



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

**I. GENERAL COURSE INFORMATION**

**Subject and Number:** Construction Technology 110  
**Descriptive Title:** Additions and Remodeling  
**Course Disciplines:** Construction Technology  
**Division:** Industry and Technology

**Catalog Description:**

This course is an introduction to the fundamentals of residential remodeling and additions. Instruction includes: planning and design, permit process, print reading, and building codes. Practical instruction is given in the use of tools and materials through construction laboratory work.

**Conditions of Enrollment:**

None

**Course Length:** X Full Term Other (Specify number of weeks):  
**Hours Lecture:** 2.50 hours per week TBA  
**Hours Laboratory:** 5.00 hours per week TBA  
**Course Units:** 4.00

**Grading Method:** Letter  
**Credit Status:** Associate Degree Credit

**Transfer CSU:** X Effective Date: 2/21/1995  
**Transfer UC:** X Effective Date: Proposed

**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)

1. SLO #1 RESIDENTIAL CONSTRUCTION MATERIALS  
Students will be able to demonstrate a basic application of materials and methods commonly used in residential construction.
2. SLO #2 RESIDENTIAL FORM TIES  
Students will be able to correctly install residential form ties.
3. SLO #3 UNDER FLOOR VENTILATION  
Students will be able to calculate the correct ratio of ventilation to under floor area.

The above SLOs were the most recent available SLOs at the time of course review. For the most current SLO statements, visit the El Camino College SLO webpage at <http://www.elcamino.edu/academics/slo/>.

### B. Course Student Learning Objectives (The major learning objective for students enrolled in this course are listed below, along with a representative assessment method for each)

1. Mix, place and finish a concrete slab.  
Performance exams
2. Determine quantities of concrete needed for various concrete pours.  
Objective Exams
3. Identify structural framing members.  
Quizzes
4. Identify and define a list of construction terms.  
Quizzes
5. Identify and use hand tools and handheld power tools common to the construction industry.  
Performance exams
6. Interpret architectural prints.  
Quizzes
7. Prepare and dimension a floor plan.  
Other exams
8. Identify and analyze the procedures for submission of a building permit application.  
Written homework
9. Frame a standard height wall.  
Performance exams

**III. OUTLINE OF SUBJECT MATTER (Topics are 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.)**

| <b>Lecture or Lab</b> | <b>Approximate Hours</b> | <b>Topic Number</b> | <b>Major Topic</b>  |
|-----------------------|--------------------------|---------------------|---|
| Lecture               | 2.5                      | I                   | ADDITIONS AND REMODELING OVERVIEW<br>A. Safety instruction<br>B. Employment opportunities   |
| Lab                   | 5                        | II                  | ADDITIONS AND REMODELING OVERVIEW<br>A. Safety instruction<br>B. Employment opportunities   |
| Lecture               | 5                        | III                 | TOOLS AND EQUIPMENT<br>A. Basic handtools<br>B. Basic handheld power tools  |
| Lab                   | 10                       | IV                  | TOOLS AND EQUIPMENT<br>A. Basic handtools<br>B. Basic handheld power tools  |
| Lecture               | 7.5                      | V                   | BUILDING MATERIALS<br>A. Lumber grades<br>B. Fasteners and hardware<br>C. Interior and exterior building materials                        |
| Lab                   | 25                       | VI                  | BUILDING MATERIALS<br>A. Lumber grades<br>B. Fasteners and hardware<br>C. Interior and exterior building materials                        |
| Lecture               | 7.5                      | VII                 | HOUSE STRUCTURES<br>A. Overview of construction methods<br>B. Construction terminology<br>C. Platform framing<br>D. Building nomenclature |
| Lab                   | 15                       | VIII                | HOUSE STRUCTURES<br>A. Overview of construction methods<br>B. Construction terminology<br>C. Platform framing<br>D. Building nomenclature |
| Lecture               | 7.5                      | IX                  | PLANNING AND DESIGNING<br>A. Consideration and feasibility<br>B. Working drawings and print reading<br>C. Building permit process         |
| Lab                   | 10                       | X                   | PLANNING AND DESIGNING<br>A. Consideration and feasibility<br>B. Working drawings and print reading<br>C. Building permit process         |
| Lecture               | 7.5                      | XI                  | CONCRETE CONSTRUCTION<br>A. Concrete forms<br>B. Mixing, placing and finishing of concrete<br>C. Concrete quantity computations           |
| Lab                   | 10                       | XII                 | CONCRETE CONSTRUCTION<br>A. Concrete forms<br>B. Mixing, placing and finishing of concrete<br>C. Concrete quantity computations           |
| Lecture               | 5                        | XIII                | DOORS AND WINDOWS   |

|                        |     |     |  |
|------------------------|-----|-----|--|
|                        |     |     | A. Sizing<br>B. Code requirements<br>C. Framed openings                      |
| Lab                    | 10  | XIV | DOORS AND WINDOWS<br>A. Sizing<br>B. Code requirements<br>C. Framed openings |
| Lecture                | 2.5 | XV  | INTERIOR SURFACES<br>A. Dry wall<br>B. Ceilings<br>C. Floors                 |
| Lab                    | 5   | XVI | INTERIOR SURFACES<br>A. Dry wall<br>B. Ceilings<br>C. Floors                 |
| Total Lecture Hours    |     | 45  |  |
| Total Laboratory Hours |     | 90  |  |
| Total Hours            |     | 135 |  |

#### IV. PRIMARY METHOD 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:

On a one-page worksheet, determine the quantities of materials needed for a specific project based on given drawings and specifications. Submit worksheet to the instructor.

##### C. COLLEGE-LEVEL CRITICAL THINKING ASSIGNMENTS:

1. On a one-page worksheet, calculate the volume of concrete needed for a residential slab-on-grade foundation. Submit worksheet to the instructor.
2. Given a floor plan and window manufacturer's specification sheet, provide a one-page worksheet indicating the layout and frame for a rough opening of a specified window. Submit worksheet to the instructor.

##### D. OTHER TYPICAL ASSESSMENT AND EVALUATION METHODS:

Performance exams  
Objective Exams  
Oral exams  
Other exams  
Quizzes  
Written homework  
Field work  
Class Performance  
Homework Problems  
Multiple Choice  
Completion  
Matching Items  
True/False  
Other: Notebook

## **V. INSTRUCTIONAL METHODS**

Demonstration  
Discussion  
Field trips  
Group Activities  
Guest Speakers  
Internet Presentation/Resources  
Laboratory  
Lecture  
Multimedia presentations

**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, instruction delivery shall provide access, full inclusion, and effective communication for students with disabilities.**

## **VI. WORK OUTSIDE OF CLASS**

Study  
Required reading  
Problem solving activities

**Estimated Independent Study Hours per Week: 5**

## **VII. TEXTS AND MATERIALS**

### **A. UP-TO-DATE REPRESENTATIVE TEXTBOOKS**

Larry Haun. Habitat for Humanity: How to Build A House. Taunton Press, 2008.  
Industry Standard

### **B. ALTERNATIVE TEXTBOOKS**

### **C. REQUIRED SUPPLEMENTARY READINGS**

### **D. OTHER REQUIRED MATERIALS**

Safety glasses  
Carpenter's nailing apron  
Appropriate shoes for construction work  
Pocket calculator

**VIII. CONDITIONS OF ENROLLMENT**

**A. Requisites (Course and Non-Course Prerequisites and Corequisites)**

| Requisites | Category and Justification |
|------------|----------------------------|
|------------|----------------------------|

**B. Requisite Skills**

| Requisite Skills |
|------------------|
|------------------|

**C. Recommended Preparations (Course and Non-Course)**

| Recommended Preparation | Category and Justification |
|-------------------------|----------------------------|
|-------------------------|----------------------------|

**D. Recommended Skills**

| Recommended Skills |
|--------------------|
|--------------------|

**E. Enrollment Limitations**

| Enrollment Limitations and Category | Enrollment Limitations Impact |
|-------------------------------------|-------------------------------|
|-------------------------------------|-------------------------------|

**Course created by** Tim Meza and Maximino Pena on 09/01/1994

**BOARD APPROVAL DATE:** 02/21/1995

**LAST BOARD APPROVAL DATE:** 06/15/2020

**Last Reviewed and/or Revised by** ROSS DURAND Date: 11/25/2019  
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