
PLANT SCIENCE

This area of study prepares students for entry-level employment and further study in the field of crop production. Students completing courses offered in this area will have a foundation in the fields of irrigation, weed control, plant diseases and pests, fertilizers, and cultivation of crops and will acquire skills in crop production in order to maximize yields as well as profits. Students interested in a career in Pest Control Advisor (PCA) can further their understanding of the industry through this program and take the courses necessary to sit for the PCA licensure exam.



WHAT YOU WILL LEARN

Plant Structures and Processes • Botany • Taxonomy • Development of major fruit, vine and nut crops in California
Weeds and Poisonous Plants • Fertilizers & Soil Amendments • Water Management
Irrigation Methods, systems, wells and pumps • Integrated Pest Management • Citrus Production
Introduction to Viticulture

WHERE DO YOU SEE YOURSELF

Pest Control Advisor • Certified Crop Advisor • Crop Production • Equipment Sales • Farm Manager
Irrigation Technician • Pesticide and Fertilizer Sales • Propagation Manager • Research Assistant

PAY RANGE

Average salary for entry-level Field Operations Manager is between \$48,000 – 66,000 per year
Licensed Pest Control Advisor with 2+ years experience can earn between \$5,000 – 8,000 per month

PROGRAMS

Associate of Science in Agriculture Plant Science (AS-T) – 60 Units

Associate of Science in Plant Science – 60 Units

Skill Certificate in Plant Science – 15 Units

CLASSES YOU WILL TAKE

PLSI 001 - Intro to Plant Science

Introduction to Plant Science including structure, growth process, propagation, physiology, growth media, biological competitors, and post-harvest factors of food, fiber, and ornamental plants.

PLSI 012 - Introduction to Fruit Science

The botany, taxonomy, and development of major fruit, vine, and nut crops in California, including variety selection, production practices including site selection, fertilization, pollination, irrigation, harvest, storage, processing, marketing, pest management, and pruning.

PLSI 105 - Weeds and Poisonous Plants

The study of the classification, identification, and life cycle of common and poisonous weeds in California production areas and grasslands and their effects on animals and man including management practices such as prevention, mechanical, biological, and chemical methods. Weeds establishment and chemical resistance also discussed.

PLSI 106 - Fertilizers & Soil Amendments

The study of the composition, value, selection, and use of fertilizer materials and soil amendments within the context of soil, plant, and fertilizer relationships, including application practices.

PLSI 108 - Water Management

Irrigation and drainage problems that focus on soil-plant-water relationships, applications scheduling, evapotranspiration, and efficiency. Introduction to irrigation equipment and technology to include water measurement, soil moisture measurement, pumping and delivery systems, and various irrigation methods. California water infrastructure, water budget, water rights and legislation.

PLSI 110 - Integrated Pest Management

The origin, history, and management measures for insect, plant pathogen, weed, and other pests of field crops; pest biology and life cycles are studied to demonstrate the use of various Integrated Pest Management (IPM) technologies for economic crop production. Pesticide regulations, application, formulations, and materials for specific uses are covered.

PLSI 111 - Citrus Production

This course focuses on the economic importance of the citrus industry. Topics include: historical development, areas of production, environmental requirements and citrus climatology, citrus botany, commercial varieties and rootstocks. Orchard planning and development and cultural practices are also covered in a laboratory setting.

PLSI 113 - Introduction to Viticulture

An introduction to viticulture including cultural practices, history, distribution, biology, anatomy, propagation, cultivated varieties, rootstocks, climate, vineyard practices, common diseases and pests.

PLSI 118 - Advanced Irrigation

Advanced management of irrigation systems. Emphasis placed on plant-soil-water relationships in reference to application, scheduling, water infiltration rates and depth, drainage, salinity measurement and management, chemigation and climate control.

REQUIREMENTS

Please see the online Catalog for specific requirements in this area:

<http://catalog.cos.edu/areas-study/>

Get Started at COS.EDU/Admissions