APPT 125: RESIDENTIAL BLUEPRINT READING & DRAWING

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2024
Units:	2.5
Hours:	18 lecture, 36 laboratory per quarter (54 total per quarter)
Prerequisite:	Per California Code of Regulations, this course is limited to students admitted to the Residential Plumbing Apprenticeship Program.
Advisory:	Current employment in the pipe trades industry.
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 describe isometric drawings.
- A student will be able to identify common pipe symbols.
- A student will be able to identify conventional drafting tools.

Description

This course familiarizes students with the various blueprints, drawings, and sketches used in residential construction. Plan types, details, and symbols will be covered, as well as common construction terms and methods. Working from a set of building plans, students will create isometric drawings of plumbing systems.

Course Objectives

The student will be able to:

1. Define the drawing types common to residential construction
2. Demonstrate the use of drafting tools
3. Interpret residential construction blueprints
4. Demonstrate proficiency in isometric drawing and sketching

Course Content

1. Drawing types common to residential construction
   a. Define working drawings
   b. Define and describe plot, floor, and elevation plans
   c. Define and describe sections and details
   d. Describe sections and details
   e. Define elevations and explain their place in the complete set of prints
2. Demonstrate the use of drafting tools
   a. Define drafting methods
   b. Identify and use conventional drafting tools
   c. Define sketching and describe common sketching tools and materials
   d. Practice good sketching techniques
   e. Sketch sections, elevations, and details
   f. Explain dimensioning
3. Interpret residential construction blueprints
   a. Identify graphic symbols for pipe fittings and valves
   b. Interpret symbols and abbreviations on a residential blueprint
   c. Describe symbols and abbreviations used on plot plans
   d. Describe floor plans and explain what a floor plan shows
   e. Describe scale as it relates to floor plans
   f. Describe elevations
   g. Interpret piping installation diagrams
   h. Interpret information from elevation drawings
   i. Define details and explain why they are used
   j. Describe how plans and specification are used in residential plumbing
4. Demonstrate proficiency in isometric drawing and sketching
   a. Describe perspective, isometric, and oblique drawings
   b. Describe orthographic projections
   c. Identify and sketch piping fittings and valves
   d. Sketch isometric piping drawings

Lab Content

1. Sketch plan view of pipe and fitting assemblies
2. Sketch elevation views of pipe and fitting assemblies
3. Create drawing of a piping assembly in isometric views

Special Facilities and/or Equipment

Laboratory with drafting tools and tables.

Method(s) of Evaluation

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

Results of written exercises, short quizzes, and end of session and end of module assessment
Class participation
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
Lab assignments
Group discussions
Demonstrations

Representative Text(s) and Other Materials

International Pipe Trades Joint Training Committee, Inc.. Drawing Interpretation and Plan Reading. 2015.

Proctor, Thomas E., and Leonard P. Toenjes. Print Reading for Residential Construction Part I, 6th ed.. 2016.

These are the standard textbooks/workbooks used for this course. Although they are older than 5 years, they are the most current books used when teaching this course.

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

1. Readings from assigned textbook
    a. Construction Documents, chapter 1
    b. Symbols and Abbreviations, chapter 4
2. Writing assignments given in the laboratory
    a. Answer study questions in assigned text, chapters 1 and 4
    b. Given a floor plan of a residential bathroom, sketch a waste and vent piping system using proper drawing symbol and labels, and write a bill of materials for the project

Discipline(s)

Plumbing