMENT OF ENTOMOLOGY AND WILDLIFE ECOLOGY IN CONJUNCTION WITH THE DEPARTMENT OF BIOLOGICAL SCIENCES

## WHAT IS ECOLOGY?

Ecology is the interdisciplinary scientific study of the interactions among organisms and their environment. As such, it is concerned with the network of relationships among small-scale biological systems such as organisms, complex interacting systems such as ecosystems, and the physical and other non-biological aspects of their environments.

## AREAS OF EMPHASIS AT DELAWARE

Students who major in Ecology study the planet earth and the interactions of its inhabitants (plants, animals, and the physical environment). The major builds from a core of courses in biology and chemistry to courses in botany, ecology, and entomology. To provide a solid education in ecology it is important that students learn principles and relationships including: 1. The movement of materials and energy through living communities, including a basic understanding of life processes, 2. The distribution and diversity of both producers (plants) and consumers (animals), and 3. The ecological interactions among organisms at different trophic levels.

The Ecology major is interdisciplinary, with the Department of Biological Sciences supplying training in the basic tenets of biology, and the Department of Entomology and Wildlife Ecology offering courses related to the diversity, behavior, and ecological interactions among organisms.

## WHAT'S SPECIAL ABOUT THE PROGRAM?

From freshman orientation to graduation, Ecology majors enjoy close interaction with faculty, who are the common thread in many experiences that make the undergraduate years meaningful. In addition to getting to know faculty as instructors, students work with faculty advisors who assist with course selection, academic issues, and career planning. This relationship is an important one, as students often rely on faculty for recommendation letters and referrals for jobs and graduate school admissions.

Ecology majors also may work with faculty as part of the Science Scholars program, where they conduct research, present posters on their findings, and may earn publication in scientific journals. Some students take their research even farther and write and defend a thesis, which earns them a Degree with Distinction. Throughout this process, a faculty mentor guides and advises the student researcher.

Ecology majors also have the opportunity to earn credits for summer internships. A "Field Agreement" form must be signed and agreed upon with their major advisor. For students who want to learn beyond the borders of Delaware, faculty-led programs in Costa Rica, and Tanzania give students the opportunity to study biodiversity in other ecosystems under the supervision and instruction of UD faculty.

## FACILITIES AND RESOURCES

Classes and laboratory sections meet both on the main campus and in Townsend Hall, which is the cornerstone of our 350-acre teaching and research complex. Townsend Hall houses faculty offices; teaching and research laboratories; several

classrooms; a student Commons; a computing site; and a library branch.

We also maintain an impressive Insect Reference Collection, containing more than 150,000 specimens, as well as extensive collections of birds and mammals, all of which are available for teaching, research, and student projects. Our outdoor research center, located on site, means easy access for field trips to our farm, botanical gardens, field plots, hedgerows, small wetlands, and

35-acre woodlot. An active apiary provides a unique resource for students interested in learning about bees and their behavior. The farm harbors numerous species, including migratory birds, red foxes, box turtles, white-tailed deer, and great-horned owls. Nearby, several state parks, a wildlife refuge, and many forests offer additional field opportunities for observation and experimentation.

## CAREER PATHS

Ecologist. City Planner (urban ecology). Environmental consulting. Nature education. These careers and more are shared by alumni. While some students enter the workforce right after college, others choose to further their education in graduate school, studying subjects like ecology. Whatever your goal, you will be encouraged to participate in our job-search workshops and career days, seek an internship, develop your communication skills, and learn to network with prospective employers. This, in addition to doing well academically, will greatly enhance your post-graduate opportunities.

# ECOLOGY CURRICULUM

Starting with the first semester, Ecology majors usually have at least one course in the department each semester. To earn a bachelor's degree, students must complete 124 credits and meet specific requirements, as outlined in the University of Delaware Undergraduate Catalog. Each semester's courses will depend on the student's interest, background, and academic preparation. The following plan is one example; not every student will take every course in the same order. Students take 12 -17 credits per term; Winter and Summer sessions may be used to lighten the loads of regular semesters. Students should meet with their academic advisor before registering for any semester.

## FRESHMAN YEAR

### FALL SEMESTER

ENWC 165- New Student Seminar (1 cr.) Study and careers in entomology and wildlife conservation. Readings, speakers, discussions, written/oral assignments and field trips

BISC 207- Introductory Biology I (4 cr.)

CHEM 103 - General Chemistry (4 cr.)

MATH 241 - Analytic Geometry and Calculus (4 cr.)

\*Breadth Requirement (6 cr.)

### SPRING SEMESTER

BISC 208- Introductory Biology II (4 cr.)

CHEM 104 - General Chemistry II (4 cr.)

ENGL 110- Critical Reading and Writing (3 cr.)

PLSC 201 Botany II (4 cr.)

## SOPHOMORE YEAR

Organic Chemistry (8 cr.)

Physics (8 cr.)

Statistics (3 cr.)

General Ecology (3 cr.)

Field Ecology (3 cr.)

Major Requirements (3-6 cr.)

\*University and College Breadth Requirements (3-6 cr.)

## JUNIOR YEAR

Genetic and Evolutionary Biology (3 cr.)

Evolution (3 cr.)

Major Requirements (3-12 cr.)

\*University and College Breadth Requirements (3 cr.)

## SENIOR YEAR

Senior Capstone Experience (1 cr.)

Population Ecology (3 cr.)

Major Requirements^ ( 3-12 cr.)

\*University and College Breadth Requirements/Electives (3-12 cr.)

\* There's a total of 21 University and College Breadth credits required for this degree including a minimum of nine credits from any three different College of Agriculture and Natural Resources subject area codes, outside the subject area codes of the student's major. Twelve credits are required (3 from each) from the following categories: Creative Arts and Humanities; History and Cultural Change; Social and Behavioral Sciences; Mathematics, Natural Sciences and Technology. At least one course in multicultural studies must be taken to fulfill graduation requirements.

^ Major Requirements are courses that guarantee education in a variety of areas expected of wildlife biologists: communications; statistics; ethics and political science. Students choose courses that interest them from various offerings in these areas.

## FOR MORE INFORMATION

**You are welcome to come talk with us about our majors and the ways in which we can help you reach your goals. Please contact us:**



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& Natural Resources

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