

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

Engineering, Trades & Computer Technologies Department
CIP Code: 47.0201

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. This program may be completed at the Harrisburg Campus through on-campus/in-person instruction.

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:

- Install, maintain and troubleshoot HVAC and refrigeration systems
- Communicate effectively with customer service issues
- Outline federal laws and obtain Environmental Protection Agency (EPA) and R-410A refrigerant certification
- Conduct and analyze readings on air properties, air flow and HVAC design for commercial dwellings
- Install and service air flow systems and HVAC systems for residential dwellings
- Calculate and design HVAC system size and system size and system air flow devices

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

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 Core Elective	3	HVAC 104 Print Reading for HVAC	1		
Mathematics or Science Core Elective	3	HVAC 105 Fundamentals of Air Conditioning II	4		
Social & Behavioral Science Core Elective	3	HVAC 107 Fundamentals of Low & Medium Temp. Refrigeration	4		
First-Year Seminar Elective	1	HVAC 109 Heating Systems	4		
Wellness Elective	1	HVAC 110 System Design	3		
	17	HVAC 200 HVAC Control Systems	4		
		HVAC 201 HVAC Building Systems	3		
			33		

*Select from the following disciplines: BUSI, CIS, ELEC, ELOC, GTEC, HVAC, 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	
FYS Elective	1	HVAC 100	1	ENGL 101 or 110	3	COMM 101 or 203	3
GTEC 105	1	HVAC 102	1	HVAC 104	1	HVAC 201	3
HVAC 101	4	HVAC 105	4	Humanities/Arts Core Elective	3	Math/Science Core Elective	3
HVAC 103	4	HVAC 107	4	Program Electives*	6	Program Elective*	3
HVAC 109	4	HVAC 110	3	Wellness Elective	1	Social/Behavioral Science Core Elective	3
		HVAC 200	4				