



**RELATED INSTRUCTION OUTLINE OF THE**  
**HVAC CURRICULUM**  
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*(5<sup>th</sup> Edition)*

<b>HVAC LEVEL 4</b>			
<b>Module #</b>	<b>Module Name</b>	<b>Module Objectives</b>	<b>Perf. Profile</b>
1	03308 <i>Water Treatment</i>	Explains water problems encountered in heating and cooling systems and identifies water treatment methods and equipment. Covers basic water testing procedures and chemistry.	Yes
2	03403 <i>Indoor Air Quality</i>	Defines the issues associated with indoor air quality and its effect on the health and comfort of building occupants. Provides guidelines for performing an IAQ survey and covers the equipment and methods used to monitor and control indoor air quality.	Yes
3	03404 <i>Energy Conservation Equipment</i>	Covers heat recovery/reclaim devices, as well as other energy recovery equipment used to reduce energy consumption in HVAC systems.	No
4	03405 <i>Building Management Systems</i>	Explains how computers and microprocessors are used to manage zoned HVAC systems. Provides coverage of various network protocols and systems controllers and introduces trainees to the various means of connection and system interface.	Yes
5	03402 <i>System Air Balancing</i>	Covers air properties and gas laws, as well as the use of psychrometric charts. Describes the tools, instruments, and procedures used to balance an air distribution system.	Yes
6	03406 <i>System Startup and Shutdown</i>	Presents the procedures for the startup and shutdown of hot water, steam heating, chilled water, and air handling systems. Also covers the startup and shutdown of typical cooling towers and packaged HVAC units. The procedures for both short-term and long-term shutdowns are included.	Yes
7	03401 <i>Construction Drawings and Specifications</i>	Teaches how to interpret drawings used in commercial construction, including mechanical drawings, specifications, shop drawings, and as-builts. Explains how to perform takeoff procedures for equipment, fittings, ductwork, and other components.	Yes
8	03407 <i>Heating and Cooling System Design</i>	Identifies factors that affect heating and cooling loads. Explains the process by which heating and cooling loads are calculated, and how load calculations are used in the selection of heating and cooling equipment. Covers basic types of duct systems and their selection, sizing, and installation requirements.	Yes
9	03408 <i>Commercial and Industrial Refrigeration</i>	Expands on the study of product and process refrigeration equipment by describing systems used in cold storage and food processing applications, as well as transportation refrigeration. Various types of defrost systems are covered in detail.	Yes
10	03409 <i>Alternative and Specialized Heating and Cooling Systems</i>	Describes alternative devices used to reduce energy consumption, including wood, coal, and pellet-fired systems, waste-oil heaters, geothermal heat pumps, solar heating, in-floor radiant heating, and direct-fired makeup units. Also introduces application-specific computer room environmental and air turnover systems.	No
11	46101 <i>Fundamentals of Crew Leadership</i>	Teaches the skills needed to become an effective crew leader. It will help a crew leader who wants to become more effective, as well as a crew member who aspires to become a crew leader. The module covers basic leadership, safety and project control.	Yes