APPT 162: MATHEMATICS/ SCIENCE FOR THE PLUMBING TRADE

Foothill College Course Outline of Record

Heading	Value
Units:	4.5
Hours:	30 lecture, 72 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 (Request for Pass/No Pass)
Repeatability:	Not Repeatable

Student Learning Outcomes

- A student will be able to demonstrate and apply all the related math and science required in the plumbing and pipefitting industry.
- A student will be able to apply hands on method using industry standard piping products and fittings.

Description

First year of the Plumber & Pipefitter Apprenticeship program. This course provides students with a working knowledge of mathematics and science as it applies to the plumbing industry.

Course Objectives

The student will be able to:
A. Demonstrate mathematics required in the Plumbing industry
B. Demonstrate science required in the Plumbing industry

Course Content

A. Mathematics
1. Basic math review
2. Formulas and tables
3. Pipe measurement
B. Science
1. Properties of water
2. Hydraulics & pneumatics
3. Mechanics
4. Metals & alloys
5. Corrosion

Lab Content

Students will work individually on applying math principles and concepts to the layout of piping systems in the lab:
A. Math & Geometry for Pipe Measurements I & II
B. Formulas for Related Math in the Plumbing Trades
C. Metric Measurements
D. Instruments Used for Piping Systems Layout

Special Facilities and/or Equipment

Laboratory with overhead projector
Calculator

Method(s) of Evaluation

A. Written examination
B. Hands-on demonstration
C. Chapter Quizzes
D. Group and Classroom participation
E. Punctuality

Method(s) of Instruction

A. Lecture
B. Discussion
C. Laboratory
D. Demonstration

Representative Text(s) and Other Materials

United Association of Journeymen and Apprentices. Related Mathematics, Science. Washington, D.C.: International Pipe Trades Joint Training Committee, Inc., 2014.

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

A. Readings from the textbook, Sections 1-137

1. Math & Science for the Plumbing Trades

2. Application of Geometry for the Plumbing Trades

3. Instrumentation for Piping Systems Layouts

B. Writing assignments are related to the assignments given in the laboratory

1. Math calculations for pipe measurements

2. Geometry of piping systems

3. Applying formulas for related Math in the Pipe Trades

4. Calculating metric measurements for piping system layouts

5. Specifying instruments used for piping system layouts

Discipline(s)

Plumbing