

# PST-2480: ARBORICULTURE PRACTICES

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## Cuyahoga Community College

**Viewing: PST-2480 : Arboriculture Practices**

**Board of Trustees:**

December 2021

**Academic Term:**

Fall 2022

**Subject Code**

PST - Plant Science/Landscape Tech.

**Course Number:**

2480

**Title:**

Arboriculture Practices

**Catalog Description:**

Advanced approach to tree care techniques used in the tree care industry including introductory tree rigging and protection.

**Credit Hour(s):**

3

**Lecture Hour(s):**

2

**Lab Hour(s):**

3

## Requisites

**Prerequisite and Corequisite**

PST-2381 Arboriculture, or departmental approval.

## Outcomes

**Course Outcome(s):**

Examine introductory concepts related to light-duty rigging.

**Essential Learning Outcome Mapping:**

Quantitative Reasoning: Analyze problems, including real-world scenarios, through the application of mathematical and numerical concepts and skills, including the interpretation of data, tables, charts, or graphs.

**Objective(s):**

1. Observe safe rigging techniques.
2. Determine correct hardware, ropes, and rigging systems for various situations.
3. Interpret rigging loads.
4. Understand anchor points and interactions with static and dynamic components.
5. Understand mechanical advantage in tree work situations.
6. Describe static and dynamic loads and their impact on the work process.

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**Course Outcome(s):**

Identify potential hazards associated with working in trees.

**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. Create work orders for specific tree care scenarios.
2. Perform pre-work inspections.

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**Course Outcome(s):**

Compare tree support and protection systems.

**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. Interpret uses of dynamic and static cabling.
2. Describe bracing systems used in the tree care industry.
3. Describe lightning protection systems used in the tree care industry.

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**Course Outcome(s):**

Perform tree climbing and pruning techniques while aloft.

**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. Demonstrate safe climbing skills.
2. Demonstrate proper pruning techniques.
3. Observe proper tree removal techniques.

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**Course Outcome(s):**

Demonstrate the safe and correct use of hand tools and equipment.

**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. Demonstrate the correct and safe operation of chainsaws in tree operations.
2. Demonstrate the correct and safe operation of hand saws in tree operations.
3. Demonstrate the correct and safe operation of climbing gear and ropes in tree operations.
4. Demonstrate the correct and safe operation of pole pruners in tree operations.

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**Methods of Evaluation:**

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

**Course Content Outline:**

1. Light-duty rigging
  - a. Techniques
  - b. Hardware
  - c. Loads
  - d. Anchor Points
  - e. Static components
  - f. Dynamic components
  - g. Mechanical advantage

2. Safety
  - a. Personal Protective Equipment
  - b. Pre-work inspections
3. Tree Support & Protection
  - a. Dynamic Braces
  - b. Static Braces
  - c. Cables
  - d. Lightning Protection
4. Climbing & Pruning while aloft
5. Equipment Use
  - a. Chainsaw
  - b. Handsaw
  - c. Ropes
  - d. Saddles
  - e. Pole Pruners

## Resources

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

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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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Jeff Jepson. *The Tree Climber's Companion*. Beaver Tree Publishing,

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G.F. Beranek. *The Fundamentals of General Tree Work*. EducatedClimber.com, 2017.

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Julian A. Dunster, E. Thomas Smiley, Nelda Matheny, and Sharon Lilly. *Tree Risk Assessment Manual*. 2nd ed. International Society of Arboriculture, 2017.

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Jeff Jepson. *To Fell A Tree*. Beaver Tree Publishing, 2009.

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