Heating, Ventilation and Air Conditioning, Diploma

School of Technology

Program Description

The Heating, Ventilation and Air Conditioning Diploma is designed to prepare students for entry-level positions in the HVAC & R field. In the classroom and through lab experiences the student learns the refrigerants used in the industry, the basic refrigeration cycle, to fabricate ductwork, and control circuitry. The students also learn the skills to install and service gas and oil furnaces. Students will install and service water based heating and cooling systems, air conditioners and heat pumps, basic wiring, and learn refrigerant recovery techniques.

Career Opportunities

Graduates of this program will obtain jobs as ductwork fabricators, service technicians, installers, maintenance technicians or troubleshooters.

Program Learning Outcomes

Upon successful completion of this degree, students will be able to:

- Demonstrate the skills, professional values and ethics necessary to be employed in the heating, ventilation and air conditioning field.
- Demonstrate effective oral and written communication skills with customers, salespersons, and fellow employees.
- Identify and demonstrate the proper use of HVAC hand tools, meters and gauges.
- Describe the general principles and terminology of HVAC systems.
- Design, install and maintain heating and cooling equipment.
- Design, install and maintain hydronic heating and cooling equipment.
- Demonstrate the ability to utilize direct digital controls.
- Understand and implement heating and air conditioning systems that utilize natural technologies.
- Demonstrate the ability to read blueprints for residential and commercial structures.
- Read and interpret electrical ladder and pictorial diagrams to understand basic electrical and control circuitry in HVAC systems.
- Demonstrate the ability to fabricate ductwork.

Sugg. Term	Seq #	Course ID	Course Title	Cr	Prereq/Coreq(Co)	Options Available
1st Fall	1	PDV 101	First Year Seminar	1		
	2	HAC 101	Introduction to Refrigeration/Air Conditioning	4		
	3	HAC 240	HVAC Duct Fabrication	2		
	4	HAC 175	Direct Digital Controls	2		
	5	HAC 250	Gas and Oil Heating Technology	4		
	6	HAC 256	Geothermal and Solar Technology	3		
1st Spring	7	HAC 105	Blueprint Reading for HVAC Technicians	2		
	8	HAC 170	HVACR Control Systems	2		
	9	HAC 255	Air Conditioning/Heat Pumps	4		
	10	HAC 260	Hydronics	4		
	11	HAC 290	EPA Refrigerant Exam Preparation	3		
Minimum Program Credits				31		HVAC