

HORT 400A: PEST MANAGEMENT: CULTURAL REQUIREMENTS

Foothill College Course Outline of Record

Heading	Value
Units:	0
Hours:	6 lecture per quarter (6 total per quarter) This course meets 1 time per quarter.
Degree & Credit Status:	Non-Degree-Applicable Non-Credit Course
Foothill GE:	Non-GE
Transferable:	None
Grade Type:	Non-Credit Course (Receives no Grade)
Repeatability:	Unlimited Repeatability

Student Learning Outcomes

- Identify cultural requirements that impact pest management
- Identify methods to use cultural control of pests

Description

This course will focus on the cultural requirements to reduce pesticide use. The first portion will concentrate on building soil and will discuss the chemicals that are deleterious to building soil. The next portion will discuss the methods used to diagnose problems with plants by determining whether it is caused by an organism (living or biotic) or not (non-living or abiotic). Integrated pest management uses the IPM pyramid or a hierarchical scale to select the right pesticide. New products in the marketplace will show the products that are relatively new in the pesticide realm. Weeds are a plant seemingly without virtue. This course will discuss methods of pesticide use to reduce the incidence of pesticide resistance, review the cultural controls for controlling weeds, and indicate which of these plants have benefits in a cropping system. This course may satisfy requirements for those students seeking continuing education for pesticide applicator licensure.

Course Objectives

The student will be able to:

- Identify beneficial soil building conditions.
- Develop strategy for diagnosing biotic vs. abiotic plant problems.
- Recommend cultural requirements to reduce pesticide use.
- Develop strategy for reducing pesticide resistance.
- Identify the role and control of weeds in pest management.
- Identify new products used in pesticide management.

Course Content

- Beneficial soil building.
 - Good soil structure and texture.
 - Correct soil chemistry.
 - Chemicals that lead to poor soil.
 - Developing a sound soil/food web.

- Develop strategy for diagnosing biotic vs. abiotic plant problems.
 - Develop problem-solving strategy for determining problem.
 - Derive logical solutions to problem determination.
 - Develop solution for problem.
- Cultural requirements to reduce pest use.
 - Soil management.
 - Treatments by organism classification.
- Develop strategy for reducing pesticide resistance.
 - Alternatives to chemical controls.
 - Prevention methods.
- Identify the role and control of weeds in pest management.
 - Identify beneficial weeds for gardens.
 - Identify problem weeds.
 - List controls for problems weeds.
- Identify products used in pesticide management.
 - Standard pest control tools and materials.
 - New developments in pest control.
 - Selection and use of existing/new controls.

Lab Content

Not applicable.

Special Facilities and/or Equipment

- Lecture room with multimedia video/audio equipment.
- Exterior area in which to observe garden pests.

Method(s) of Evaluation

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

- Written exams.
- Presentation on course topics.

Method(s) of Instruction

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

- Lecture from instructor.
- Lecture from guest speakers.
- Demonstrations of technical topics.
- Discussion with groups and students in class.
- Observation of participatory demonstrations.

Representative Text(s) and Other Materials

California Department of Pesticide Regulations Laws and Regulations Study Guide, 2nd ed. Sacramento, CA: State of California, 2011.

This is a seminal document developed by the State of California and is required for licensure.

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

- Reading 15-30 pages per week from assigned text.
- Reading handouts and website material.
- Web and library research.

Discipline(s)

Ornamental Horticulture