

HORT 52L: HORTICULTURAL PRACTICES: DISEASE IDENTIFICATION & PATHOLOGY

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Fall 2026
Units:	3
Hours:	3 lecture per week (36 total per quarter)
Advisory:	Not open to students with credit in HORT 54L.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade Only
Repeatability:	Not Repeatable
Formerly:	HORT 54L

Student Learning Outcomes

- Student should be able to identify common horticultural diseases
- Student should be able to identify controls for common horticultural diseases

Description

Identification, morphology, physiology, and management of common agricultural and horticultural diseases. Study of the common diseases found in plants. Review of the impacts of common diseases on the plant production and landscape industries and their identification throughout the life cycle of the disease.

Course Objectives

The student will be able to:

1. Identify common diseases that impact California horticultural crops.
2. Classify diseases using taxonomical nomenclature.
3. Review the pathology of common plant diseases.
4. Identify the stage of growth of the diseases.
5. Discuss integrated pest management (IPM) solutions to control the diseases.
6. List the recommended chemical controls for diseases.
7. Prepare a management plan for disease control in horticultural facilities and the landscape.

Course Content

1. Diseases of California horticultural crops and landscapes
 - a. Common horticultural diseases
 - b. Economic impacts of diseases on the horticultural field

- c. Disease effects on the California nursery and greenhouse industry
 - d. Disease damage to landscape installations
2. Disease taxonomical nomenclature
 - a. Related taxonomic groups
 - b. General conditions and characteristics of disease groups
 3. Pathology of plant diseases
 - a. Diseases caused by fungi
 - b. Diseases caused by bacteria
 - c. Diseases caused by viruses
 - d. Diseases caused by phytoplasmas
 - e. Diseases caused by other organisms
 4. Growth stages
 - a. Stages of growth for each disease
 - b. Cultural conditions which promote diseases
 5. Integrated pest management (IPM)
 - a. IPM options in disease control
 - b. Disease exclusion through cultural control
 - c. Mitigation of disease impacts through alternatives to pesticides
 - d. Crop varieties with minimal impact from common diseases
 - e. Point of economic impact to crops from diseases
 6. Chemical control
 - a. Effective chemical controls for diseases
 - b. Safety hazards for chemical controls
 - c. Safe application methods for chemical disease controls
 7. Disease management planning
 - a. Disease control measures
 - b. Economic implications of various disease control methods
 - c. Scheduling of disease control methods

Lab Content

Not applicable.

Special Facilities and/or Equipment

1. Classroom with overhead projection and internet connection.
2. Gardens and greenhouse with plants that host diseases for identification.

Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

Identification exams requiring field and image identification of diseases
Written exams on the cultural, identification, and management issues related to diseases
Disease management plan preparation for a designated facility or landscape

Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

Lectures about the impact of diseases on the horticultural industry
Discussions regarding pest management
Observation and identification of diseases in the greenhouse, nursery, and field

Discussions regarding control methods for diseases

Representative Text(s) and Other Materials

Greenwood, Pippa. American Horticultural Society: Pests and Diseases. 2004.

Horst, Kenneth. Westcott's Plant Disease Handbook. 2013.

Although these texts are older than the suggested "5 years or newer" standard, they remain seminal texts in this area of study.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

1. Reading assignments include reading approximately 30-50 pages per week from assigned text. Supplemental reading will be provided in hand-out form or through reference to online resources
2. Field trips to horticultural venues to examine measures used for disease control will be provided
3. Writing assignments include:
 - a. Short papers on specific insects
 - b. Management plan for a designated facility or landscaped area

Discipline(s)

Ornamental Horticulture