



El Camino College
COURSE OUTLINE OF RECORD – Official

Course Acronym:	CTEC
Course Number:	501
Descriptive Title:	Fundamentals of Construction
Division:	Industry and Technology
Department:	Construction Technology
Course Disciplines:	Construction Technology
Catalog Description:	In this noncredit course, students learn all the skills necessary to complete a specific construction application. Students also learn safety, tool operation, material handling, and math applications.
Prerequisite:	
Co-requisite:	
Recommended Preparation:	
Enrollment Limitation:	
Hours Lecture (per week):	3
Hours Laboratory (per week):	9
Outside Study Hours:	1
Total Course Hours:	12
Course Units:	0
Grading Method:	Pass/No Pass only
Credit Status:	Non Credit
Transfer CSU:	No
Effective Date:	
Transfer UC:	No
Effective Date:	
General Education: ECC	
Term:	
Other:	
CSU GE:	
Term:	
Other:	
IGETC:	
Term:	

Other:	
Student Learning Outcomes:	<p>SLO #1 Safety Procedures</p> <p>Upon completion of this course, students will be able to list safety procedures relevant to the construction process covered in the course.</p> <p>SLO #2 Tool Usage</p> <p>Upon completion of this course, students will be able to demonstrate proper usage of tools used in the construction process covered in the course.</p> <p>SLO #3 The Construction Process</p> <p>Upon completion of this course, students will be able to perform the construction process.</p>
Course Objectives:	<ol style="list-style-type: none"> 1. Identify proper safety equipment and situations when the equipment is appropriate. 2. Create a materials list for a construction project. 3. Accurately estimate the cost of a construction project. 4. Properly utilize tools for a construction project. 5. Handle materials safely and properly.
Major Topics:	<p>I. Safety (1 hour, lecture)</p> <ul style="list-style-type: none"> A. Personal Protective Equipment (PPE) B. Occupational Safety and Health Administration (OSHA) standards <p>II. Work Preparation (1 hour, lecture)</p> <ul style="list-style-type: none"> A. Materials list B. Estimating cost <p>III. Construction Processes (1 hour, lecture)</p> <ul style="list-style-type: none"> A. Preparing the job site B. Tool usage C. Handling materials D. Math application <p>IV. Construction Processes (9 hours, lab)</p> <ul style="list-style-type: none"> A. Preparing the job

	<p>B. Handling materials</p> <p>C. Using tools</p> <p>D. Math application</p> <p>E. Completing a construction project</p>
Total Lecture Hours:	3
Total Laboratory Hours:	9
Total Hours:	12
Primary Method of Evaluation:	3) Skills demonstration
Typical Assignment Using Primary Method of Evaluation:	Measure, cut, and install underlayment for ceramic tile in an 8' x 5' space. Consult your instructor for evaluation.
Critical Thinking Assignment 1:	In the construction yard dig a 3' x 3' square plot ensuring you have 90 degree angles by using the 3-4-5 method. Once you are finished, your instructor will check to see if your plot is square.
Critical Thinking Assignment 2:	Plan the installation of a sprinkler system in the front yard of a residential property. The yard is a rectangle measuring 20' x 43'. Indicate on the worksheet provided the number of sprinkler zones needed. Be sure to consider the flow rate in gallons per minute. Submit worksheet to the instructor.
Other Evaluation Methods:	Class Performance Matching Item Multiple Choice Performance Exams
Instructional Methods:	Demonstration Group Activities Lab Lecture Role Play/simulation
If other:	
Work Outside of Class:	Problem solving activity Skill practice
If Other:	
Up-To-Date Representative Texts:	Not Applicable
Alternative Texts:	None
Required Supplementary Readings:	
Other Required Materials:	Instructor-created materials and handouts
Requisite:	

Category:	
Requisite course(s): List both prerequisites and corequisites in this box.	
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	
Requisite Skill:	
Requisite Skill and Matching Skill(s): Bold the requisite skill(s). If applicable	
Requisite course:	
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	
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Enrollment Limitations and Category:	
Enrollment Limitations Impact:	
Course Created by:	Ross Durand
Date:	05/14/2019
Original Board Approval Date:	5/18/2020
Last Reviewed and/or Revised by:	Ross Durand
Date:	11/20/2023
Last Board Approval Date:	01/17/2024
Effective Term:	FALL 2024