

College of San Mateo
Official Course Outline

1. **COURSE ID:** BLDG 740 **TITLE:** Mechanical Code
Units: 3.0 units **Hours/Semester:** 48.0-54.0 Lecture hours; 96.0-108.0 Homework hours; 144.0-162.0 Total Student Learning hours
Method of Grading: Letter Grade Only

2. **COURSE DESIGNATION:**
Degree Credit
Transfer credit: none

3. **COURSE DESCRIPTIONS:**
Catalog Description:
Regulations and inspection methods governing mechanical construction, heating and cooling equipment, combustion air, floor furnaces, wall furnaces, unit heaters, venting, ducts, ventilation systems, and refrigeration systems and equipment.

4. **STUDENT LEARNING OUTCOME(S) (SLO'S):**
Upon successful completion of this course, a student will meet the following outcomes:
 1. Describe various HVAC equipment and their uses.
 2. Identify correct installation procedures and labeling.
 3. Define critical terms used in the Mechanical Code and in the HVAC profession.
 4. Critically examine safety issues and their compliance to all building and fire codes.
 5. Evaluate proposed systems through the plan check process.
 6. Prepared for certification as a Mechanical Inspector.

5. **SPECIFIC INSTRUCTIONAL OBJECTIVES:**
Upon successful completion of this course, a student will be able to:
 1. Describe various HVAC equipment and their uses.
 2. Identify correct installation procedures and labeling.
 3. Define critical terms used in the Mechanical Code and in the HVAC profession.
 4. Critically examine safety issues and their compliance to all building and fire codes.
 5. Evaluate proposed systems through the plan check process.
 6. Prepare for certification as a Mechanical Inspector.

6. **COURSE CONTENT:**
Lecture Content:
 1. CALIFORNIA ADMINISTRATIVE BUILDING CODE
 2. CALIFORNIA BUILDING MECHANICAL CODE
 3. CALIFORNIA RESIDENTIAL CODE
 4. CALIFORNIA ELECTRICAL CODE
 5. CALIFORNIA MECHANICAL CODE
 6. CALIFORNIA PLUMBING CODE
 7. CALIFORNIA ENERGY CODE
 8. CALIFORNIA HISTORICAL BUILDING CODE
 9. CALIFORNIA FIRE CODE
 10. CALIFORNIA EXISTING BUILDING CODE
 11. CALIFORNIA GREEN BUILDING STANDARDS CODE
 12. CALIFORNIA REFERENCED STANDARDS CODE

7. **REPRESENTATIVE METHODS OF INSTRUCTION:**
Typical methods of instruction may include:
 - A. Lecture
 - B. Discussion
 - C. Guest Speakers
 - D. Other (Specify): materials demonstrations, written examination, reading assignments, handouts from the Uniform Mechanical Code Study Guide.

8. REPRESENTATIVE ASSIGNMENTS

Representative assignments in this course may include, but are not limited to the following:

Writing Assignments:

Written responses to homework questions.

Written reports following correct format.

With illustrations provided of mechanical systems and components, students will identify Code violations

Reading Assignments:

Reading assigned from course textbook.

Other Outside Assignments:

Research of specific documents. Critique an inspection report.

9. REPRESENTATIVE METHODS OF EVALUATION

Representative methods of evaluation may include:

A. Class Participation

B. Quizzes

C. Short quizzes, midterm and final examinations.

10. REPRESENTATIVE TEXT(S):

Possible textbooks include:

- A. International Association of Plumbing and Mechanical Officials. *2022 California Mechanical Code*, ed. Ontario: International Association of Plumbing and Mechanical Officials, 2022

Origination Date: October 2023

Curriculum Committee Approval Date: April 2024

Effective Term: Fall 2024

Course Originator: Michael Mitchell