

APPT 164: PLUMBING II

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2024
Units:	5
Hours:	50 lecture, 52 laboratory per quarter (102 total per quarter)
Prerequisite:	Per California Code of Regulations, this course is limited to students admitted to the Plumbing & Pipefitting Apprenticeship Program.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	None
Grade Type:	Letter Grade Only
Repeatability:	Not Repeatable

Student Learning Outcomes

- A student will be able to demonstrate and classify drainage systems.
- A student will be able to apply piping and plumbing fixture supports.
- A student will be able to layout piping systems.
- A student will be able to demonstrate and classify piping layouts.

Description

Second-year course of the Plumbing and Pipefitting Apprenticeship program. This course provides students with a working knowledge of plumbing and piping layouts, drainage systems, piping and fixture supports as it applies to mechanical drawings.

Course Objectives

The student will be able to:

1. Recognize and classify piping layouts
2. Recognize and classify drainage systems
3. Recognize and classify piping and fixture support
4. Recognize and display piping to California State Code

Course Content

1. Conceptual drawings of piping layouts
 - a. Elevation views of piping systems
2. Conceptual drawings of drainage systems
 - a. Isometric plans
 - b. Classes of drainage systems
3. Conceptual drawings of pipe fixtures
 - a. Creating blueprints with structural fixtures
4. Review of the California State Code book
 - a. Creating drawings to code standards

Lab Content

Students will work individually on computer-aided design (CAD) stations performing basic layouts of a plumbing system for 3-D and isometric drawings:

1. Drawing techniques
2. Line quality
3. Drawing proportion
4. Labeling and sizing of piping systems
5. Drawing file management

Special Facilities and/or Equipment

1. Laboratory with drawing tables
2. Drawing utensils
3. 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:

Written examination
Hands-on demonstration
Chapter quizzes
Group and classroom participation
Punctuality

Method(s) of Instruction

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

Lecture
Discussion
Laboratory
Demonstration

Representative Text(s) and Other Materials

United Association of Journeymen and Apprentices. Drawing Interpretation and Plan Reading. 2015.

. Pipe and Coupling Cast Iron Soil Pipe and Fitting. 2002.

. Drainage Systems. 2016.

Texts older than five years may be utilized in this course as industry-standard texts.

Pocket reference chart.

2022 California Plumbing Code (Code of Regulations Title 24, Part 5).

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

1. Readings from textbook
 - a. The application of isometric drawings
 - b. The application of 3-D drawings
2. Students complete writing assignments on elevation, isometric and plan views

- a. An isometric drawing of a PRV station is turned in as part of the final exam
3. Readings from the California Plumbing Code book

Discipline(s)

Plumbing