

# APPT 187: DRAWING INTERPRETATION & PLAN READING/SCIENCE

## Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2021
Units:	5
Hours:	37 lecture, 86 laboratory per quarter (123 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 (Request for Pass/No Pass)
Repeatability:	Not Repeatable

## Student Learning Outcomes

- A student will be able to identify conventional drafting tools.
- A student will be able to describe isometric drawings.
- A student will be able to identify common pipe symbols.

## Description

Students will gain a working knowledge of drawing interpretation, plan reading and science as it applies to the plumbing industry. This course is required to meet the certificate requirements to become a journeyman plumber.

## Course Objectives

The student will be able to:

- Perform drawing interpretation as its required in the plumbing industry.
- Perform scientific practices as required in the plumbing industry.

## Course Content

- Drawing interpretation
  - Blue prints and tables
  - Pipe measurement
- Science
  - Properties of water
  - Hydraulics and pneumatics
  - Metals and alloys
  - Corrosion

## Lab Content

Students will work individually on applying drawing interpretation principles and scientific concepts to the layout of piping systems in the lab:

- Interpret drawings and plan lay out

- Use math formulas for lay out and science as it applies in the plumbing trades
- Perform metric measurements
- Demonstrate the use of instruments for piping systems layout

## Special Facilities and/or Equipment

- Laboratory with overhead projector
- Calculator

## 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:

- Discussion
- Laboratory
- Demonstration

## Representative Text(s) and Other Materials

United Association of Journeymen and Apprentices. [Drawing Interpretation, and Science](#). 2009.

NOTE: This is the Plumbing textbook used for this course. Although it may not be within 5 years of the required published date, it is the most current book used when teaching this course. We will adopt the next edition, as it is published.

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

- Readings from the textbook. Examples include:
  - Drawing interpretation and science for the plumbing trades (Chapters 1-3)
  - Application of geometry for the plumbing trades (Chapter 2)
  - Instrumentation for piping systems layouts (Chapters 4-5)
- Writing assignments that are related to the assignments given in lecture. Examples include:
  - Use math calculations for pipe measurements
  - Apply geometry of piping systems
  - Applying formulas for drawing interpretation in the pipe trades
  - Calculating metric measurements for piping system layouts
  - Specifying instruments used for piping system layouts

## Discipline(s)

Plumbing