

# PLANT SCIENCE



Students completing this area of study will have a foundation for the field of Plant Science, through the study of soil, irrigation, weed control, plant diseases and pest, fertilizers, and cultivation of crops and will acquire skills in crop production to maximize yields as well as profits.

Students interested in a career as a **Pest Control Advisor (PCA)** can further their understanding of the industry through this department and take the courses necessary to sit for the PCA licensure exam.

## Contact Information

### Plant Science Faculty Contact

Allison Ferry-Abee, Ph.D. | (559) 688-3139 | [allisonf@cos.edu](mailto:allisonf@cos.edu)  
 (charlesa@cos.edu)  
 Tulare Center Building B: 206 | Tulare Campus

### Agriculture Division Chair

Shannan Cooper | (559) 688-3118 | [shannanc@cos.edu](mailto:shannanc@cos.edu)  
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### Provost - Tulare College Center, Dean of Agriculture

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## Associate Degree

- Associate of Science in Agriculture Plant Science for Transfer (AS-T) (<https://catalog.cos.edu/areas-study/plant-science/associate-science-agriculture-plant-science-as-t/>)
- Associate of Science in Plant Science (AS) (<https://catalog.cos.edu/areas-study/plant-science/associate-science-plant-science-not-transfer-as/>)

## Certificate

- Skill Certificate in Plant Science (<https://catalog.cos.edu/areas-study/plant-science/skill-certificate-plant-science/>)

For a complete list of courses and descriptions visit: COURSES (<https://catalog.cos.edu/course-descriptions/>)

### PLSI 001 Introduction to Plant Science 3unit(s)

Hours: 3 Lecture/Discussion Hours:  
1 Lab

Introduction to plant science including structure, growth processes, propagation, physiology, growth media, biological competitors, and post-harvest factors of food, fiber, and ornamental plants. Laboratory required. (C-ID AG-PS106L)

### PLSI 012 Fruit and Nut Production 3unit(s)

Hours: 3 Lecture/Discussion Hours:  
1 Lab

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

### PLSI 105 Weeds and Poisonous Plants 3unit(s)

Hours: 3 Lecture/Discussion Hours:  
1 Lab

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

### PLSI 106 Fertilizers and Soil Amendments 3unit(s)

Hours: 3 Lecture/Discussion Hours:  
1 Lab

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 current application practices. Laboratory required.

### PLSI 108 Ag Water Management 3unit(s)

Hours: 3 Lecture/Discussion Hours:  
1 Lab

Irrigation and drainage problems that focus on soil-plant-water relationships, application 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 3unit(s)

Hours: 3 Lecture/Discussion Hours:  
1 Lab

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) techniques for economic crop production. Pesticide regulations, application, formulations, and materials for specific uses are covered. Laboratory required.

**Advisory on Recommended Preparation:** PLSI 001 or equivalent college course with a minimum grade of C or equivalent knowledge and/or skills as determined by departmental assessment.

**PLSI 111 Citrus Production** **3unit(s)**

Hours: 3 Lecture/Discussion Hours:

1 Lab

This course is designed to provide a basic understanding of citrus production in California. Emphasis will be placed on production regions, citrus botany and physiology, climactic controls, irrigation, fertilization, pest management, site selection, fruit quality, and rootstock and scion selection.

**PLSI 113 Grape Production** **3unit(s)**

Hours: 3 Lecture/Discussion Hours:

1 Lab

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

**Advisory on Recommended Preparation:** PLSI 001 or equivalent college course with a minimum grade of C.

**PLSI 118 Advanced Irrigation** **3unit(s)**

Hours: 3 Lecture/Discussion Hours:

1 Lab

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.

## **Plant Science**

Abee, Charles

A.S., College of Sequoias

B.S., California State University, Fresno

Ferry-Abee, Allison, Ph.D.

B.A., California State University, Fresno

Ph.D., University of California, Davis