



RELATED INSTRUCTION OUTLINE OF THE

HVAC CURRICULUM

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(4th Edition)

HVAC LEVEL 1			
Module #	Module Name	Module Objectives	Perf. Profile
1	03101-13 <i>Introduction to HVAC</i>	Covers the basic principles of heating, ventilating, and air conditioning, career opportunities in HVAC, and how apprenticeship programs are constructed. Basic safety principles, as well as trade licensure and EPA guidelines, are also introduced.	No
2	03102-13 <i>Trade Mathematics</i>	Explains how to solve HVAC/R trade-related problems involving the measurement of lines, area, volume, weights, angles, pressure, vacuum, and temperature. Also includes a review of scientific notation, powers, roots, and basic algebra and geometry.	No
3	03106-13 <i>Basic Electricity</i>	Introduces the concept of power generation and distribution, common electrical components, AC and DC circuits, and electrical safety as it relates to the HVAC field. Introduces reading and interpreting wiring diagrams.	Yes
4	03108-13 <i>Introduction to Heating</i>	Covers the fundamentals of heating systems and the combustion process. The different types and designs of gas furnaces and their components, as well as basic procedures for their installation and service, is provided.	Yes
5	03107-13 <i>Introduction to Cooling</i>	Explains the fundamental operating concepts of the refrigeration cycle and identifies both primary and secondary components found in typical HVAC/R systems. Common refrigerants are introduced as well. Describes the principles of heat transfer and the essential pressure-temperature relationships of refrigerants. Basic control concepts for simple systems are also introduced.	Yes
6	03109-13 <i>Air Distribution Systems</i>	Describes the factors related to air movement and its measurement in common air distribution systems. The required mechanical equipment and materials used to create air distribution systems are also presented. Basic system design principles for both hot and cold climates are introduced.	Yes
7	03103-13 <i>Basic Copper and Plastic Piping Practices</i>	Explains how to identify types of copper tubing and fittings used in the HVAC/R industry and how they are mechanically joined. The identification and application of various types of plastic piping, along with their common assembly and installation practices, are also presented.	Yes
8	03104-13 <i>Soldering and Brazing</i>	Introduces the equipment, techniques, and materials used to safely join copper tubing through both soldering and brazing. The required PPE, preparation, and work processes are covered in detail. The procedures for brazing copper to dissimilar materials are also provided.	Yes
9	03105-13 <i>Basic Carbon Steel Piping Practices</i>	Explains how to identify various carbon steel piping materials and fittings. The joining and installation of threaded and grooved carbon steel piping systems is covered, with detailed coverage of threading and grooving techniques included.	Yes