

PLANT BIOLOGY

www.uvm.edu/~plantbio/

Plants play a central role on our planet. Plant biologists are deeply involved with learning about, cultivating, and unlocking the mysteries of the plant world – from the molecular level to individual plants, whole plant populations, communities and ecosystems.

UVM's plant biology program emphasizes the life sciences, spanning the range from biochemistry to organismal biology to ecology, all essential to the study of plant biology. Course work allows our students to master subdisciplines in the field, such as molecular biology, biophysics, genetics, ecology, growth and development, physiology and evolution. Our program provides an excellent education for a career in plant biology, or in any of the other natural sciences. The flexible curriculum and wide choice of electives lets students tailor their studies to their future goals, spanning everything from research in universities or industry, teaching, or professional positions in the private sector and government.

DEGREES OFFERED

- Bachelor of Science in Plant Biology
- Specializations are also available, including Evolution and Ecology of Plants and Plant Molecular Biology

CURRICULUM OVERVIEW

Students must complete the core curriculum of the College of Agriculture and Life Sciences (CALC), which includes communication and technology courses. At least 30 hours of courses specific for the botany major are also needed in areas including chemistry, biology, genetics, plant ecology and evolution.

RESEARCH

Undergraduate research opportunities abound within the department and include biophysics, photosynthesis, computer modeling, sequencing DNA, ecology, forest ecosystems, evolution and systematics. Nearly every plant biology undergraduate works in the laboratory of a professor to gain experience in their chosen field. A student who has worked on a project for a semester or more may compete for University-sponsored grants and other independent research assistance. These grants may support a research project during the academic year or provide a stipend for the summer. In other instances students perform independent research projects for academic credit.

There are also opportunities to work in the University's Pringle Herbarium, the second largest herbarium in New England, with a collection of 300,000 plant specimens and a library of books, many of them unique to the Pringle. A state-of-the-art computerized greenhouse and modern laboratories also afford a variety of research opportunities. Because UVM is a comprehensive university, student research opportunities extend to a variety of other disciplines as well, such as agriculture and medicine.

Regardless of your interests, undergraduate research opportunities are an excellent way to discover first hand the thrill of doing science. The experience was summed up nicely by a recent plant biology major who has since gone on to graduate school: *"Undergraduate research at UVM has been the best learning experience that I have encountered in college and has changed the way that I approach science and my education."*

CAREER DIRECTIONS

About half of UVM Plant Biology majors go on to graduate or medical school. Among students who enter the workforce right after college, many work in the public sector with federal, state, or local governments or public interest organizations. Others work in the plant agricultural industry or become self-employed in private businesses.

Employment opportunities in plant biology are expected to increase at a rate greater than average within the total job market for the foreseeable future. This employment picture is all the better because the current number of students training in plant biology is below average. Employment prospects are very good and professionals in the field report especially high job satisfaction.

CORE COURSES

Foundations
Written Communications
Oral Communications
Information Technology
Introduction to Botany
Ecology and Evolutionary Biology of Plants
Plant Molecular Biology
Principles of Genetics
Introduction to Wetlands

ADVANCED COURSES

(a sampling)
The Green World
Physiology of the Plant Body
Morphology and Evolution of Vascular Plants
Systematics and Phylogeny
Plant Anatomy
Plant Ecology
Botany Field Trip
Biology of the Fungi
Plant Growth and Development

FOR FURTHER INFORMATION, CONTACT:



PLANT BIOLOGY PROGRAM

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