

# ATLB-1430: SCAFFOLD USER AND SKID STEER SAFETY

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## Cuyahoga Community College

**Viewing: ATLB-1430 : Scaffold User and Skid Steer Safety**

**Board of Trustees:**

2017-11-30

**Academic Term:**

Spring 2019

**Subject Code**

ATLB - AIT-Construct/Hazard Material

**Course Number:**

1430

**Title:**

Scaffold User and Skid Steer Safety

**Catalog Description:**

Certification course covering hazard recognition including electrical and fall hazards related to working on scaffolds and skid steers. Included are practical applications related to safe operation of the equipment and worker safety on scaffolds.

**Credit Hour(s):**

1

**Lecture Hour(s):**

1

## Requisites

**Prerequisite and Corequisite**

Departmental approval: admission to Laborer's Apprenticeship program.

## Outcomes

**Course Outcome(s):**

Recognize the safety hazards associated with working on different scaffold systems and identify the safety standards to be followed for worker safety.

**Essential Learning Outcome Mapping:**

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

**Objective(s):**

1. Identify the various types of scaffolds used on construction job sites.
2. Differentiate between the different scaffolds and the respective applications.
3. List the job site tasks and select the proper scaffold system for each application.
4. Identify the components of common to each scaffold system.
5. Identify the safety hazards related to scaffold usage.
6. Discuss the safety standards as prescribed by the Occupational Health and Safety Administration (OSHA).
7. Determine loading capacities for scaffolds using load charts and calculations.

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**Course Outcome(s):**

Discuss the different types of skid steers used on construction sites for specific applications and identify the procedures employed for safe operation and required

**Essential Learning Outcome Mapping:**

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

**Objective(s):**

1. Interpret load charts for safe operating capacities.
  2. List the different components and attachments of skid steers.
  3. Explain proper maneuvering functions of skid steers employing different steering mechanisms.
  4. Identify the OSHA standards required for safe skid steer operation and worker safety.
  5. List the different types of skid steers.
  6. Identify the different job site tasks facilitated by skid steers.
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**Course Outcome(s):**

Demonstrate the ability to safely operate skid steers on construction jobsites.

**Essential Learning Outcome Mapping:**

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

**Objective(s):**

1. Review and employ safe operation procedures as prescribed by the equipment manufacturer.
  2. Perform walk around inspections prior to operation to verify proper fluid levels and identify equipment faults and failures including frame fracture and malfunctioning supply lines.
  3. Determine safe operation of equipment controls and hydraulic functions during startup operations.
  4. Perform maneuvering and steering exercises on respective equipment in order to verify proper equipment control.
  5. Employ safe procedures while operating skid steer equipment for site preparation and material handling.
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**Methods of Evaluation:**

1. Quizzes
2. Tests
3. Class participation

**Course Content Outline:**

1. Scaffolds: safety and types
  - a. Hazards
    - i. Tipping
    - ii. Falls
    - iii. Overhead
    - iv. Electrical
    - v. Overloading
    - vi. Environmental
  - b. Scaffold types
    - i. Welded frame
    - ii. Systems
    - iii. Tube and clamp
    - iv. Rolling mobile
    - v. Suspended
  - c. Scaffold applications
    - i. Masonry
    - ii. Concrete formwork
    - iii. Industrial
    - iv. General maintenance
  - d. Components
    - i. Frame
    - ii. Braces
    - iii. Platform
    - iv. Screw jacks
    - v. Outriggers
    - vi. Guard rails
    - vii. Clamps
    - viii. Runners and uprights
  - e. Loading capacities

- i. Light
  - ii. Medium
  - iii. Heavy duty
  - iv. Load charts
  - v. Calculations
    - a. Pounds per square foot of platform
    - b. Material weights
    - c. Counter weight
- 1. Skid steers
  - a. Types
    - i. 1.Standard
    - ii. 2.Specialty equipment
    - iii. 3.Tracks
    - iv. 4.Wheel driven
  - b. Jobsite tasks
    - i. 1.Site preparation
    - ii. 2.Material handling
    - iii. 3.Curb setting
    - iv. 4.Road work housekeeping
    - v. 5.Post hole placement
    - vi. 6.Specialty applications
  - c. Load charts and capacities
  - d. Attachments
    - i. 1.Bucket
    - ii. 2.Forks
    - iii. 3.Post hole digger
    - iv. 4.Broom
    - v. 5.Rock hound
    - vi. 6.Plow
  - e. Maneuvering functions
    - i. 1.Forward
    - ii. 2.Forward turn
    - iii. 3.Reverse
    - iv. 4.Reverse turn
    - v. 5.Continuous rotational
  - f. OSHA standards
    - i. 1.Personal Protection Equipment
    - ii. 2.Roll over protection
    - iii. 3.Restraints
- 2. Equipment operation
  - a. Manufacturers specifications
  - b. Inspections
    - i. 1.Operating fluids
    - ii. 2.Hydraulic lines
    - iii. 3.Frame fractures
    - iv. 4.Tire pressure
  - c. Controls
    - i. 1.Alarms
    - ii. 2.Electrical
    - iii. 3.Mechanical
  - d. Start-up procedures
  - e. Maneuvering functions
  - f. Attachment controls
  - g. Field applications

## Resources

Drexel J. Thrash Training Center. *Scaffold User Safety*. current. Drexel J. Thrash Training Center, 2014.

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Drexel J. Thrash Training Center. *Skid Steer Safety*. current. Howard, OH;Drexel J. Thrash Training Center, 2014.

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Yates. *Safety Professionals*. second. Boca Raton, FL; CRC Publishers, 2015.

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**Resources Other**

OSHA'S 1926 Standard, Subpart L"

<http://www.OSHA.gov>

"Bobcat Skid-Steer Loader Operator Training Course"

<http://www.training.bobcat.com>

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