

PREREQUISITES: Introduction to Public Works

GRADING METHOD: INSTRUCTORS OPTION: Grade or Pass/No Pass.

COURSE DESCRIPTION

A course in tree care for persons working in public works or private industry: tree anatomy, physiology, pruning, cabling, identification, root structure and its effects on infrastructure, soil management and irrigation. The course is designed to introduce students to components in the Tree Worker Certification exam given by Western Chapter, International Society of Arboriculture

COURSE CONTENT

- I. Introduction
- II. Basic Tree Anatomy
- III. Basic Tree Physiology
- IV. Tree Identification and Selection
- V. Planting and Early Care
- VI. Soil Management
- VII. Pruning Concepts and Techniques
- VIII. Irrigation
- IX. Cabling and Bracing
- X. Safe Work Practices
- XI. Tree Climbing
- XII. Chain Saw Safety
- XIII. Aerial Lift Safety
- XIV. Brush Chipper Safety
- XV. Tree Valuation
- XVI. Diagnosing Common Tree Problems
- XVII. Root Structure and its Effects on Infrastructure

STUDENT LEARNING OUTCOMES

Upon completion of this course, students will be able to do the following:

- 1. Computation

OUTCOME: Demonstrate the appropriate level of knowledge in the areas of tree anatomy, physiology, pruning, cabling, identification, root structure and its effect on infrastructure, soil management and irrigation

RATIONALE: to successfully pass the Tree Worker Certification Exam

ASSESSMENT: through oral presentation, written assignments, and examinations

2. Creative, Critical, and Analytical Thinking

OUTCOME: 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

RATIONALE: required in order to complete a successful tree planting project

ASSESSMENT: in written assignments

OUTCOME: Demonstrate the ability to identify various tree maintenance issues that require additional skill and knowledge above the ability of a tree worker

3. Community/Global Consciousness and Responsibility

OUTCOME: Describe the basic procedures adopted in the WCISA pruning standards

RATIONALE: for early care of trees in an urban environment

ASSESSMENT: through oral presentation, written assignments, and examinations

OUTCOME: Recall and explain the basic principles of tree anatomy and physiology including the function of leaves, roots and branches and the impacts on tree care

RATIONALE: according to current industry standards

ASSESSMENT: in writing

4. Information competency

OUTCOME: Demonstrate the ability to identify 20 common tree species from a list and correctly spell the common names

RATIONALE: as is required in the public works profession

ASSESSMENT: in writing

OUTCOME: List and describe the proper use of various tree care equipment used in the field including chain saws, brush chippers, aerial devices, hydraulic loppers and pruners

RATIONALE: according to current industry standards

ASSESSMENT: through written assignments

C. OUTCOME: Describe Title 8: Article 12 of the CAL OSHA

RATIONALE: regulations pertaining to tree care and safe work practices in the field of tree maintenance

ASSESSMENT: oral presentation

OBJECTIVES

1. Explain basic principles of tree anatomy and physiology including the function of leaves, roots, and branches and how these principles affect tree care

2. Define procedures and principles of proper pruning, including the WCISA Pruning Standards, and for planting, irrigation, tree identification and early care in the urban environment

3. Demonstrate the ability to know what types of tree problems require skill above that of a tree worker

4. Identify various soils and determine the proper form of irrigation and management required by each

5. Identify 20 common tree species from a list of 50 and correctly spell the common names

6. Explain the principles in the proper use of tree care equipment including chain saws, brush chippers, aerial devices, hydraulic loppers and pruners

Explain Title 8: Article 12 of the CAL OSHA regulations as it pertains to tree care

Pass a written examination similar in content and form to the oral test given for Tree Worker certification by the Western Chapter of the ISA