



El Camino College
COURSE OUTLINE OF RECORD – Approved

I. GENERAL COURSE INFORMATION

Subject and Number: Noncredit Construction Technology 4
Course Disciplines: Occupational Safety and Health Administration (OSHA) 30 Standards for Construction Safety
Course Discipline: Construction Technology
Division: Industry and Technology

Catalog Description:

This noncredit course covers Occupational Safety and Health Administration (OSHA) policies, procedures, and standards, as well as construction safety and health principles. Topics include scope and application of the OSHA construction standards. Special emphasis is placed on those areas that are the most hazardous, using OSHA standards as a guide. Upon successful course completion, students will receive an OSHA 30-Hour Construction Outreach Training Completion Card.

Conditions of Enrollment:

None

Course Length: Full Term
Hours Lecture: 30.00 hours
Hours Laboratory: 0.00 hours
Total Hours: 30.00 hours
Course Units: 0.00

Grading Method: Pass/No Pass
Course Type: Noncredit

Transfer CSU: No
Transfer UC: No

General Education:
El Camino College

CSU GE:

IGETC:

II. OUTCOMES AND OBJECTIVES

A. COURSE STUDENT LEARNING OUTCOMES (The course student learning outcomes are listed below, along with a representative assessment method for each. Student learning outcomes are not subject to review, revision or approval by the College Curriculum Committee)

SLO #1 Job Hazard Analysis

Upon completion of this course, students will be able to demonstrate the ability to perform a job hazard analysis for construction job tasks as applicable to OSHA safety standards as defined in 29 Code of Federal Regulations Part 1926 (29 CFR 1926).

SLO #2 Identifying Hazards

Upon completion of this course, students will be able to demonstrate the ability to identify potential hazards in the (construction)workplace and the means to avoid, control and/or prevent them.

SLO #3 Records, Inspections, and Citations

Upon completion of this course, students will be able to identify and explain OSHA record keeping requirements, types of inspections and citations for construction businesses.

B. COURSE OBJECTIVES (The major learning objective for students enrolled in this course are listed below)

1. Identify correct OSHA Standards in 29 Code of Federal Regulations (CFR) 1926
2. Analyze the common causes of accidents and fatalities in hazardous areas of construction.
3. Evaluate abatement techniques for hazards found in construction.
4. Develop Lock Out/Tag Out Procedures meeting OSHA minimum standards.
5. Compare the OSHA definitions of a Competent Person and a Responsible Person.
6. Differentiate the types of work covered under the term Construction.
7. Explain the OSHA record keeping requirements, inspections, and citations.

III. OUTLINE OF SUBJECT MATTER Topics should be detailed enough to enable a qualified instructor to determine the major areas that should be covered as well as ensure consistency from instructor to instructor and semester to semester.

Lecture or Lab	Approximate Hours	Topic Number	Major Topic
Lecture	2	I	Introduction to OSHA Standards, OSHA General Duty Clause, Record Keeping A. Origin of OSHA Standards B. Code of federal regulations C. Paragraph numbering system D. Most frequently cited serious violations E. Required record keeping
Lecture	2	II	General Safety and Health Provision, Competent Person A. Safety training and education B. First aid and medical attention C. Acceptable certifications D. Definitions
Lecture	2	III	Occupational Health and Environmental Controls (emphasis on Hazard Communication) A. Container labeling B. Material Safety and Data Sheets (MSDS) C. Employee training and education D. MSDS glossary
Lecture	1	IV	Health Hazards in Construction A. Sanitation B. Noise exposure C. Gases, vapors, fumes, dusts and mists D. Ventilation E. Illumination
Lecture	2	V	Personal Protective and Lifesaving Equipment (PPE) A. Criteria for PPE B. Occupational foot protection C. Head protection D. Hearing protection E. Eye and face protection F. Respiratory protection G. Safety belts, lifelines and lanyards
Lecture	1	VI	Fire Protection and Prevention A. Fire prevention B. Fire protection C. Flammable and combustible liquids D. Temporary heating devices E. Definitions applicable to this subpart
Lecture	1	VII	Materials Handling, Storage, Use and Disposal A. General requirements for storage B. Rigging equipment for material handling C. Disposal of waste material
Lecture	2	VIII	Tools - Hand and Power A. General requirements B. Hand tools C. Power-operated hand tools

			<ul style="list-style-type: none"> D. Abrasive wheels and tools E. Jacks and hydraulic tools F. Air tools
Lecture	1	VIX	<p>Welding and Cutting</p> <ul style="list-style-type: none"> A. Gas welding and cutting B. Arc welding and cutting C. Fire prevention D. Ventilation and protection in welding, cutting and heating
Lecture	3	X	<p>Electrical</p> <ul style="list-style-type: none"> A. General requirements B. Wiring design and protection C. Wiring methods, components and equipment for general use D. Specific purpose equipment and installation E. Hazardous locations F. Maintenance of equipment G. Definitions applicable to this subpart
Lecture	2	XI	<p>Scaffolds</p> <ul style="list-style-type: none"> A. General requirements B. Additional requirements applicable to specific equipment C. Aerial lifts D. Training requirements
Lecture	2	XII	<p>Fall Protection</p> <ul style="list-style-type: none"> A. Duty to have fall protection B. Fall protection system criteria and practices C. Training requirements
Lecture	1	XIII	<p>Cranes, Derricks, Hoists, Elevators and Conveyors</p> <ul style="list-style-type: none"> A. Cranes and derricks B. Material hoists, personnel hoists and elevators C. Overhead Hoists D. Conveyors
Lecture	1	XIV	<p>Motor Vehicles, Mechanized Equipment and Marine Operations; Rollover Protective Structures and Overhead Protection; and Signs, Signals and Barricades</p> <ul style="list-style-type: none"> A. Equipment B. Motor vehicles C. Material handling equipment D. Pile driving equipment E. Site clearing F. Definitions applicable to these subparts
Lecture	2	XV	<p>Excavations</p> <ul style="list-style-type: none"> A. Scope, application, and definitions applicable to this subpart B. Specific excavation requirements C. Requirements for protective systems
Lecture	1	XVI	<p>Concrete and Masonry Construction</p> <ul style="list-style-type: none"> A. General requirements B. Requirements for equipment and tools C. Cast in place concrete D. Precast concrete E. Masonry construction

Lecture	1	XVII	Stairways and Ladders A. General requirements B. Stairways C. Ladders D. Training requirements
Lecture	1	XVIII	Confined Space Entry A. Employer responsibility B. Definitions applicable to this subpart C. Examples of confined spaces D. Types of hazards in confined spaces E. Regulations regarding confined spaces F. Responsible parties G. Training requirements
Lecture	2	XIX	Lock Out/Tag Out Procedures and Requirements A. General Requirements B. Definitions applicable to this subpart C. Control of hazardous energy D. Tagout devices E. Training and communication F. Periodic inspection G. Outside personnel H. Minimum acceptable procedures
Total Lecture Hours		30	
Total Laboratory Hours		0	
Total Hours		30	

IV. PRIMARY METHODS OF EVALUATION AND SAMPLE ASSIGNMENTS

A. PRIMARY METHOD OF EVALUATION

Problem solving demonstrations (computational or non-computational)

B. TYPICAL ASSIGNMENT USING PRIMARY METHOD OF EVALUATION

In a one-page report, list the common hazards in a confined space and detail strategies to ensure the safety of workers. Submit your findings to the instructor.

C. COLLEGE LEVEL CRITICAL THINKING ASSIGNMENTS

1. In a paragraph discuss excavation requirements and the protective systems germane to excavations.
2. Congratulations! You have been hired as the foreman on a new site, and your employer is not happy because there are no lock out/tag out procedures. Develop a set of lock out/tag out procedures to ensure workers are safe. Present your procedures to the class when you are finished in a 5-minute oral presentation.

D. OTHER TYPICAL ASSESSMENT AND EVALUATION METHODS:

Objective Exam
Performance Exams
Quizzes
Homework Problems
True/False
Matching Items
Written Homework
Multiple Choice

V. INSTRUCTIONAL METHODS: Select from this list.

- Lecture
- Role play/simulation
- Discussion
- Demonstration

Note: In compliance with Board Policies 1600 and 3410, Title 5 California Code of Regulations, the Rehabilitation Act of 1973, and Sections 504 and 508 of the Americans with Disabilities Act, instructional delivery shall provide access, full inclusion, and effective communication for students with disabilities.

VI. WORK OUTSIDE OF CLASS:

- Study
- Answer questions
- Skill practice
- Required reading

Estimated Study Hours Per Week: 3 hours

VII. TEXTS AND MATERIALS

A. UP-TO-DATE REPRESENTATIVE TEXTBOOKS

Not Applicable

B. REQUIRED TEXTS (title, author, publisher, year)

None

C. REQUIRED SUPPLEMENTARY READINGS

D. OTHER REQUIRED MATERIALS

Teacher-generated materials and handouts

VIII. CONDITIONS OF ENROLLMENT

A. Requisite/s (Course and Non-Course Prerequisite/s and Corequisite/s).

Requisites	Category and Justification
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B. Requisite Skills

Requisite Skills – Matching

C. Recommended Preparations (Course and Non-Course)

Recommended Preparation	Category and Justification
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D. Recommended Skills

Recommended Skills

E. Enrollment Limitations

Enrollment Limitations and Category	Enrollment Limitations Impact

Course created by: ROSS DURAND on 03/01/2020

BOARD APPROVAL DATE: 05/18/2020

LAST BOARD APPROVAL DATE:

Last Reviewed and/or Revised by