

Discipline: Agriculture	Sub-discipline: Environmental Horticulture
General Course Title: <b>Landscape Maintenance</b>	Min. Units: <b>3 Semester</b>
Proposed Suffix: <b>L</b>	
<p>Course Description:  Enhancing the function and aesthetic value of public and private landscapes by applying appropriate maintenance techniques. Topics include; planting, pruning, watering, soil fertility, pest management, weed control, and landscape maintenance business practices. Laboratory required.</p>	
Required Prerequisites or Co-Requisites <sup>1</sup>	
Advisories/Recommended Preparation <sup>2</sup>	
<p>Course Objectives: <i>At the conclusion of this course, the student should be able to:</i></p> <ul style="list-style-type: none"> <li>• Describe landscape maintenance careers and employment opportunities.</li> <li>• Demonstrate safety-consciousness in dress/apparel, tool use, job site demeanor, and personal safety equipment</li> <li>• Identify, maintain, and describe the use of various hand tools</li> <li>• Select and safely use appropriate hand tools for a variety of landscape operations</li> <li>• Identify, select and safely operate various types of landscape power equipment</li> <li>• Describe basic pruning systems applied to shade trees, shrubs, vines, perennials, roses and fruit trees</li> <li>• Demonstrate pruning techniques on a variety of landscape plants</li> <li>• Maintain and improve soil conditions with amendments and fertilizers</li> <li>• Identify the parts of an irrigation system and make basic repairs and adjustments</li> <li>• Program a controller for a water-efficient irrigation schedule</li> <li>• Describe sustainable landscape practices</li> <li>• Identify common turf grasses for the region and recommend proper care</li> <li>• Plant container, balled and burlapped, and bare root plants; ground covers and bedding plants</li> <li>• Recommend appropriate staking/guying methods</li> <li>• Recognize symptoms of plant damage by common pests and diseases</li> <li>• Identify common insect pests and beneficials</li> <li>• Identify common landscape weeds and recommend control measures</li> <li>• Describe integrated pest management methods for controlling selected pests and diseases</li> <li>• Mix and apply selected pesticides according to label directions</li> <li>• Summarize state license requirements applicable to commercial landscape pest control</li> <li>• Create an annual maintenance calendar for a selected landscape</li> <li>• Present a cost estimate and contract proposal for landscape maintenance service</li> </ul>	
<p>Course Content:</p> <ol style="list-style-type: none"> <li>1. Landscape maintenance industry in California <ol style="list-style-type: none"> <li>a. Scope of work of the maintenance industry</li> <li>b. Career and employment opportunities</li> <li>c. Licenses and permits</li> <li>d. Local ordinances <ol style="list-style-type: none"> <li>(1) Weed abatement</li> <li>(2) Noise control</li> <li>(3) Waste disposal</li> </ol> </li> </ol> </li> </ol> <p><b>Landscape Maintenance (Content Continued)</b></p>	

<sup>1</sup> Prerequisite or co-requisite course need to be validated at the CCC level in accordance with Title 5 regulations; co-requisites for CCCs are the linked courses that must be taken at the same time as the primary or target course.

<sup>2</sup> Advisories or recommended preparation will not require validation but are recommendations to be considered by the student prior to enrolling.

2. Safety
  - a. Importance of safe work habits
  - b. Clothing and shoes
  - c. Vehicles, power equipment and hand tools
  - d. Job site behavior
  - e. Accident and injury procedures
    - (1) First Aid
    - (2) Workers Compensation
    - (3) Safety training and record-keeping
  
3. Tool identification, care and safe use
  - a. Hand tool cleaning, sharpening, repair
    - (1) Shovels, spades, hoes, trowels, weeders
    - (2) Garden and lawn rakes
    - (3) Pruning shears, loppers, saws
    - (4) Wheelbarrows, carts and miscellaneous implements
  - b. Power equipment use and routine maintenance
    - (1) Mowers
    - (2) Edgers
    - (3) Leaf blowers
    - (4) String trimmers
    - (5) Hedge shears
    - (6) Rototillers
    - (7) Turf aerators
    - (8) Vertical mowers (verticutters)
  
4. Pruning
  - a. Objectives
    - (1) Plant health
    - (2) Landscape function
    - (3) Flowers and fruit
    - (4) Aesthetics and special forms
  - b. Plant types and pruning needs
    - (1) Deciduous trees and shrubs
    - (2) Evergreen trees and shrubs
    - (3) Conifers
    - (4) Flowering trees
    - (5) Fruit trees
    - (6) Roses
    - (7) Rhododendrons, azaleas and camellias
    - (8) Perennials
  - c. Pruning methods and systems
    - (1) Heading back
    - (2) Thinning
    - (3) Pinching
    - (4) Shearing
    - (5) Pollarding

**Landscape Maintenance  
(Content Continued)**

- d. Plant responses to placement and timing of pruning cuts

- (1) Identification of stem structures
- (2) Terminal and lateral buds
- (3) Vegetative and flower buds
- (4) Bud scale scars and age of wood
- (5) Importance of the branch collar and branch bark ridge
- (6) 3-cut method of removing large diameter branches
- (7) Shaping and directing growth with pruning cuts

5. Soil amendments and fertilizers
  - a. Aeration and drainage characteristics of different soil types
  - b. Amendments
    - (1) Organic
    - (2) Inorganic
  - c. Mulches
    - (1) Organic
    - (2) Inorganic
  - d. Fertilizers
    - (1) Selection of organic and inorganic fertilizers
    - (2) Nutrient needs of various plant types
    - (3) Fertilizer label
    - (4) Calculation of amounts required
    - (5) Spreader types and calibration
  - e. Soil sampling and testing
6. Irrigation systems
  - a. Identification of system components
  - b. Operation, adjustments, and basic repairs
    - (1) Controllers
    - (2) Valves
    - (3) Heads and emitters
    - (4) PVC pipe, risers, and plastic tubing
  - c. Plant water needs and water-efficient irrigation scheduling
7. Planting methods
  - a. Container grown plants
    - (1) Nursery cans and boxes
    - (2) Flats and cell packs
  - b. Bare root
  - c. Balled and burlapped
  - d. Root Barriers
  - e. Tree staking and guying methods
8. Lawn care
  - a. Warm and cool season turf grass varieties
  - b. Mowing, edging, watering, fertilizing
  - c. Aerating and dethatching
  - d. Lawn insect, disease and weed problems

**Landscape Maintenance  
(Content Continued)**

9. Introduction to pests and diseases of landscape plants
  - a. Symptoms of pest and disease damage
  - b. Pest and beneficial insects

- c. Weed identification
  - d. Diseases caused by fungi, bacteria and viruses
10. Landscape pest management
- a. Integrated pest management concept and other control practices
  - b. Pesticides
    - (1) Insecticides, miticides, herbicides, fungicides, rodenticides, molluscicides
    - (2) Reading and following label directions
    - (3) Safety precautions and protective equipment
    - (4) Mixing and applying
    - (5) Sprayer use and maintenance
  - c. Pesticide use regulations for landscape maintenance
    - (1) Qualified Applicator Certificate (QAC)
    - (2) Maintenance Gardener Pest Control Business License
    - (3) Qualified Applicator License (QAL)
    - (4) County Agricultural Commissioner registration
11. Professionalism in the landscape maintenance industry
- a. Importance of proper business practices and licenses
  - b. Public image and personal appearance
  - c. Scheduling seasonal maintenance tasks annually
  - d. Cost estimating and maintenance contracts
  - e. Client relations and communications
  - f. Certified Landscape Technician, Maintenance, or Irrigation exam
- Laboratory Activities: Individual Laboratory Activities are designed to support course objectives.

Methods of Evaluation: Lecture Comprehensive Quizzes and Exams Written Critical Thinking Scenarios Problem Analysis and Solution Research and Term Papers	Methods of Evaluation: Laboratory Laboratory Skill Validation by Observation Laboratory Projects and Reports Laboratory Research Projects and Reports Laboratory Skill Practicum Exams
---	--

Typical Textbooks, Manuals, or Other Support Materials

Ann Marie VanDerZanden and Thomas W. Cook, The complete guide to the sustainable management of landscapes (2010) ISBN-13: 978-0470480939

Ingels, Jack E. (2010). Landscaping Principles and Practices. Del Mar, NY (ISBN: 9781428376410 ).

Other References:

Harris, Richard W. (2003). Arboriculture. Pearson (ISBN: 0-13-088882-6).

Biondo, Ronald J. and Schroeder, Charles B. (2003). Introduction to Landscaping: Design, Construction, and Maintenance. Interstate, IL (ISBN: 0-8134-3236-7).

Sunset Western Garden Book  
Sunset Pruning Handbook  
UC Cooperative Extension publications  
California Landscape Standards, CLCA  
Landscape Data Manual by James Griffin, CLCA  
Tool Identification Manual by VEP

**Statewide Articulation: CPSLO-EHS 123, CPP-PLT 131/L, other universities as lower division elective**

FDRG Lead Signature: Date:

Mark E. Bender, PhD CSU Stanislaus

[For Office Use Only]	<b>Internal Tracking Number</b>