

HEATING, VENTILATION AND AIR CONDITIONING/REFRIGERATION – HVAC/R, Certificate - 4280

Engineering & Technology Department
CIP Code: 47.0201

The Heating, Ventilation and Air-Conditioning/Refrigeration (HVAC/R) certificate provides students with the necessary theory and hands-on skills needed to identify, design, and install heating, ventilation and air condition (HVAC) systems – at the entry level – for residential and commercial buildings. 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 find employment as HVAC service technicians, equipment installers, or HVAC maintenance technicians.
(SOC Code: 49-9021 Heating, A/C and Refrigeration Mechanics and Installers)

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

PROGRAM REQUIREMENTS (TOTAL CREDITS = 30)

General Education	Major Requirements		Other Required Courses	
	HVAC 100 EPA Refrigerant Handling,	1	GTEC 105 Customer Service	1
	HVAC 101 Basic Electrical Fundamentals	4	HVAC Program Elective*	$\frac{1}{2}$
	HVAC 102 R410-Safety & Handling	1		2
	HVAC 103 Fundamentals of Air Conditioning I	4		
	HVAC 105 Fundamentals of Air Conditioning II	4		
	HVAC 107 Fundamentals of Low & Medium Temperature Refrigeration	4		
	HVAC 109 Heating Systems	4		
	HVAC 110 Fundamentals of Air Conditioning & Heating System Design	3		
	HVAC 200 Control Systems	$\frac{3}{28}$		

*Students are to select from the following courses: ELEC 100 (1-credit); GTEC 101 (3-credits); HBR 130 (3-credits).

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	
GTEC 105	1	HVAC 100	1
HVAC 101	4	HVAC 102	1
HVAC 103	4	HVAC 105	4
HVAC 109	4	HVAC 107	4
Program Elective*	1	HVAC 110	3
		HVAC 200	3