PUB 158: MUNICIPAL AND URBAN TREE CARE

Citrus College Course Outline of Record

Heading	Value
Effective Term:	Fall 2021
Credits:	3
Total Contact Hours:	54
Lecture Hours :	54
Lab Hours:	0
Hours Arranged:	0
Outside of Class Hours:	108
Strongly Recommended:	ENGL 101.
Transferable to CSU:	No
Transferable to UC:	No
Grading Method:	Standard Letter, Pass/No Pass

Catalog Course Description

A course in tree care for persons currently employed or seeking future employment in the public works or private landscape industry: tree anatomy, physiology, pruning, cabling, identification, root structure and its effects on infrastructure, soil management and irrigation are covered in detail. The course is designed to prepare students to pass the Tree Worker Certification and/or pass the certified arborist exam given by the Western Chapter, International Society of Arboriculture. 54 lecture hours.

Course Objectives

- Explain basic principles of tree anatomy and physiology including the function of leaves, roots, and branches and how these principles affect tree care
- Analyze tree nutrition and fertilization and determine essential elements needed.
- Make proper tree selection based upon environment, landscape, site characteristics, and urban forest planning.
- Determine early care procedures for newly planted trees.
- Describe the procedures and techniques used in pruning and understand the relationship of branch collar and branch size to wound closure and the potential for decay.
- Determine proper tree support and protection for newly planted and/or damaged trees.
- Identify various types of insect and disease problems in trees
- Distinguish physiological problems caused by living and nonliving disorders.
- Differentiate the philosophies between Plant Health Care (PHC) and Integrated Pest Management (IPM)
- Understand the liability associated with tree risk and the role of the arborist in assessing the condition of trees.
- Establish a plan to preserve trees on a construction site.
- Identify various soil types
- Follow and implement all safety standards required for tree care and maintenance.
- Identify common tree species using plant characteristics such as growth habit, texture, color, and leaf arrangment
- Explain the proper use of tree care equipment including chain saws, brush chippers, aerial devices, hydraulic loppers and pruners
- Implement the American National Standards Institute's ANSI Z133.1 standards for tree care operations.
- Explain how the soil environment affects root growth and distribution
- Understand how the growth and develoment of a tree is the result of the interaction between its genetic potential and the environmental surroundings.
- Understand soil structure, soil texture and soil moisture and the relationship to compaction, drainage, pH, cation exchange capacity, buffering capacity, absorption, and root growth.
- Explain the principles of evapotranspiration, infiltration, and water-holding capacity.

Major Course Content

1. Tree Biology, Anatomy, and Physiology
2. Tree/Soil Relations
3. Tree Identification and Selection
4. Installation, Planting, Establishment, and Early Care
5. Soil Management, Tree Nutrition, and Fertilization
6. Pruning Concepts and Techniques
7. Water Management and Irrigation
8. Cabling and Bracing
9. Safe Work Practices
10. Tree Climbing
11. Equipment Safety
12. Trees and Construction
13. Tree Assessment and Risk Management
14. Diagnosing and Treating Common Tree Problems, Disease, and Disorders
15. Root Structure and its Effects on Infrastructure

Suggested Reading Other Than Required Textbook

Articles assigned from readings in the Arborist News quarterly magazine.

Examples of Required Writing Assignments

Compare and contrast the properties of the various soil types in the region and the impacts these variables have on tree selection and irrigation designs; describe appropriate pruning techniques.

Examples of Outside Assignments

Identify 20 regional tree species. Then include a description of each tree's identification characteristics that were used to determine each tree species.

Instruction Type(s)

Lecture, Online Education Lecture