HORT A184: GREENHOUSE AND NURSERY SCIENCE

Item	Value
Curriculum Committee Approval Date	12/08/2021
Top Code	010930 - Nursery Technology
Units	3 Total Units
Hours	90 Total Hours (Lecture Hours 36; Lab Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)

Course Description

A survey of the nursery industry. Nursery structures and equipment, construction, operation and use in the production of commercial crops. Cultural aspects of crop production. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Plant and manage a commercial greenhouse crop.
2. Operate the environmental controls, irrigation and fertigation equipment in a greenhouse.
3. Identify crop problems and apply appropriate control measures.
4. Compute the profitability of a commercial greenhouse crop.

Course Objectives

- 1. Discuss the nursery industry.
- 2. Recognize the current techniques used to produce nursery plants.
- 3. Produce a commercial sized nursery crop.
- 4. Recognize the skills that will be needed for employment in the nursery industry.
- 5. Recognize the importance of the various aspects of the plant environment and how to control the environment.
- 6. Describe how to safely and efficiently use the chemicals involved in crop production.
- 7. Operate irrigation and fertigation systems.
- 8. Explain the different structures used in crop production.
- 9. Calculate the costs of producing a crop.
- 10. Discuss how to merchandize a crop.

Lecture Content

A survey of the nursery industry Globalization of plant production Production sequences of various nursery crops Growing media – soil-less mixes Irrigation of nursery crops Plant nutrients, fertilizers, fertilizer programs pH and Salinity Use of growth affecting chemicals Plant problems, pest and diseases and weeds Nursery sanitation Nursery structures, greenhouses and shade structures Types of greenhouses, heating, cooling, ventilation, shading, day length control Controls for greenhouse environment. Cultural aspects in the production of a commercial crop Merchandizing a commercial crop.

Lab Content

Making soil-less mixes Calculating mix requirements prior to planting Planting techniques for various containers Moving plants to greenhouses. Spacing plants on tables Irrigating greenhouse plants Fertilizing greenhouse plants Pinching plants Applying growth retardants to greenhouse plants

Method(s) of Instruction

- Lecture (02)
- Lab (04)

Instructional Techniques

Lectures illustrated with slides, Demonstrations by the instructor Interaction between students and instructor during lab sessions, before class, in office hours and by E mail.

Reading Assignments

Readings as assigned.

Writing Assignments

Written final exam with essay answers

Out-of-class Assignments

Students are required to produce a comprehensive diary throughout the semester

Demonstration of Critical Thinking

Weekly evaluation of the commercial crop that is the students responsibility. Evaluation of the procedures performed by the studentEvaluation of computer generated growth curves, from data collected by the student on a weekly basis.A final examination

Required Writing, Problem Solving, Skills Demonstration

Written final exam with essay answers

Other Resources

1. Handouts to be provided and distributed by the instructor.