

# C-ID Descriptor

## Plant Materials and Usage I

### Descriptor Details

- **Descriptor Title:** Plant Materials and Usage I
- **C-ID Number:** 108
- **SUB C-ID Number:** 108
- **Suffix:**
  - Lab Course (L)
- **Units:** 3.0
- **Hours:** 0000
- **Date of Last Revision:** 11/5/2024 08:27:27 AM PST

### General Description

Identification, growth habits, culture and ornamental use of landscape and indoor plants adapted to climates of California with emphasis on need for sustainability and water wise plants. Plants emphasized will come from current cloud-based resources. Covers those plants best observed and studied in the spring of the year. Plant materials from local regions will also be included. Laboratory required.

### Prerequisites

No information provided

### Corequisites

No information provided

### Advisories

No information provided

### Content

1. Background of Botanical Nomenclature
  - a. Categories of consecutive rank
  - b. Cultivar names
  - c. Hybrid names
  - d. Budded and grafted plants names
  - e. Lines
  - f. Clones
2. External Structures Used in Identification of Plants
  - a. Buds
  - b. Item
  - c. Bark
  - d. Leaves
  - e. Flowers
  - f. Fruit
3. Identification by sight memory of 200 plants best observed in the spring season taken from cloud-based resources and college/university plant lists (from Addendum A) selected for regional climate zones:
  - a. Indoor plants
  - b. Annuals
  - c. Perennials
  - d. Vines
  - e. Ground covers
  - f. Shrubs
  - g. Trees
4. Plant Physical or Growth Characteristics
  - a. Origin and climatic range
  - b. Form of growth
  - c. Rate of growth
  - d. Ultimate height and spread
  - e. Leaf structure with special emphasis on texture and color
  - f. Flower color and texture in relation to their value in landscape use
  - g. Fruit size and color
  - h. Exposure, soil and water requirements of the plants studied
  - i. Maintenance needs of plant
  - j. Landscape use of each species of plant studied
  - k. Propagation of each plant studied

## I. Pests and diseases which attack the plants collected

### Lab Activities

Laboratory Activities may include but are not limited to:

1. Utilizing the Western Garden Book (Climate Zones) section students will find and identify the climate zone for the following cities in California.
2. Identify botanical terms as they relate to plant structures used in plant identification.
3. Collect or take digital photograph of plant material
4. Create a plant characteristics key or chart
5. How to use plant keys
6. Identification of plants from leaf, flower, seed, bud, stem and bark.

### Objectives

*At the conclusion of this course, the student should be able to:*

- Explain the binomial method of plant nomenclature
- Identify botanical terms (plant identification terminology) as related to various plant parts and structures
- Identify and classify landscape plants using physical features of leaf, bark, flower, fruit, and growth habit
- Describe the importance of understanding soil requirements, water usage and ecology of different plants
- Summarize the various uses of plants as related to landscape and garden applications
- Explain growth habits and requirements
- Select plants with requirements that conform to selected landscape use criteria
- Use plant keys to identify plants
- Demonstrate the use of computerized plant selection programs
- Create a plant characteristics key for future design work

### Evaluation Methods

## **Lecture**

Comprehensive Quizzes and Exams  
Written Critical Thinking Scenarios  
Problem Analysis and Solution  
Research and Term Papers

## **Laboratory**

Laboratory Skill Validation by Observation  
Laboratory Projects and Reports  
Laboratory Research Projects and Reports  
Laboratory Skill Practicum Exams

## **Textbooks**

*Sunset Western Garden Book*, Oxmoor House. Birmingham, AL

## **Other References**

Conner, W.E., *Back Pocket Guide to Ornamental Plants*, VEP, San Luis Obispo, CA

Wait, D. D., *Ornamental Plants: Their Care, Use, Propagation, and Identification*, EHC, Modesto, CA.

Harris & Harris, *Plant Identification Terminology: An Illustrated Glossary*

Dirr, M. A., *Manual of Woody Landscape Plants*

Editors of Botanica, *The Plant Book*, Random House. Australia

Editors of the American Horticultural Society, *A-Z Encyclopedia of Garden Plants*

PlantMaster-California College Edition. Version 6.71, CDROM Plant Selection Database, 2000-2004 (GardenSoft, 2686 Velarde Dr., Thousand Oaks, CA 91360)

Horticopia, CDROM Plant Selection Database, 2005 (Horticopia Inc., P.O. Box 1200, Purcellville, VA 20134)

Bailey, L.H., *Hortus Third*

Duffield & Jones, *Plants for Dry Climates*

Hoyt, R.E., *Check Lists of Plants for Subtropical Regions*

McClintock & Leiser, *A Checklist of Woody Ornamental Plants of California*

Perry, B., *Trees and Shrubs for Dry California Landscapes*

Jepson, W.L., *The Jepson Manual: higher plants of California*

*Note: There are a large number of other specific references dealing with the identification of individual or related groups/families/genera of plants. In addition, most general horticulture texts have sections dealing with plant nomenclature and identification.*