

# PST-1380: INTRODUCTION TO TREE CARE

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## Cuyahoga Community College

**Viewing: PST-1380 : Introduction to Tree Care**

**Board of Trustees:**

December 2021

**Academic Term:**

Fall 2022

**Subject Code**

PST - Plant Science/Landscape Tech.

**Course Number:**

1380

**Title:**

Introduction to Tree Care

**Catalog Description:**

Introduction to the tree care trade and occupation. Emphasis on introductory tree care techniques, technologies and industry standards.

**Credit Hour(s):**

2

**Lecture Hour(s):**

1

**Lab Hour(s):**

3

## Requisites

**Prerequisite and Corequisite**

PST-1411 Equipment Operations & Safety or concurrent enrollment, and PST-1311 Deciduous Woody Landscape Plants, or concurrent enrollment, or department approval.

## Outcomes

**Course Outcome(s):**

Complete an orientation to the tree care trade and occupation.

**Essential Learning Outcome Mapping:**

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

**Objective(s):**

1. Identify industry standard certifications and the requirements to obtain and maintain these certifications.
2. Identify industry trade organizations.
3. Identify different career pathways and job sectors.
4. Identify potential careers in the tree care industry.

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**Course Outcome(s):**

Recognize American National Standards Institute (ANSI) and Occupational Safety & Health Administration (OSHA) standards for the tree care industry.

**Essential Learning Outcome Mapping:**

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

**Objective(s):**

1. Compare OSHA and ANSI standards.
  2. Review common tree care industry standards.
  3. Describe set up of safe work zones and jobsites.
  4. Explain the concept of minimum approach distance (MAD) and identify basic overhead electrical hazards.
  5. Define safe operations in the tree care industry.
  6. Recognize and identify Personal Protective Equipment (PPE) properly.
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**Course Outcome(s):**

Identify and evaluate the safe operations of hand tools and equipment commonly used in the tree care industry.

**Essential Learning Outcome Mapping:**

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

**Objective(s):**

1. Discuss the limitations of each tool and piece of equipment.
  2. Summarize safety considerations when operating each tool and piece of equipment.
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**Course Outcome(s):**

Identify and understand common work at height equipment and techniques.

**Essential Learning Outcome Mapping:**

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

**Objective(s):**

1. Discuss the limitations of each technique and piece of equipment.
  2. Summarize safety considerations for each technique and piece of equipment.
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**Course Outcome(s):**

Discuss the role of trees in the landscape.

**Essential Learning Outcome Mapping:**

Civic Responsibility: Analyze the results of actions and inactions with the likely effects on the larger local and/or global communities.

**Objective(s):**

1. Discuss the benefits of trees in the landscape.
  2. Discuss the costs of trees in the landscape.
  3. Compare the costs and benefits of trees in the landscape.
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**Course Outcome(s):**

Discuss common landscape conditions and their impacts on trees in the landscape.

**Essential Learning Outcome Mapping:**

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

**Objective(s):**

1. Explain the difference between biotic and abiotic disorders.
  2. Summarize major abiotic issues encountered by trees in urban settings.
  3. Describe common methods to prevent abiotic damage to urban trees.
  4. Describe common methods to mitigate abiotic damage to urban trees.
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**Course Outcome(s):**

Describe tree installation and maintenance techniques according to ANSI A300 Standards.

**Essential Learning Outcome Mapping:**

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

**Objective(s):**

1. Describe proper planting techniques for trees.
  2. Describe proper fertilizing techniques for trees.
  3. Describe proper mulching techniques for trees.
  4. Describe pruning systems and methods.
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**Methods of Evaluation:**

1. Quizzes
2. Midterm
3. Final Exam
4. Projects

**Course Content Outline:**

1. Tree Care Industry
  - a. Trade organizations
    - i. International Society of Arboriculture (ISA)
    - ii. Tree Care Industry Association (TCIA)
  - b. Industry certifications
    - i. ISA Certifications
    - ii. TCIA – Certified Treecare Safety Professional (CTSP)
    - iii. Pesticide Applicators License
  - c. Industry sectors
    - i. Urban Forestry
    - ii. Commercial Tree Care
    - iii. Municipal Tree Care
    - iv. Utility Tree Care
    - v. Public Horticulture
  - d. Career pathways
2. Tree Care Industry Standards
  - a. American National Standards Institute (ANSI) Z133
  - b. Occupational Safety & Health Administration (OSHA)
  - c. American National Standards Institute (ANSI) Z60.1
  - d. American National Standards Institute (ANSI) A300
3. Trees in the Landscape
  - a. Benefits of trees
  - b. Cost of tree care
4. Landscape Conditions Impacting Trees
  - a. Construction
  - b. Soil quality/quantity
  - c. Mulch
  - d. Equipment Damage
  - e. Pedestrian
5. Common Tree Care Hand Tools and Equipment Operation
  - a. Chipper
  - b. Chainsaw
  - c. Pole Saw
  - d. Hand Saw
  - e. Stump Grinder
  - f. Personal Protective Equipment
6. Tree Maintenance
  - a. Pruning
  - b. Fertilization
  - c. Mulching

- 7. Pruning Systems & Methods
- 8. Electrical Hazards
  - a. Minimum Approach Distance (MAD)
  - b. Indirect Contact
  - c. Direct Contact
  - d. Electric Shock vs. Electrocutation

## Resources

Tree Care Industry Association. "Tree Shrub and Other Woody Plant Management - Standard Practices (Pruning)" *ANSI A300 Pruning Standard*. Tree Care Industry Association, 2017.

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Michael A. Dirr. *Manual of Woody Landscape Plants*. 6th ed. Champaign, IL: Stipes Publishing LLC, 2009. <https://stipes.com/catalog/horticulture/manual-woody-landscape-plants-paperback/30>

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S.J. Lilly. *Arborists' Certification Study Guide*. 3rd ed. International Society of Arboriculture, 2010.

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Jeff Jepson. *Knots at Work*. Beaver Tree Publishing,

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Sharon J. Lilly and Alex K. Julius. *Tree Climbers' Guide*. 4th ed. International Society of Arboriculture, 2021.

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*Glossary of Arboricultural Terms*. 2020.

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