

# HORT 52M: URBAN FORESTRY

## Foothill College Course Outline of Record

Heading	Value
<b>Units:</b>	3
<b>Hours:</b>	2 lecture, 3 laboratory per week (60 total per quarter)
<b>Degree &amp; Credit Status:</b>	Degree-Applicable Credit Course
<b>Foothill GE:</b>	Non-GE
<b>Transferable:</b>	CSU
<b>Grade Type:</b>	Letter Grade Only
<b>Repeatability:</b>	Not Repeatable

## Student Learning Outcomes

- Student will be able to select appropriate trees for urban conditions
- Prepare a management plan for urban street trees

## Description

This course will explore the impact, use and maintenance of plant material used in the urban environment. Emphasis will be on proper selection of plants for urban situations, proper installation of urban plants and maintenance of plants. Pruning and maintenance of trees and other large plants will be included.

## Course Objectives

The student will be able to:

- Discuss the benefits and challenges of urban forestry to the urban environment
- Describe a tree's anatomy, physiology and vascular system functions
- Describe the cultural requirements of trees
- Describe tree characteristics and classification
- Identify healthy tree stock
- Identify tree injuries and physiological problems
- Identify safety standards and equipment for tree maintenance
- Identify tree maintenance procedures
- Plant and transplant trees

## Course Content

- Discuss the benefits and challenges of urban forestry to the urban environment.
  - Identify how trees adjust ambient temperature.
  - Discuss how trees improve esthetic qualities of neighborhoods.
  - Describe how trees improve air quality in urban environments.
- Describe a tree's anatomy, physiology and vascular system functions.
  - Describe a tree's root systems.
  - Describe a tree's trunk and branch systems.
  - Describe a tree's foliage systems.
  - Describe how these tree systems interact for growth and survival.
- Describe the cultural requirements of trees.
  - Identify the sun/shade requirement of trees.
  - Define the moisture requirements for trees.
  - Identify the soil requirements for trees.
- Describe tree characteristics and classification.
  - Describe tree characteristics.
  - Identify the major tree classifications.
    - Overstory.
    - Understory.

- Deciduous.
  - Coniferous.
  - Evergreen.
- Identify how these characteristics aid in classifying trees.
- Identify healthy tree stock.
    - Identify healthy root is a tree.
    - Identify healthy trunk and stem growth in a tree.
    - Identify health foliage in a tree.
  - Identify tree injuries and physiological problems.
    - Identify tree damage.
      - Injury from growth habits.
      - Injury from improper growing.
      - Injury from external sources.
    - Identify tree physiological problems.
      - Internal defects.
      - Root, trunk and bark defects.
  - Identify safety standards and equipment for tree maintenance.
    - Describe the safe approach to maintaining tree health.
    - Identify equipment used to maintain tree health.
    - Demonstrate the proper use of tree maintenance equipment.
  - Identify tree maintenance procedures.
    - Demonstrate planting.
    - Demonstrate pruning.
    - Demonstrate specialty tree care techniques.
  - Plant and transplant trees.
    - Excavate trees from existing planting sites.
    - Prepare new planting hole for tree.
    - Properly prepare a tree for planting.
    - Place tree in planting hole and backfill.
    - Execute proper tree post-planting care.

## Lab Content

- Identification of safety standards and equipment
- Review of plant anatomy and physiology
- Identifying tree injuries and physiological disorders
- Planting trees
- Pruning trees

## Special Facilities and/or Equipment

- Structure for equipment storage and maintenance
- Classroom with multi-media equipment
- Exterior arboretum for lab activities
- Waste disposal area, composting area

## Method(s) of Evaluation

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

- Written exams
- Tree evaluations
- Writing reports
- Lab reports

## Method(s) of Instruction

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

- Lectures
- Presentations by guest speakers
- Class discussion

- D. Field trips
- E. Labs

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

Gilman, Edward. An Illustrated Guide to Pruning. 3rd ed. Independence, KY: Cengage Learning, 2011.

Although this text is older than the five year standard, it is a seminal piece of work on arboriculture.

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

- A. Reading 30-40 pages from assigned text each week
- B. Reading handouts and websites each week related to current topics in urban forestry
- C. Writing tree evaluations regarding the health and condition of plants being evaluated
- D. Writing papers on the values and conditions of urban forestry and urban environment
- E. Preparing recommendations for plant selections for urban planting

## **Discipline(s)**

Ornamental Horticulture