

Heating and Ventilation



Learn how to maintain peak efficiencies of Heating and Ventilation (HV) systems while minimizing the risk of downtime due to unscheduled maintenance and repair. HV systems can be dangerous due to the combustion of gas and requires a thorough understanding by technicians.

This course covers the principles of gases and combustion theory, safety practices, system components, control systems, operating / maintenance practices and troubleshooting. As these systems are also electrical, this course includes electrical components and safety equipment and testing.

WHAT THIS COURSE COVERS

- Design, Operation, and Maintenance and Troubleshooting of Gas Fired Heating Systems
- Controls and Control Systems
- Electrical Components of HVAC Systems
- Maintenance and Troubleshooting of Gas-Fired Furnaces and Boilers

WHO SHOULD TAKE THIS

- Apprentice and Experienced HVAC Maintenance and Repair Technicians
- Plant and Facility Maintenance Technicians
- Plant and Facility Engineers, Managers & Superintendents
- Environmental Health & Safety Personnel
- Stationary Engineers
- Energy Management Personnel of People

COURSE OUTCOMES

- Understand heating system fuels and combustion, mechanical components, and system operation as they apply to gas fired and boiler heating systems.
- Understanding of electrical theory, test equipment, HVAC electrical components and heating system electrical control systems.
- Perform heating system, electrical, and mechanical preventative maintenance and troubleshooting.

COURSE AGENDA

- Thermodynamics
- Theory of Gas and Combustion
- Burners, Regulators, and Valves
- Ignition and Flame Proving
- Electrical Fundamentals
- Troubleshooting HVAC Electrical Systems
- Electrical Components and Heating Controls
- Gas-Burning Forced-Air Equipment
- Boiler Systems

Lecture Hands-on • **ONSITE:** 2-days (16 hours) • **LIVE ONLINE:** N/A



ONSITE - TRAINING TOUR - LIVE VIRTUAL - ONLINE - HANDS ON - AUDITS - CONSULTING - **TRAINED WORKERS. STRONGER COMPANIES.**
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HV Course Overview and Agenda v01142025.docx