

THE FIELD

Plant and soil sciences bring together biologists and environmental scientists seeking translation of cutting-edge science to fit the needs and challenges of a complex and ever-changing world. Our curriculum has a strong focus on environmentally conscious and socially responsible management of plant and soil systems. Research, teaching, and outreach programs emphasize study and technology transfer related to the growth of food and ornamental crops, protection of soil and water resources, study and management of plant diseases and pests, improvement of plants, development of new crops, and management of harvested materials. These same sound scientific and ecological approaches central to agricultural systems have expanded roles in new applied science endeavors, such as remediation of pollution in soil, use of urban and agricultural by-products, sustainable management of plant diseases, and developing biofuels. Faculty members have expertise in a wide range of disciplines, including molecular biology and genetics; plant breeding; plant physiology, nutrition, and growth regulation; plant pathology; environmental stress; and soil sciences.

Minors in plant and soil sciences and plant pathology are available.

THE MAJOR

The major in plant and soil sciences has been designed with the goal of allowing students to tailor their coursework to best reflect individual academic interests and career objectives. The major encompasses a broad range of related disciplines dealing with applied biology and the environment in general. If you are interested in the sciences of plant biology, soil sciences, plant responses to environmental stresses, plant biotechnology, plant pathology, and postharvest plant biology, this major might be for you. For all students studying plant and soil sciences, learning extends beyond the classroom and the library. With on-campus laboratories and greenhouses, in addition to nearby orchards and farm facilities, students receive hands-on training that enhances the classroom learning experience. Faculty work closely with students to provide individualized academic advising and guidance of independent study projects.

CURRICULUM OPTIONS

Students majoring in plant and soil sciences are required to complete core courses in botany, soil science, math, and chemistry before undertaking more advanced coursework in the major. Majors complete a minimum of 30 course credits taken within the Stockbridge School of Agriculture. This major prepares students in applied and basic sciences to meet current and future needs of our society for well-trained biologists. Students receive rigorous training in biology, including genetics, physiology, and laboratory methods. In addition, students may receive academic credits for internships and independent work related to their area of study. Individualized plans are developed with an academic advisor to custom design a program for each student's interests and career aspirations.

HONORS

Students may pursue honors opportunities within the major. Contact the honors coordinator, Allen Barker (413-545-4733, barker@umass.edu), for more information.

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) and work closely with their academic advisor to choose the appropriate courses in preparation for study abroad.

CAREER OPPORTUNITIES

The plant and soil sciences program prepares graduates for innumerable career opportunities. Graduates are employed as laboratory research technicians, teachers, soil scientists, federal and state regulatory officials, biologists, and Peace Corps volunteers. A significant number of graduates pursue advanced degrees in graduate and professional schools, which provide additional opportunities in research, teaching, consulting, and public service in their chosen areas of specialization.

THE STOCKBRIDGE SCHOOL OF AGRICULTURE

The Stockbridge School is unique in that its students have all the advantages of being members of the larger UMass Amherst community and the College of Natural Sciences while keeping the close student-faculty relationships of a small school. Students can be involved in a broad range of activities, including clubs, intramural sports, and residential activities. Stockbridge faculty members teach at both the undergraduate and graduate level, participate in research, and are highly trained professionals. Stockbridge is a small school with big opportunities.

Levi Stockbridge, who was the university's first professor of agriculture and its fifth president, pioneered "Learning by Doing," a concept that combines classroom lectures with practical experiences. We follow his philosophy to this day.

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: 208 Paige Lab

Phone: 413-545-2222

Website: stockbridge.cns.umass.edu/academics/bachelor-degrees