Plant Science, BS

Emphases: Horticulture and Cropping Systems; Research
Department: Plants, Soils, and Climate Department
College: College of Agriculture and Applied Sciences

Overview

About This Degree

USU is home to the only agriculturally focused plant science degree in the state. In this program, students focus on the research, production, and management of economically important plants. Students have access to faculty mentors and the opportunity to receive hands-on experience working side-by-side with research scientists in laboratories, greenhouses, and fields.

Plant science majors are able to customize their education and focus on a variety of areas in the plant science field, such as sustainable agriculture, crop physiology and biotechnology, weed control, fertilization, water requirements and application, and the specific production of fruits, vegetables, turf, ornamentals, and agronomic crops.

Distance Education

The BS in plant science with an emphasis in horticulture and cropping systems is available through USU's Regional Campuses and Distance Education program.

Career Options

Horticulture and Cropping Systems Emphasis

- Orchard, greenhouse, or nursery management
- Golf course or parks superintendent
- Laboratory technician
- Supervisor or demonstrator of chemical or technical products
- Inspector of agricultural products
- Private businesses in irrigation equipment sales
- Work abroad through government or philanthropic foundations to help solve world food, soil, and environmental problems
- Garden center, seed, and chemical sales
- Agricultural production
- Owning or managing farm-related businesses
- Consulting
- Agricultural product sales
- Government agencies

Research Emphasis

Students pursing this emphasis typically continue on to graduate school to become plant research scientists who work in the following areas:

- Genetic engineering
- Agribusiness
- Plant breeding
- Research laboratories
- Government agencies
- Agriculturally oriented research companies
- Chemical firms
- Work abroad through government or philanthropic foundations to help solve world food, soil, and environmental problems
- Academia

Career Services provides counseling and information on hundreds of job and internship opportunities and even

helps students apply and interview.

What it takes

Admissions Requirements

In addition to Utah State University's admissions requirements, the plant science program has additional requirements:

- **Freshman:** New freshmen admitted to USU in good standing qualify for admission to this major.
- **Transfer Students**: Transfer students from other institutions need a 2.2 total GPA for admission to this major. Students transferring from other USU majors need a 2.0 total GPA for admission to this major.

International students have additional admissions requirements.

Major Requirements

Click here to see course requirements for the **Bachelor of Science**.

All students must complete an internship that is between one and four credits.

Contact

Advising

All new USU students participate in a New Student Orientation program, where they receive detailed information about major requirements, registering for classes, and other important advising information.

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Get Involved

Professional Organizations, Honor Societies, and Clubs

American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America: ASA, CSSA, and SSSA are prominent international scientific societies headquartered in Madison, Wisconsin. Because of their common interests, all three societies share a close working relationship as well as the same headquarters office staff. Society members are dedicated to the conservation and wise use of natural resources to produce food, feed, and fiber crops while maintaining and improving the environment.

American Society for Horticultural Science: ASHS supports the science for specialty crops, global solutions for nutritious food sources, and healthy, beautiful environments. ASHS members (researchers, faculty, and other educational personnel, Extension agents, federal and state experiment station representatives, and growers and distributors of horticultural products) continue to make significant advances in these areas, and are well-positioned to lead the rapid evolution of horticultural science through the 21st century.

AG-ri-CULTURE Club: This club provides students opportunities to learn from and network with fellow students and professionals from various agriculture-related fields. Professionals from the industry give lectures at club meetings throughout the year, providing students with valuable knowledge and career opportunities. Lectures are diversified so the club is open to students from all of the departments in the college as well as any students that want to learn about agriculture. This club exists to diversify and broaden students thinking by talking about many different disciplines in agriculture and bringing in real-world experience from professionals throughout the industry.

Plant Science Club: This club provides a means for students to meet together, build relationships, and participate in worthwhile projects. The club conducts fundraising projects, such as growing and selling plants and flowers, to

finance student competitions and trips to areas of interest throughout the western United States. The Plant Science Club is also involved in service activities.

Labs, Centers, Research

With the second oldest undergraduate research program in the nation, USU offers students a wide range of opportunities to gain hands-on research experience. The Undergraduate Research and Creative Opportunities program allows students to apply for grants and receive funding. USU's Honors Program prepares students for excellent graduate programs by helping them build relationships with professors, participate in research projects, take smaller, more intensive classes, and develop leadership skills.

Center for Integrated BioSystems: The CIB leads a progressive, interdisciplinary effort in research, core services, and education serving agriculture and life sciences. The CIB is where the first hybrid animal, a mule, was cloned, and was named one of "30 Awesome College Labs" by Popular Science magazine. The CIB has a research program with several active projects in diverse areas of life science that encompass plant, animal, and microbe functional genomics.

D. Craig Aston Teaching Park: The D. Craig Aston Park is adjacent to the Dale and Adele Young Teaching Greenhouses, creating a horticulture laboratory teaching cluster. The D. Craig Aston Park is an outdoor teaching laboratory where students in the landscape construction and maintenance courses can learn skills through hands-on experience. Each year students are involved in site preparation, plant installation, and designing and building garden structures. Over time, the land will be completely developed through the activity of laboratory classes. The experience students gain is invaluable to them as they enter the landscape industry.

Dale and Adele Young Teaching Greenhouses: This facility contains some 3,000 square feet of greenhouse space, head house space for propagation and potting, as well as a classroom for horticulture instruction. Here, students gain hands-on experience in greenhouse operation and management. Greenhouse management lectures and labs occur here as do the laboratory experiences for plant propagation. During the spring semester, students grow bedding plants, and in the fall they grow poinsettias.

USDA ARS Forage and Range Laboratory: Scientists at the USDA-ARS Forage and Range Research Laboratory develop improved plant materials and planting practices to enhance both environmental conservation and rancher profitability on rangelands and pastures in the western United States.

Utah Agricultural Experiment Station: The UAES is part of a network of researchers and facilities at the nation's land-grant universities and is committed to improving agriculture and managing natural resources for the people of Utah. At research facilities on the USU campus and throughout the state, UAES supports hundreds of research projects that promote agriculture and human nutrition and enhance the quality of rural life.

Utah Botanical Center: The UBC, located in Kaysville, Utah, is home to research and demonstration projects focused on sustainable living in the Intermountain West. Studies of water conservation, horticulture, water quality enhancement, wetland ecology, integrated pest management, urban forestry, agriculture, fish and wildlife, highway enhancement, and storm-water management combine to make the center a living laboratory.

Water Initiative: Utah State University supports a broad community of students and faculty engaged in water education, research, and outreach. The USU Water Initiative provides an overarching umbrella for the activities of this community aimed at fostering interdisciplinary collaboration and collegial sharing of ideas related to water across the departments and colleges of USU.