

Technical Training Series

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MCAWW Board of Education Mission:

Providing MCAWW Members innovative,
meaningful learning opportunities.

Knowledge ~ Growth ~ Respect



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WESTERN WASHINGTON

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Mechanical Contractors Association
WESTERN WASHINGTON

Why You Should Attend

The programs in the MCAWW Technical Training Series are designed to provide project managers, project engineers, detailers/coordinators, estimators, etc. with a basic knowledge of technical subjects, giving them a better understanding of systems and how to ask questions of technical experts.

Introduction to HVAC

Intro to HVAC is an entry-level HVAC course that will introduce you to HVAC equipment and will cover areas such as equipment identification, functions of equipment, and what maintenance actions are required.

Benefits of the program include learning about HVAC components in an environment with other “beginners”, learning how to identify HVAC equipment and the functions of the components, learning to understand the maintenance requirements of components and getting a chance to touch “cutaways” of particular equipment.

HVAC Engineering *for Non-Engineer Project Managers*

In the ‘HVAC Engineering for Non-Engineer Project Managers’ program, students will learn how to select the most cost-effective equipment, evaluate loads, and suggest value engineering alternatives. The program will provide exposure to engineering calculations used in the HVAC design process and will teach students how to determine what size of duct, pipe and equipment is appropriate for project needs.

Students will learn how to minimize oversizing and will be more capable of laying out systems based on Basis of Design concepts. Upon completion, students will be prepared to ask better questions, communicate with engineers during the pre-construction processes, and participate with an advantage in change order negotiations and interviews.

Topics covered:

- Thermodynamics
- Psychrometrics
- Load Calculations
- Hydronic Pipe Sizing
- Air-handling Units
- Refrigeration
- Pump Sizing
- Ductwork
- Wet Equipment

**Plunging Into Plumbing**

Plunging into Plumbing is a basic program that introduces a number of topics concerning plumbing systems. Students will learn how to classify, recognize and assemble plumbing fixtures; look up information in the Uniform Plumbing Code (UPC); size pipe for Domestic Water, Waste & Vent, and Rain Water; recognize challenges associated with various types of piping systems; and maximize productivity in the installation of plumbing systems.

Topics covered:

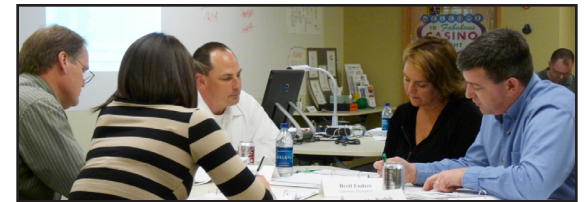
- Introduction to Plumbing & UPC
- Fixtures & Submittals
- Domestic Sizing
- Waste Sizing
- Specialty Plumbing Systems
- Coordination
- Blueprint Reading & Plumbing Estimating
- Hands-on experience with cutting pipe, hanging fixtures, soldering and brazing

**The Last 10%: Controls, Electrical, Start-up, TAB, Cx & Close-out**

The ‘Controls, Electrical, Start-up, TAB, Cx & Close-out’ program is designed to help mechanical contractors understand and manage the important process of closing-out and turning over a project and will include an overview of the basics, as well as challenges & pitfalls.

Topics covered:

- Controls
- Electrical
- Start-up
- TAB
- Commissioning
- Close-out



— For more information about Technical Training programs, —
visit www.mcaww.net or call (206) 442-9029.