

# APPT 135B: P-301B PLUMBING CODES

## Foothill College Course Outline of Record

Heading	Value
<b>Effective Term:</b>	Summer 2024
<b>Units:</b>	4.5
<b>Hours:</b>	54 lecture per quarter (54 total per quarter)
<b>Prerequisite:</b>	Per California Code of Regulations, this course is limited to students admitted to the Plumbing Technology Apprenticeship Program.
<b>Advisory:</b>	Not open to students with credit in APPR 119.
<b>Degree &amp; Credit Status:</b>	Degree-Applicable Credit Course
<b>Foothill GE:</b>	Non-GE
<b>Transferable:</b>	None
<b>Grade Type:</b>	Letter Grade (Request for Pass/No Pass)
<b>Repeatability:</b>	Not Repeatable

## Student Learning Outcomes

- A successful student will be able to define the term as it pertains to the UPC.
- A successful student will be able to define the term "fixture unit".
- A successful student will be able to demonstrate knowledge of code requirements for clean-outs.

## Description

Students learn and demonstrate the procedures for coordinating the testing and inspection of plumbing systems and applicable codes that a plumbing systems test must meet. Knowledge of general regulations, including accessibility and ADA requirements, is also discussed.

## Course Objectives

The student will be able to:

1. Define terms used in the Uniform Plumbing Code
2. Demonstrate ability to locate and apply applicable code sections
3. Demonstrate ability to properly size drain/waste/vent, potable water, and fuel gas systems

## Course Content

1. Define terms used in Uniform Plumbing Code
  - a. National, state, and local standards and codes
  - b. Administration and definition of terms
  - c. Various types of plumbing system tests
  - d. Testing and inspection of plumbing systems
2. Demonstrate ability to locate and apply applicable code sections
  - a. UPC, Chapter 1, Administration
  - b. UPC, Chapter 2, Definitions

- c. UPC, Chapter 3, General Regulations
  - d. UPC, Chapter 4, Plumbing Fixtures and Fixture Fittings, ADA requirements
  - e. UPC, Chapter 5, Water Heaters as presented in Chapter 5 of the UPC
  - f. UPC, Chapter 6, Water Supply and Distribution
  - g. UPC, Chapter 7, Sanitary Drainage
  - h. UPC, Chapter 8, Indirect Wastes
  - i. UPC, Chapter 9, Vents
  - j. UPC, Chapter 10, Traps and Interceptors
  - k. UPC, Chapter 11, Storm Drainage
  - l. UPC, Chapter 12, Fuel Piping
  - m. UPC, Chapter 13, Health Care Facilities
  - n. UPC, Chapter 14, Referenced Standards
  - o. UPC, Chapter 15, Firestop Protection
3. Demonstrate ability to properly size drain/waste and vent, potable water, and fuel gas piping systems
    - a. Calculate sanitary drainage pipe sizing
    - b. Calculate sanitary vent pipe sizing
    - c. Methods and procedures for potable water pipe sizing
    - d. Methods and procedures for sizing fuel gas piping

## Lab Content

Not applicable.

## Special Facilities and/or Equipment

1. Laboratory with plumbing and piping equipment.
2. When taught via Foothill Global Access, on-going access to computer with email software and hardware; email address.

## Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

- Results of written exercises and final examination
- Satisfactory completion of hands-on projects
- Maintenance of a student's workbook with questions drawn from text

## Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

- Lecture
- Group discussion
- Demonstration

## Representative Text(s) and Other Materials

. [California Plumbing Code: California Code of Regulations, Title 24](#). 2019.

International Association of Plumbing and Mechanical Officials. [Uniform Plumbing Code Study Guide](#). 2018.

We will adopt the next edition of each text, as it is published.

## **Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

1. Readings from assigned textbook, California Plumbing Code: California Code of Regulations, Title 24, Chapter 3
  - a. General Regulations, Section 301.0, Materials - Standards and Alternates
2. Writing assignments
  - a. Make a schematic drawing of a basic natural gas piping system
  - b. Describe properties and indicate pipe size of each point in the system

## **Discipline(s)**

Plumbing