

HORT A185: PLANT DISEASES

Item	Value
Curriculum Committee Approval Date	12/08/2021
Top Code	010900 - Horticulture
Units	1.5 Total Units
Hours	27 Total Hours (Lecture Hours 27)
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

Common diseases of plants, emphasis on ornamentals grown in Southern California. Their symptoms and control of salinity, air pollutants, fungi, bacteria, virus, nematodes and other causal agents of plant diseases. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Identify and name the plant diseases common to ornamental plants from observing symptoms on diseased plants and name the casual agent.
2. Give accurate controls including proper cultural practices to prevent diseases.

Course Objectives

- 1. Discuss the "Disease Triangle."
- 2. Discuss differences between Biotic and A Biotic disorders in Plants.
- 3. Recognize the commonly misdiagnosed normal characteristics of some plants.
- 4. Assess and identify a casual agent for a specific disease.
- 5. Discuss the various biotic casual agents of many plant diseases.
- 6. Discuss the proper diagnosis of diseases and how that effects accurate control options.

Lecture Content

Plant Disease Defined Normal vs abnormal compared Galls vs storage organs, normal variegation, other normal characteristics, commonly mis diagnosed as "diseased." Plant Disease Complex of Interactants – "The Disease Triangle" Host plant Causal agent Environment Non Parasitic vs Parasitic agents (Biotic vs. A biotic) Parasite defined Field differentiation Non parasitic (A Biotic)causal agents host symptoms and control of: Environment temperature, light, wind; soil moisture, oedemia and oxygen deficiency Nutrients deficiencies and excesses Salinity alkaline and other excess salts Air pollutants smog (pan), ozone, fluorides, ethylene, source of pollutants, plant resistance Chemical damage to plants Mechanical damage potbound, "mower blight" and other injuries Parasitic causal agents (Biotic) including for each host symptoms, control, and typical life cycles of: Fungi Bacteria Nematodes Viruses and

Mycoplasmas Parasitic flowering plants Career in Plant Pathology Job opportunities Salary range and higher education

Method(s) of Instruction

- Lecture (02)

Instructional Techniques

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

Reading Assignments

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Writing Assignments

Short-answer exams. essay

Out-of-class Assignments

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Demonstration of Critical Thinking

Written and practical exams; student reports

Required Writing, Problem Solving, Skills Demonstration

Short-answer exams. essay

Other Resources

1. Shurtleff — How to Control Plant Disease in Home and Garden 2. Westcott — Plant Disease Handbook 3. Pirone — Diseases and Pests of Ornamental Plants 4. Streets — The Diagnosis of Plant Diseases 5. Forsberg — Diseases of Ornamental Plants 6. Streets — Diseases of the Cultivated Plants of the Southwest 7. University of California, Agricultural Extension Service, Publications of Plant Diseases 8. University of California, Agricultural Extension Service, Pests of Landscape Trees and Shrubs 2nd Edition