

# HORT 21: PLANT MATERIALS I

## Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2023
Units:	3
Hours:	3 lecture per week (36 total per quarter)
Advisory:	Completion of or concurrent enrollment in HORT 15 strongly recommended; not open to students with credit in HORT 51A.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU/UC
Grade Type:	Letter Grade Only
Repeatability:	Not Repeatable

## Student Learning Outcomes

- Compare and contrast tree features and cultural need.
- Identify trees presented by botanical and common names.

## Description

Identification, taxonomy, habits of growth, and cultural and environmental requirements of plants grown in California. Emphasis on the identification, use, and maintenance of plants commonly used in the landscaping and gardening industry. Plants are observed on campus and at off-site locations. This is the first of two plants courses covering the master plant list.

## Course Objectives

The student will be able to:

1. List the botanical and common names, appearance, culture, adaptation, and use of California trees, shrubs, and palms, as indicated by program master list
2. Correctly identify listed plants presented by botanical and common names
3. Design with listed plants, selecting plants with proper form, color, texture, line, cultural needs, and uses, and conform to specific landscape needs
4. Define horticultural and botanical terms and use them to identify plant parts and characteristics
5. Describe the importance of soil and ecology of different plants
6. Demonstrate knowledge of the binomial nomenclature utilized in the identification plants
7. Describe plant growth habits and requirements
8. Recognize the variety of ways plants are utilized by different cultures around the world
9. Use keys to identify plants
10. Create a plant key
11. Use a computer program to select plants for various landscape and garden situations

## Course Content

1. List plants selected for the class by name, appearance, culture, use, and adaptation, including:
  - a. Trees
  - b. Shrubs
  - c. Palms
2. Correctly identify listed plant:
  - a. By common name
  - b. By genus, species, and, if applicable, variety or cultivar
3. Using written and design materials, compare, contrast, and select plants in landscape and garden applications by:
  - a. Plant form, color, texture, and line
  - b. Common cultural needs
  - c. Aesthetic and functional uses
  - d. Plants for specific needs
4. Define terms used to identify plant parts and characteristics, including:
  - a. Leaf
  - b. Bark
  - c. Flower
  - d. Fruit
  - e. Deciduous
  - f. Evergreen
  - g. Monocot
  - h. Dicot
5. Describe soil and ecological conditions for plants
  - a. Preferred soil types for growth
  - b. Soil biology necessary for growth
  - c. Native habitats for plants
  - d. Native plants to bay area region
6. Describe binomial nomenclature and its use for identification of plants
  - a. General nomenclature
  - b. Genus
  - c. Species
  - d. Cultivar and variety
7. Describe habits and requirements for plant growth
  - a. Soil requirements
  - b. Light requirements
  - c. Fertility requirements
  - d. Moisture requirements
  - e. Exposure
  - f. Pest issues
  - g. Poisonous
  - h. Edible
    - i. Plant size
    - j. Plant characteristics
8. Describe the cultural uses of plants
  - a. Native American uses
    - i. Medicinal
    - ii. Ceremonial
    - iii. Edible
  - b. Non-Native American uses

- i. Edible
  - ii. Medicinal
- 9. Identify plants using various ID keys
  - a. Yoked key
  - b. Photographic key
  - c. Twig identification
  - d. Leaf identification
  - e. Flower identification
- 10. Develop a key for personal use
  - a. Photographs of plant
  - b. Notes on plant characteristics
- 11. Use computer software to select plants for various uses
  - a. Vectorworks CADD plant library
  - b. Plantmaster
  - c. Hortiscopia

## Lab Content

Not applicable.

## Special Facilities and/or Equipment

1. Horticultural classroom with multi-media projection system.
2. Campus and external arboretum to view plants.

## Method(s) of Evaluation

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

Weekly identification quizzes  
Written midterm exam on use of plants in design situations  
Written final exam on use of plants in design situations  
Written report on use of listed plants in the California landscape

## Method(s) of Instruction

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

Field observation of plants  
Lectures on plant characteristics  
Discussions regarding use and care of plants  
Read assigned reading activities  
Perform self-guided research

## Representative Text(s) and Other Materials

Bernstein, Fross, and O'Brien. California Native Plants for the Garden. 2006.

Although this publication is older than five years, it remains the seminal text on California native plants.

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

1. Reading assignments include:
  - a. Researching up to 15 plant species per week (approximately 20 pages of reading) in representative texts
  - b. Review of Foothill Horticulture Plant Database
2. Writing assignments include:
  - a. Essay exams at midterm and final
  - b. Report on use of California plant material

## Discipline(s)

Ornamental Horticulture