

ATLB-1360: LABORER SAFETY OSHA 30

Cuyahoga Community College

Viewing: ATLB-1360 : Laborer Safety OSHA 30

Board of Trustees:

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Academic Term:

Spring 2019

Subject Code

ATLB - AIT-Construct/Hazard Material

Course Number:

1360

Title:

Laborer Safety OSHA 30

Catalog Description:

Certification course covering safety and health standards as prescribed by the Occupational Safety and Health Administration (OSHA) for Laborers in the construction industry. Included are specific subject focus with respect to working with concrete handling and work in confined spaces.

Credit Hour(s):

2

Lecture Hour(s):

2

Requisites

Prerequisite and Corequisite

Departmental approval: admission to Laborer's apprenticeship program.

Outcomes

Course Outcome(s):

Discuss the safety standards with respect to construction as prescribed by OSHA for worker safety including fall protection, overhead work and material handling, including concrete placement, and working in confined spaces.

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. Define the general safety and health provisions of the OSHA standards.
2. Discuss the standards for welding and cuttings.
3. Describe the safety precautions for excavation, electrical and scaffolding.
4. Recognize and apply the standards for stairways and ladders.
5. Recognize the standards for safety for cranes, derricks, hoists, elevators, conveyors, and demonstrate the use of hand signals for the use of such.
6. Explain the OSHA standards with respect to working in confined spaces including workplace hazards, health concerns and permit writing requirements.
7. Identify health and safety hazards related to concrete construction and demolition.
8. Explain the requirements for record keeping for safety and general duty clause 5(A) (1).
9. Discuss occupational health and environmental controls.
10. Identify and list personal protective equipment.
11. Describe and apply the standards regarding fall protection.
12. Identify and apply the standards regarding fire protection.
13. Identify signs, signals and barricades for danger and safety.
14. Recognize standards for handling and storage of materials.
15. Discuss the standards for the safe use of tools-hand and power.

Methods of Evaluation:

1. quizzes
2. tests
3. class participation

Course Content Outline:

1. General safety and health provisions
 - a. Contractor requirements
 - b. Accident prevention responsibilities
 - c. Safety training and education
 - i. general requirements
 - ii. employer responsibility
 - d. First aid and medical attention
 - e. Fire protection and prevention
 - f. Housekeeping
 - g. Personal protective equipment
 - h. Illumination
 - i. Sanitation
 - j. Personal protective equipment
 - k. Incorporation by reference
 - l. Definitions
 - i. act
 - ii. "ANSI"
 - iii. approved
 - iv. authorized person
 - v. administration
 - vi. competent person
 - vii. construction work
 - viii. defect
 - ix. designated person
 - x. employee
 - xi. employer
 - xii. hazardous substance
 - xiii. safety factor
 - xiv. secretary
 - xv. "SAE"
 - xvi. shall
 - xvii. should
 - xviii. suitable
2. Access to employee exposure, medical records and other records
 - a. Definitions
 - i. access
 - ii. analysis using exposure and/or medical records
 - iii. designated representative
 - iv. employee
 - v. employee exposure record
 - vi. employee medical record
 - b. Medical and employment questionnaire
 - c. Results of medical examinations
 - d. Medical opinions, diagnoses, progress notes and recommendations
 - e. First aid records
 - f. Descriptions of treatments and prescriptions
 - g. Employee medical complaints
 - h. Records concerning health insurance
 - i. Records created solely in preparation for litigation

- j. Records concerning voluntary employee assistance programs
 - k. Health insurance claims records
 - l. Biological monitoring results
3. Occupational health and environmental controls
- a. Medical services and first aid
 - b. Sanitation
 - i. portable water
 - ii. non-portable water
 - iii. toilets
 - iv. food handling
 - v. temporary sleeping quarters
 - vi. eating and drinking areas
 - vii. vermin control
 - viii. change rooms
 - ix. washing facilities
 - c. Occupational noise exposure
 - d. Ionizing radiation
 - e. Gases, vapors, fumes, dusts and mists
 - i. threshold limit values
 - ii. exceptions
 - f. Ventilation
 - g. Hazard communication
 - i. purpose
 - ii. scope and application
 - iii. definitions
 - iv. hazard determination
 - v. hazard written communication program
 - vi. labels and other forms of warning
4. Criteria for personal protective equipment
- a. Application
 - b. Employee-owned equipment
 - c. Design
 - d. Occupational foot protection
 - e. Protective clothing for fire brigades
 - f. Respiratory protection for fire brigades
 - g. Head protection
 - h. Hearing protection
 - i. Eye and face protection
 - j. Protection against radiant energy
 - k. Respiratory protection
 - l. Safety belts, lifelines and lanyards
 - m. Safety nets
 - n. Working over or near water
 - o. Definitions applicable
5. Fall protection
- a. Scope and application
 - b. Definitions
 - i. anchorage
 - ii. body belt
 - iii. body harness
 - iv. buckle
 - v. connector
 - vi. controlled access zone (CAZ)
 - vii. dangerous equipment
 - viii. deceleration device
 - ix. deceleration distance
 - x. equivalent
 - xi. failure

- xii. free fall
 - xiii. free fall distance
 - xiv. hole
 - xv. infeasible
 - xvi. lanyard
 - xvii. leading edge
 - c. Duty to have fall protection
 - d. Unprotected sides and edges
 - e. Protection from falling objects
 - f. Fall protection system criteria and practices
 - i. guardrail system
 - ii. safety net system
 - iii. personal fall arrest system
 - iv. positioning device systems
 - v. warning line systems
 - vi. controlled access zones
 - g. Training requirements
6. Fire protection
- a. General requirements
 - b. Water supply
 - c. Portable firefighting equipment
 - d. Fixed firefighting equipment
 - e. Fire prevention
 - i. ignition hazards
 - ii. temporary buildings
 - iii. open yard storage
 - iv. indoor storage
 - f. Flammable and combustible liquids
 - i. general requirements
 - ii. indoor storage
 - iii. storage outside buildings
 - iv. fire control
 - g. Service and refueling areas
 - h. Tank storage
7. Signs, signals and barricades
- a. Accident preventions, signs and tags
 - i. general
 - ii. danger signs
 - iii. exit signs
 - iv. safety instruction signs
 - v. directional signs
 - vi. traffic signs
 - vii. accident prevention signs
 - viii. additional rules
 - b. Signaling
 - i. flagmen
 - ii. crane and hoist signals
 - c. Barricades
 - i. definitions
 - ii. signs
 - iii. signals
 - iv. tags
8. Materials: handling, and storage
- a. General requirements for storage
 - b. Rigging equipment for handling
 - i. general
 - ii. alloy steel chains
 - iii. wire rope

- iv. natural rope and synthetic fiber
- v. synthetic webbing
- vi. shackles and hooks
- 9. Hand and power tool use
 - a. General requirements
 - i. condition
 - ii. guarding
 - iii. personal protective equipment
 - iv. switches
 - b. Hand tools
 - c. Power-operated hand tools
 - i. electric powered
 - ii. pneumatic powered
 - iii. fuel powered
 - iv. hydraulic powered
 - v. power-actuated
 - d. Abrasive wheels and tools
 - i. power
 - ii. guarding
 - iii. use
 - iv. other requirements
 - v. work rests
 - e. Woodworking tools
 - i. disconnect switches
 - ii. speeds
 - iii. self-feed
 - iv. guarding
 - v. personal protective equipment
 - vi. other requirements
 - vii. radial saws
 - viii. hand-fed crosscut saws
 - ix. hand-fed ripsaws
 - f. Jacks-lever and ratchet, screw and hydraulic
 - i. general requirements
 - ii. blocking
 - iii. operation and maintenance
 - g. Air receivers
 - i. general requirements
 - ii. installation and equipment requirements
 - iii. drains and traps
 - h. Mechanical power-transmission apparatus
 - i. general requirements
 - ii. prime-mover guards
 - iii. pulleys
 - iv. belt, rope and chain drives
 - v. gears, sprockets and chains
 - vi. guarding friction drives
 - vii. keys, set screws and other projections
 - viii. collars and couplings
 - ix. bearings and facilities for oiling
- 10. Welding and cutting
 - a.

Resources

Graham, Rosaline; Rowley, Linda. *Occupational Safety and Health*. current. Orland Park, IL; American Technical Publishers, 2014.

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

Bauer, Roger. *Safety and health for Engineers*. third. Hoboken, NJ; Wiley Publishing, 2016.

Resources Other

<https://www.osha.gov>

<https://ohsonline.com/>

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