

HEATING, VENTILATION AND AIR CONDITIONING/REFRIGERATION – HVAC/R, Associate in Applied Science Degree – 4780

Engineering & Technology Department

The Heating, Ventilation and Air Conditioning/Refrigeration (HVAC/R) AAS program is designed to provide students with the theory and hands-on skills necessary to identify, design, and install basic HVAC systems for both residential and commercial buildings. This curriculum is also supported by general education courses in the communications, sciences, and mathematics areas. The complete program is available at the Harrisburg Campus (Mid-town II location) and the York Campus. Students can attend full-time during the day or part-time during the evening depending on the campus chosen.

Career Opportunities

Graduates have the knowledge and skills to move from entry-level, multi-skilled mechanic position into a supervisory position in industry, such as HVAC Installation Leader, HVAC Service Technician, HVAC Technical Support Service Technician; Supply or Distributor Counter/Parts Manager, or HVAC Equipment Sales.

Competency Profile

This curriculum is designed to prepare students to:

- Develop and apply basic skills of electricity, heating, refrigeration, and air conditioning technology
- Install, repair, and maintain heating, air conditioning, and refrigeration systems
- Cite federal laws relevant to refrigerant recovery and recycling
- Read HVAC blueprints
- Design HVAC systems to meet prescribed specifications
- Address customer-service issues
- Install and maintain building wide HVAC systems
- Design and install HVAC control systems in residential and commercial buildings

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I (or)	3	HVAC 100 EPA Refrigerant Handling, Preparation, & Testing	1	GTEC 105 Customer Service	1
ENGL 110 Foundations of Professional Writing	(3)	HVAC 101 Basic Electrical Fundamentals	4	Program Specific Electives*	9
COMM 101 Effective Speaking (or)	3	HVAC 102 R410A-Safety & Handling	1		10
COMM 203 Interpersonal Communication	(3)	HVAC 103 Fundamentals of Air Conditioning I	4		
Humanities & Arts Elective	3	HVAC 105 Fundamentals of Air Conditioning II	4		
Mathematics or Science Elective	3	HVAC 106 Plumbing for the Trades	3		
Social & Behavioral Science Elective	3	HVAC 107 Fundamentals of Low & Medium Temp. Refrigeration	4		
First-Year Seminar Elective	1	HVAC 109 Heating Systems	4		
Wellness	1	HVAC 110 System Design	3		
	17	HVAC 200 HVAC Control Systems	3		
		HVAC 201 HVAC Building Systems	3		
			34		

*Select from the following disciplines: BUSI, CARP, CIS, ELEC, ELOC, GTEC, HBR, HVAC 291, IA, IMT, MGMT, and WELD.

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ENGL 101 or 110	3	Humanities/Arts Elective	3	COMM 101 or 203	3	GTEC 105	1
FYS Elective	1	HVAC 100	1	HVAC 106	3	HVAC 200	3
HVAC 101	4	HVAC 102	1	HVAC 107	4	Math/Science Elective	3
HVAC 103	4	HVAC 105	4	HVAC 201	3	Program Elective*	3
Program Elective	3	HVAC 109	4	Program Elective*	3	Social/Behavioral Science Elective	3
		HVAC 110	3			Wellness	1