APR 163 : PLUMBING CALCULATIONS AND PRINT READING

Transcript title

Plumbing Calculations and Prin

Credits

4

Grading mode

Standard letter grades

Total contact hours

80

Other hours

80

Prerequisites

APR 162.

Course Description

Focuses on using the Pythagorean Theorem to calculate angles accurately. Develops skills for interpreting civil, architectural, structural, mechanical, plumbing, and electrical drawings for the installation of plumbing systems. Introduces techniques for creating isometric drawings, performing material takeoffs, and utilizing approved submittal data. Presents methods for attaching and routing DWV and water supply piping while meeting structural and code requirements. Designed for registered apprentices in the plumbing trade.

Course learning outcomes

1. Calculate 22-1/2-, 45-, 60-degree offsets, parallel offsets and determine square of a corner.
2. Draw simple and rolling offsets, as well as offsets on parallel runs of pipe.
3. Read and interpret building plans and drawings.
4. Create an isometric drawing and prepare elementary single-line sketches of drainage and vent systems.
5. Layout a building site including fixtures through building sewers including building the stack location.
6. Prepare a materials list for a drainage waste and vent system using approved submittal data.
7. Explain applications for installation of hangers, supports, and fire stopping for plumbing systems.
8. Install and test a DWV system using appropriate hangers and correct grade or slope.
9. Use proper techniques and equipment for locating, installing and connecting roof, floor and area drains according to code.

Content outline

1. Learn to calculate angles using the Pythagorean Theorem.
2. Interpret civil, architectural, structural, mechanical, plumbing, and electrical drawings for plumbing system installations.
3. Creating isometric drawings.
4. Perform material takeoffs and utilize approved submittal data.
5. Understand methods for attaching and routing DWV and water supply piping.
6. Ensure installations meet structural and code compliance standards.

Required materials

Materials not required.