

Course Objectives/Course Outline
Spokane Community College

Course Title: Arboriculture

Prefix and Course Number: AGHRT 228

Course Learning Outcomes:

By the end of this course, a student should be able to:

- Understand how trees grow and how tree organs function
- Understand how to water, fertilize and care for trees
- Understand how to select trees for a specific site
- Know how to choose healthy planting stock and how to properly plant and maintain trees after planting
- Understand how to diagnose plant damage and determine appropriate remediation and care
- Know how to set up a plant health care plan for a specific tree or landscape

Course Outline:

- I. Tree Biology
 - A. Tree Anatomy
 - B. Tree Physiology
 - C. Tropical Trees and Palms
- II. Soil Science
 - A. Physical Properties
 - B. Chemical Properties
 - C. Biological Properties
 - D. Soil Moisture and Plant Growth
 - E. Urban Soils
 - F. Soil Improvement
 - G. Soil Remediation
- III. Water Management
 - A. Trees and Water
 - B. Irrigation
 - C. Water Conservation
 - D. Flooding
 - E. Drainage
- IV. Tree Nutrition and Fertilization
 - A. Tree Requirements
 - B. Fertilizers
 - C. Soil and Plant Uptake
 - D. Analysis and Prescription
- V. Tree Selection
 - A. Site Analysis
 - B. Tree Characteristic
 - C. Matching Tree and Site
 - D. Selecting Trees at the Nursery
- VI. Tree Installation and Establishment
 - A. Plant Selection

- B. Planting Techniques
- C. Transplanting
- D. Care After Planting
- E. Planting Specifications
- VII. Diagnosis and Plant Disorders
 - A. Principles of Diagnosis
 - B. Tree Stress
 - C. Abiotic Disorders
 - D. Biotic Disorders
 - E. Exotic Pests
 - F. Laboratory Analysis
- VIII. Plant Health Care
 - A. Definition and Philosophy
 - B. Determining Plant Health
 - C. Plant Defense Mechanisms
 - D. Plant Health Care Process
 - E. Health Management Monitoring and Reporting
 - F. Targeted Pest Management
 - G. Management Options