

ATCT-1310: CARPENTRY SAFETY

Cuyahoga Community College

Viewing: ATCT-1310 : Carpentry Safety

Board of Trustees:

May 2025

Academic Term:

Fall 2025

Subject Code

ATCT - Appld Indus Tech - Carpentry

Course Number:

1310

Title:

Carpentry Safety

Catalog Description:

Introduction to hazards and dangers of elevated working conditions, including those that involve use of ladders and scaffolds. Hazards of working in confined spaces of limited means of egress with limited natural ventilation that are not meant for continuous occupancy will be examined. Introduction to Material Safety Data Sheets and their use to reduce chemical accidents in the workplace. Use of proper safety procedures and safety equipment as prescribed by OSHA and/or safety enforcement agencies will be emphasized.

Credit Hour(s):

2

Lecture Hour(s):

2

Lab Hour(s):

0

Requisites

Prerequisite and Corequisite

Departmental approval: Admissions to Carpentry Technology apprenticeship program.

Outcomes

Course Outcome(s):

Apply prescribed safety procedures when placing, erecting, and using ladders and scaffolds.

Objective(s):

1. Explain OSHA regulations and standards for placing, erecting, and using ladders and scaffolds.
2. Demonstrate proper safety procedures for placing, erecting, and using ladders and scaffolds.
3. Calculate loads, erect and disassemble scaffolds.

Course Outcome(s):

Apply prescribed safety procedures when working in confined spaces.

Objective(s):

1. Explain OSHA regulations for working in confined spaces.
2. Describe atmospheric hazards of confined spaces.
3. Demonstrate proper procedures for confined space entry including ventilation and use of air monitors as prescribed by OSHA.
4. Demonstrate proper use of personal protective equipment including air purifying respirators, supplied air respirators, and chemical protective clothing.

5. Demonstrate proper use of communications equipment.
6. Demonstrate use of retrieval systems and equipment to rescue a person from a confined space.

Course Outcome(s):

Identify potentially hazardous situations and take appropriate steps to resolve the situation and prevent injuries/accidents from occurring.

Objective(s):

1. Describe causes for falls and potential hazards at the construction work site.
2. Explain preventative actions that can be taken to avoid injuries/accidents at the worksite.
3. Identify situations and conditions that lend themselves to falls in the workplace.
4. Demonstrate the use of proper fall protection equipment.
5. Interpret and apply chemical labels and material safety data sheets (MSDS).
6. Calculate unsafe chemical levels based on MSDS.
7. Interpret materials off data sheets from chemical labels.

Methods of Evaluation:

1. Quizzes
2. Exams
3. Classroom participation
4. Completion of assigned projects

Course Content Outline:

1. Concepts
 - a. Causes of falls
 - b. Potential hazards
 - c. Hazard/accident prevention techniques
 - d. Fall protection systems and equipment
 - e. Situations requiring fall protection equipment
 - f. When and where fall protection is necessary on all work surfaces
 - g. Scaffold regulations and standards
 - h. OSHA safety regulations 1926 Subpart L and 1910.28
 - i. Definitions and properties of confined spaces
 - i. Limited means of entry/exit
 - ii. Not meant for continuous occupancy
 - iii. Poor natural ventilation
 - j. Atmospheric hazards of confined spaces
 - i. Oxygen deficiency
 - ii. Oxygen enrichment
 - iii. Flammable gases and vapors
 - iv. Flammable atmospheres
 - v. Vapor density
 - vi. Toxic atmospheres
 - k. OSHA's Permit system
 - i. Definition of confined spaces
 - ii. Entry permit
 - iii. Confined space standards 29 CFR 1910.146
 - l. Training requirement for MSDS (OSHA's standard 1926.59 / 1910.1200 (g)
 - m. Hazard recognition as it applies to material safety data sheets
 - n. Safe handling of various chemicals used
 - i. Adhesives
 - ii. Cleaning Chemicals
 2. Skills
 - a. Setting up fall protection system and equipment including guard rail systems, personal fall arrest systems, lifelines, safety nets, fall protection plans, covers, stairways and ladders, aerial lifts, and housekeeping

- b. Preparing for protection from falling objects
- c. Selecting appropriate protective equipment
- d. Installing toe boards
- e. Installing catch platforms
- f. Setting up barricades
- g. Monitoring air in confined spaces with sampling pump/calibrating air monitors, and using intrinsic safe tools
- h. Ventilating confined spaces by placement of fans and purging confined spaces.
- i. Using personal protective equipment with air purifying respirators, supplied air respirators, chemical protective clothing, and communications equipment
- j. Rescuing person from confined space using retrieval systems and equipment
- k. Interpreting and applying a chemical label
- l. Interpreting and applying a Material safety data sheet

Resources

Carpenters International Training Fund. "Scaffold Erector: Qualification" Las Vegas, NV: Carpenters International Training Fund, 2023.

Carpenters International Training Fund. *Construction Fall Protection*. Second Edition. Las Vegas NV: Carpenters International Training Fund, 2020.

Carpenters International Training Fund. *Confined Space Participants Manual*. Las Vegas, NV: Carpenters International Training Fund, 2020.

Occupational Safety and Health Administration, United States Department of Labor. *Code of Federal Regulations 1926*. National Safety Compliance, 2022.

Occupational Safety and Health Administration, United States Department of Labor. *Code of Federal Regulations 1910*. National Safety Compliance, 2022.

Resources Other

Carpenter's International Training Fund. <https://www.carpenters.org/citf-training/> 2024.

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