

# BI 0807 - BASIC MATERIAL HANDLING AND BUILDING

## Catalog Description

Formerly known as CET 807

Prerequisite: Completion of BI 806 with grade of "Pass"

Hours: 53 (36 lecture, 17 laboratory)

Description: Provides an overview of building materials and techniques for construction. Introduces students to basic trades including plumbing, electrical, and HVAC. Covers the fundamentals of framing, flooring, and tiling. Explains relevant building codes. (pass/no pass grading) (noncredit)

## Course Student Learning Outcomes

- CSLO #1: Demonstrate how to correctly measure, cut, prepare and install construction materials.
- CSLO #2: Demonstrate ability to select appropriate material handling equipment.
- CSLO #3: Demonstrate methods for basic wall framing.

## Effective Term

Fall 2020

## Course Type

Noncredit

## Contact Hours

53

## Outside of Class Hours

72

## Total Student Learning Hours

125

## Course Objectives

Lecture:

1. Describe various building materials.
2. Identify and discuss proper use of fasteners and adhesives for the selected materials.
3. Describe various tools used for specific construction projects
4. Describe vocabulary and basic techniques used in Plumbing.
5. Describe vocabulary and basic techniques used in Electrical.
6. Describe vocabulary and basic techniques used in Heating, Ventilation and Air Conditioning.
7. Describe how frame a wall, ceiling, floor and trusses.
8. Outline removal techniques for ceramic, asphalt tile, hardwood, linoleum and carpet flooring.
9. Outline installation techniques for ceramic, asphalt tile, hardwoods, linoleum and carpet flooring.
10. Explain building codes.

Laboratory:

1. Demonstrate how to measure, cut, prepare and install construction materials.

## General Education Information

- Approved College Associate Degree GE Applicability
- CSU GE Applicability (Recommended-requires CSU approval)
- Cal-GETC Applicability (Recommended - Requires External Approval)
- IGETC Applicability (Recommended-requires CSU/UC approval)

## Articulation Information

- Not Transferable

## Methods of Evaluation

- Objective Examinations
  - Example: Students will take a multiple-choice examination on electrical components. Example Question: A typical wiring configuration for a electrical outlet will have: A. A common, neutral and ground wire, B. Common and neutral, C. Neutral and ground, D. None of the above. Points will be assigned to each question and converted to a letter grade.
- Skill Demonstrations
  - Example: Students will demonstrate the correct and safe techniques when using power tools in the construction of a stem wall.

## Repeatable

Yes

## Methods of Instruction

- Laboratory
- Lecture/Discussion

Lab:

1. Lab techniques will be presented in a "describe / show / review" methodology. Students will complete a safety test before using equipment. Instructor will work with students until they can successfully complete the test with 100% success rate.

Lecture:

1. Instructor will lecture and demonstrate aspects of safety practices and methods of plumbing installations. The student will be given an opportunity to clarify any questions in an instructor-guided discussion.

## Typical Out of Class Assignments Reading Assignments

1. Read chapter on construction materials and be prepared to discuss in class.
2. Read chapter on wall framing and be prepared to discuss in class.

## Writing, Problem Solving or Performance

1. In a report, students will describe how to frame a residential wall.
2. Given an instructor provided set of plans, students will determine exactly how many feet of lumber are required for the exterior walls.

**Other (Term projects, research papers, portfolios, etc.)**

**Required Materials**

**Other materials and-or supplies required of students that contribute to the cost of the course.**

Course Materials provided by the Instructor.