



**El Camino College**  
**COURSE OUTLINE OF RECORD – Official**

<b>Course Acronym:</b>	CTEC
<b>Course Number:</b>	504
<b>Descriptive Title:</b>	Occupational Safety and Health Administration (OSHA) 30 Standards for Construction Safety
<b>Division:</b>	Industry and Technology
<b>Department:</b>	Construction Technology
<b>Course Disciplines:</b>	Construction Technology
<b>Catalog Description:</b>	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.
<b>Prerequisite:</b>	
<b>Co-requisite:</b>	
<b>Recommended Preparation:</b>	
<b>Enrollment Limitation:</b>	
<b>Hours Lecture (per week):</b>	30
<b>Hours Laboratory (per week):</b>	0
<b>Outside Study Hours:</b>	3
<b>Total Course Hours:</b>	30
<b>Course Units:</b>	0
<b>Grading Method:</b>	Pass/No Pass only
<b>Credit Status:</b>	Non Credit
<b>Transfer CSU:</b>	
<b>Effective Date:</b>	
<b>Transfer UC:</b>	No
<b>Effective Date:</b>	
<b>General Education: ECC</b>	
<b>Term:</b>	
<b>Other:</b>	
<b>CSU GE:</b>	
<b>Term:</b>	
<b>Other:</b>	

	<b>IGETC:</b>
	<b>Term:</b>
	<b>Other:</b>
<b>Student Learning Outcomes:</b>	<p><b>SLO #1 Job Hazard Analysis</b></p> <p>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).</p> <p><b>SLO #2 Identifying Hazards</b></p> <p>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.</p> <p><b>SLO #3 Records, Inspections, and Citations</b></p> <p>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.</p>
<b>Course Objectives:</b>	<ol style="list-style-type: none"> <li>1. Identify correct OSHA Standards in 29 Code of Federal Regulations (CFR) 1926.</li> <li>2. Analyze the common causes of accidents and fatalities in hazardous areas of construction.</li> <li>3. Evaluate abatement techniques for hazards found in construction.</li> <li>4. Develop Lock Out/Tag Out procedures meeting OSHA minimum standards.</li> <li>5. Compare the OSHA definitions of a Competent Person and a Responsible Person.</li> <li>6. Differentiate the types of work covered under the term Construction.</li> <li>7. Explain the OSHA record keeping requirements, inspections, and citations.</li> </ol>
<b>Major Topics:</b>	<p><b>I. Introduction to OSHA Standards, OSHA General Duty Clause, Record Keeping (2 hours, lecture)</b></p> <ol style="list-style-type: none"> <li>A. Origin of OSHA Standards</li> <li>B. Code of federal regulations</li> <li>C. Paragraph numbering system</li> <li>D. Most frequently cited serious violations</li> <li>E. Required record keeping</li> </ol> <p><b>II. General Safety and Health Provision, Competent Person (2 hours, lecture)</b></p> <ol style="list-style-type: none"> <li>A. Safety training and education</li> <li>B. First aid and medical attention</li> <li>C. Acceptable certifications</li> <li>D. Definitions</li> </ol> <p><b>III. Occupational Health and Environmental Controls with emphasis on Hazard Communication (2 Hours, lecture)</b></p> <ol style="list-style-type: none"> <li>A. Container labeling</li> <li>B. Safety and Data Sheets (SDS)</li> <li>C. Employee training and education</li> </ol>

D. SDS glossary

**IV. Health Hazards in Construction (1 hour, lecture)**

- A. Sanitation
- B. Noise exposure
- C. Gases, vapors, fumes, dusts and mists
- D. Ventilation
- E. Illumination

**V. Personal Protective and Lifesaving Equipment (2 hours, lecture)**

- 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

**VI. Fire Protection and Prevention (1 hour, lecture)**

- A. Fire prevention
- B. Fire protection
- C. Flammable and combustible liquids
- D. Temporary heating devices
- E. Definitions

**VII. Materials Handling, Storage, Use and Disposal (1 hour, lecture)**

- A. General requirements for storage
- B. Rigging equipment for material handling
- C. Disposal of waste material

**VIII. Tools - Hand and Power (2 hours, lecture)**

- A. General requirements
- B. Hand tools
- C. Power-operated hand tools
- D. Abrasive wheels and tools
- E. Jacks and hydraulic tools
- F. Air tools

**VIX. Welding and Cutting (1 hour, lecture)**

- A. Gas welding and cutting
- B. Arc welding and cutting
- C. Fire prevention
- D. Ventilation and protection in welding, cutting and heating

**X. Electrical (3 hours, lecture)**

- 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

**XI. Scaffolds (2 hours, lecture)**

- A. General requirements
- B. Additional requirements applicable to specific equipment
- C. Aerial lifts
- D. Training requirements

**XII. Fall Protection (2 hours, lecture)**

- A. Fall protection requirements
- B. Fall protection system criteria and practices
- C. Training requirements

**XIII. Cranes, Derricks, Hoists, Elevators and Conveyors (1 hour, lecture)**

- A. Cranes and derricks
- B. Material hoists, personnel hoists and elevators
- C. Overhead hoists
- D. Conveyors

**XIV. Motor Vehicles, Mechanized Equipment and Marine Operations; Rollover Protective Structures and Overhead Protection; Signs, Signals and Barricades (1 hour, lecture)**

- A. Equipment
- B. Motor vehicles
- C. Material handling equipment
- D. Pile driving equipment
- E. Site clearing
- F. Definitions

**XV. Excavations (2 hours, lecture)**

- A. Scope, application, and definitions
- B. Specific excavation requirements
- C. Requirements for protective systems

**XVI. Concrete and Masonry Construction (1 hour, lecture)**

- A. General requirements
- B. Requirements for equipment and tools
- C. Cast in place concrete
- D. Precast concrete

	<p>E. Masonry construction</p> <p><b>XVII. Stairways and Ladders (1 hour, lecture)</b></p> <p>A. General requirements B. Stairways C. Ladders D. Training requirements</p> <p><b>XVIII. Confined Space Entry (1 hour, lecture)</b></p> <p>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</p> <p><b>XIX. Lock Out/Tag Out Procedures and Requirements (2 hours, lecture)</b></p> <p>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</p>
<b>Total Lecture Hours:</b>	30
<b>Total Laboratory Hours:</b>	0
<b>Total Hours:</b>	30
<b>Primary Method of Evaluation:</b>	2) Problem solving demonstrations (computational or non-computational)
<b>Typical Assignment Using Primary Method of Evaluation:</b>	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.
<b>Critical Thinking Assignment 1:</b>	In a paragraph discuss excavation requirements and the protective systems germane to excavations. Submit paragraph to the instructor.
<b>Critical Thinking Assignment 2:</b>	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. When you are finished, present your procedures to the class in a 5-minute oral presentation.
<b>Other Evaluation Methods:</b>	Homework Problems Matching Items Multiple Choice Objective Exam

	Performance Exams Quizzes True/False Written Homework
<b>Instructional Methods:</b>	Demonstration Discussion Lecture Role play/simulation
<b>If other:</b>	
<b>Work Outside of Class:</b>	Answer questions Required reading Skill practice Study
<b>If Other:</b>	
<b>Up-To-Date Representative Texts:</b>	Not Applicable
<b>Alternative Texts:</b>	None
<b>Required Supplementary Readings:</b>	
<b>Other Required Materials:</b>	Teacher-generated materials and handouts
<b>Requisite:</b>	
<b>Category:</b>	
<b>Requisite course(s): List both prerequisites and corequisites in this box.</b>	
<b>Requisite and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s).</b>	
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<b>Enrollment Limitations and Category:</b>	
<b>Enrollment Limitations Impact:</b>	
<b>Course Created by:</b>	Ross Durrand
<b>Date:</b>	05/14/2019
<b>Original Board Approval Date:</b>	05/08/2020
<b>Last Reviewed and/or Revised by:</b>	Ross Durand
<b>Date:</b>	11/20/2023
<b>Last Board Approval Date:</b>	01/17/2024
<b>Effective Term:</b>	FALL 2024