

APR 260 : PLUMBING WATER SUPPLY SYSTEMS

Transcript title

Plumbing Water Supply Systems

Credits

4

Grading mode

Standard letter grades

Total contact hours

80

Other hours

80

Prerequisites

APR 165.

Course Description

Presents how to size water piping in all applications and how to treat potable water for private and public water systems. Explores sizing waste and vent piping, installing water heaters, and diagnosing gas and electric water heaters. Applies trade calculations like basic offsets and math concepts of geometry. Reinforces safety in the workplace, plumbing tools, code definitions, and hands-on troubleshooting. Familiarizes learners with Uniform Plumbing Code (UPC) with Oregon Amendments, administration, definitions, and general regulations. Designed for registered apprentices in their third-year of the plumbing trade.

Course learning outcomes

1. Demonstrate safe workplace behavior and employ common safety practices.
2. Effectively use common trade calculations in standard and metric lengths, areas, weights, volumes, and basic offsets.
3. Identify and safely use and care for various plumbing hand and power tools.
4. Demonstrate troubleshooting skills for a variety of equipment, including electric water heaters, gas water heaters, etc. mechanical fittings, installation standards.
5. Use the concepts of temperature and pressure to assess effects on plumbing installations.
6. Lay out a water supply system efficiently by calculating delivery lengths and pressure drops.
7. Identify common water problems and the basic techniques and equipment to solve problems.
8. Demonstrate knowledge of the Uniform Plumbing Code.

Content outline

1. Apply math concepts, including geometry, to plumbing applications.
2. Techniques for sizing water piping for private and public water systems.
3. Methods for sizing waste and vent piping.
4. Gain skills in installing water heaters and diagnosing gas and electric water heaters.

5. Workplace safety practices relevant to the plumbing trade.
6. Trade math concepts, including basic offsets.
7. Use plumbing tools effectively.
8. Study code definitions and apply them in plumbing scenarios.
9. Troubleshooting with plumbing systems.
10. Overview of the Uniform Plumbing Code (UPC) with Oregon Amendments, focusing on administration, definitions, and general regulations.

Required materials

Materials not required.