

Crop Science

Crop Science is the application of biological, chemical, and physical principles to crops and cropping systems to increase their efficiency in converting light and supplemental resources into food, feed, fiber, or ornamental products. Crop science majors at Ohio State concentrate on the interrelationships among the physical and biological factors that regulate crop plant productivity. With knowledge of and experience in working with these interrelationships, graduates are prepared to devise creative solutions to the changing problems in modern crop production and management.

The application of biotechnology in crop science—an emerging area worth considering for study—is playing an increasingly important role in world crop production in twenty-first century agriculture.

Crop science majors may choose to specialize in one of three areas: agronomy, horticulture, or floriculture.

Pursuing Crop Science at Ohio State (Columbus)

Students interested in crop science as a major should develop a high school program emphasizing the sciences. All freshmen applicants are considered within a competitive admission process. The primary criteria for admission are the completion of the applicants' high school preparation program, performance in that program as indicated by class rank and/or grade point average, and performance on either the ACT or SAT. Students with good academic backgrounds may receive credit for some courses by examination after enrolling at Ohio State.

A crop science faculty member is assigned to assist students in program planning and is available for academic consultation.

Crop Science Requirements

- Required crop science courses include:
 - Crop Science
 - General Plant Biology
 - Control of Crop Plant Development
 - Issues in Crop Science
 - Internship
- Crop science electives include:
 - Grain Crops
 - Forage Crops
 - Principles of Vegetable Crop Production
 - Principles of Weed Science

Greenhouse Environment Control
Seed Science
Small Fruit Production and Viticulture
Crop Production in Developing Countries

Students may select an additional 10-13 credit hours in agricultural and construction systems management, entomology, soil science, genetics, microbiology, and plant pathology. Additional electives to total a minimum of 183 hours are required for graduation and are selected in consultation with the student's advisor to fit the needs of the student.

A wide array of minors is available to students majoring in crop science. Popular minors offered within the College of Food, Agricultural, and Environmental Sciences include agribusiness, plant pathology, entomology, agricultural systems management, and animal sciences

Co-Curricular Opportunities

An international experience, such as a study abroad opportunity, provides an education one does not receive in a classroom or from a textbook, and is an invaluable aid in today's global market. While abroad, students complete three courses for 15 hours of credit that may be applied towards a minor, free electives or General Education Requirements. The College of Food, Agricultural, and Environmental Sciences currently sponsors opportunities for students to study abroad in Australia, the Dominican Republic, China, England, South Africa, Poland, Russia, Mexico and the Czech Republic.

Additional chances to learn outside the classroom are available in one of the over 800 Ohio State student organizations. The OSU Crops and Soils Club is a student organization for crop science majors, as well as plant health management and agri-business majors. Club meetings focus on social involvement and fund raising activities for the OSU Weed Science Judging Team and Soil Judging Team. The club also assists with the FFA agronomy contest training. The Landscape and Floriculture Forum (L.A.F.F.) promotes social relationships among students with interests in ornamental horticulture and brings the students into closer contact with the faculty. L.A.F.F. provides programs related to the broad scope of ornamental horticulture. Pi Alpha Xi is a national honor society for undergraduate and graduate students in floriculture, ornamental horticulture, and landscape horticulture.

For more information, check these web sites:

Horticulture & Crop Science: hcs.osu.edu
College of Food, Agricultural, and Environmental Sciences:
cfaes.osu.edu

Ohio State: osu.edu
Awesome Plant Science Careers: enPlant.osu.edu
Multicultural Center: multiculturalcenter.osu.edu

Curriculum Sample

This is a sample list of classes a student will take to pursue a degree in Crop Science. Since university students need more than a specific education in a narrow field, they also will take classes to complete the General Education Curriculum (GEC). The GEC will allow students to develop the fundamental skills essential to collegiate success across major programs. Course work options satisfying the GEC often come from a variety of academic areas of study allowing students to tailor their GEC toward their interests. Note: This sample represents one of several possible paths to a degree in Crop Science. Consult the departmental web site, hcs.osu.edu, for details on each specific track.

Freshman Year:

Agriculture Survey	1
Freshman English	5
Microeconomics	5
College Algebra	4
Biology sequence	10
Chemistry sequence	10
Introductory Sociology	5
History	5
Total hours	45

Sophomore Year:

Science of Growing Plants	5
Crop Genetic Resources	4
General Plant Biology	5
Major elective	3
GEC arts and literature	5
GEC data analysis	5
GEC social science	5
GEC second writing course	5
Minor	9
Total hours	46

Junior Year:

Crop Development	4
Major electives	18
Contemporary Issues	5
Minor	13
Electives	2
Oral Expression	5
Total hours	47

Senior Year:

Issues in Crop Science	5
Internship	5
Minor	12
Electives	12
HCS Electives	6
GEC arts and literature	5
Total hours	45

Honors & Scholars Programs

Incoming first year students in the top 10% of their high school graduating class with an ACT composite of 30 or higher or combined SAT Critical Reading and Math scores of 1340 or higher are offered admission to the University Honors program. The honors program is designed to challenge superior ability students. It is based on the concepts of flexibility in course selection, accelerated or advanced classes, and an honors research or scholarly project. Course flexibility enables the honors student to achieve breadth and depth in the academic program and to define academic growth in a more personal way. Honors program students are given priority scheduling. Students completing honors courses have these designated on their transcripts with an "H" before the course, and those who complete the honors program satisfactorily, meeting all requirements, will graduate "with distinction" in their area of specialization. Enrolled students may also apply to the Honors program by submitting an Individualized Honors Curriculum after earning at least a 3.5 CPHR on 30 hours at Ohio State. Student must also maintain at least a 3.5 CPHR to remain in honors.

Career Prospects in Crop Science

Within the private sector, agrochemical, seed, grain, greenhouse, nursery, and food processing companies employ crop scientists. Crop scientists may also become independent crop producers or professional agricultural consultants.

Within the public sector, crop scientists are eligible for various jobs with the United States Department of Agriculture (USDA), local and regional planning agencies, and the Cooperative Extension Service.

For those interested in teaching and conducting research at a college or university, the graduate program in horticulture and crop science at The Ohio State University offers the opportunity to pursue a Master of Science (MS) and Doctor of Philosophy (PhD) through advanced studies.

Beginning annual salaries for crop science graduates average an annual salary of \$30,450 (2006). Salaries vary depending on location, the candidate's skill, and previous job-related experience.

More About Crop Science

All crop science majors are required to go on internship locally, nationally, or internationally. Crop science faculty provide counseling and advice on choosing an appropriate internship. In addition to a formal internship, part-time employment is available on campus, often within the student's home college and department. Several private-sector agricultural companies are located in or near Columbus and offer part-time employment to students majoring in crop science.

Revised July 2007. For the most up-to-date information the crop science program, please visit hcs.osu.edu.

Contact information:

Horticulture and Crop Science | 2021 Coffey Road
Columbus, Ohio 43210-1086 | (614) 292-2001 | 1-866-enPlant