

# HORT 52C: HORTICULTURE PRACTICES: PLANT INSTALLATION & MAINTENANCE

## Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2023
Units:	4
Hours:	3 lecture, 3 laboratory per week (72 total per quarter)
Advisory:	Completion of or concurrent enrollment in HORT 15 strongly recommended.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade Only
Repeatability:	Not Repeatable

## Student Learning Outcomes

- Demonstrate skills required for proper pruning of various species of trees and shrubs.
- Plant trees and shrubs.

## Description

Horticultural principles and practices for management of plants and gardens. Proper selection and maintenance of trees, shrubs, and ground covers. Fine gardening techniques used by landscape gardeners. Transplanting and planting containerized and boxed plant material. Preparation of planting areas and post-planting care of landscape plants. Techniques for pruning of various species. Operation of equipment and tools used in gardening. Managing pests in the landscape. Troubleshooting irrigation equipment. Surveying requirements for landscape maintenance business.

## Course Objectives

The student will be able to:

1. Evaluate the botany and health of plants to be planted in the landscape
  - a. Demonstrate knowledge of plant anatomy
  - b. Demonstrate knowledge of basic plant growth processes
    - i. Apical dominance
    - ii. Dormancy
  - c. Evaluate plant health prior to planting
  - d. Evaluate health of plants in the field
2. Practice and achieve proficiency in the safe handling of various landscape maintenance equipment, including hand tools and power equipment
  - a. Hand tools
    - i. Pruners
    - ii. Saws
    - iii. Rakes
    - iv. Other hand maintenance tools
  - b. Power tools
    - i. Saws
    - ii. Blowers
    - iii. Pruning equipment
    - iv. Chippers
    - v. Mowers
  - c. Safety equipment
    - i. Personal protective gear
    - ii. Public protection
3. Demonstrate skills required for proper pruning of various landscape plants
  - a. Pruning methods for plants
    - i. Shearing
    - ii. Heading back
    - iii. Thinning
    - iv. Drop crotch
    - v. Decorative techniques
  - b. Selection of proper technique(s) for individual plants
    - i. Trees
    - ii. Shrubs
    - iii. Vines
    - iv. Perennials
    - v. Ground covers and bedding plants
    - vi. Turf
4. Plant and transplant trees, shrubs, and perennials
  - a. Plant material using various planting techniques
    - i. Bare root
    - ii. Containerized
    - iii. Balled and burlapped
8. Identify routine maintenance requirements and special problems in several different landscape settings
9. Perform the basic operations necessary for a landscape maintenance business
10. Recognize the variety of planting techniques used in different cultures around the world

## Course Content

- iv. Boxed
  - v. Machine moved
- b. Turf establishment
- 5. Recognize and evaluate various post-planting techniques in order to select the most appropriate method for care of a given plant species
  - a. Staking and guying
  - b. Wrapping
  - c. Mulching
  - d. Deep watering
  - e. Spraying
- 6. Identify common pest problems and solutions in the landscape
  - a. Identify common pests
    - i. Insects
    - ii. Diseases
    - iii. Weeds
  - b. Engage in proper pest management
    - i. IPM
    - ii. Biological controls
    - iii. Safe pesticide use
- 7. Troubleshoot irrigation systems and set controllers
  - a. Identify irrigation system components
    - i. Controller
    - ii. Piping
    - iii. Valves
    - iv. Heads
    - v. Other components
  - b. Recognize common irrigation problems
  - c. Identify and implement problem fixes
- 8. Identify routine maintenance requirements and special problems in several different landscape settings
  - a. Plant cultural practices
    - i. Watering
    - ii. Fertilizing
    - iii. Pest management
    - iv. Post-planting care
  - b. Turf care
  - c. Seasonal maintenance
- 9. Perform the basic operations necessary for a landscape maintenance business
  - a. Identify legal and business requirements for landscape maintenance business
    - i. Business requirements
    - ii. Landscape contracting licensure
    - iii. Pesticide regulations
  - b. Prepare a proposal for landscape maintenance services
  - c. Prepare a landscape maintenance schedule
  - d. Identify methods to improve sustainability of business and services
- 10. Recognize the variety of planting techniques used in different cultures around the world
  - a. Hand equipment
  - b. Power equipment
- 3. Practice pruning techniques on plants
  - a. Shearing
  - b. Pinching
  - c. Renewal
  - d. Rejuvenation
  - e. Drop crotch
  - f. Decorative techniques
- 4. Plant installation and post-planting care activities
  - a. Plant preparation
  - b. Plant hole preparation
  - c. Planting bare root stock
  - d. Planting containerized stock
  - e. Planting boxed stock
  - f. Deep watering
  - g. Mulching
  - h. Staking
- 5. Pest identification and control practices
  - a. Survey of pest problems
  - b. Establishment of pest controls
- 6. Troubleshoot irrigation systems
  - a. Identification of irrigation problems
  - b. Implementation of solutions to irrigation problems
- 7. Maintenance plan development
  - a. Identification of maintenance tasks required for a site
  - b. Creation of a management plan for a site
  - c. Development of a maintenance schedule for site management

## Special Facilities and/or Equipment

1. Horticultural laboratory, greenhouse, and related horticultural facilities and equipment.
2. Students provide pruning shears with sheath, work boots, leather gloves, and clothing for fieldwork.

## Method(s) of Evaluation

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

Lab exercises  
Midterm  
Written plant report  
Final examination  
Participation through attendance

## Method(s) of Instruction

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

Lectures  
Discussions  
Lab activities  
Guest speakers  
Assigned reading activities  
Self-guided research

## Lab Content

1. Plant anatomy and physiology review
2. Demonstrate and practice proper use and maintenance of landscape tools, including:

## **Representative Text(s) and Other Materials**

Turnball, Cass. Guide to Pruning, 3rd ed. (ISBN-10: 1570617515). 2012.

This book is a seminal text in horticultural pruning, even though it is older than five years.

## **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 provided in hand-out form or through reference to online resources
2. Writing assignments include:
  - a. Topical white papers
3. Other:
  - a. Lectures address reading topics and experiences of instructor. Classroom discussion and demonstrations in support of lecture topics will be provided
  - b. Guest speakers from industry provide supplemental lecture and demonstration

## **Discipline(s)**

Ornamental Horticulture