

# Heating, Ventilation and Air Conditioning Mechanic II, Certificate

## School of Technology

The heating ventilation and air conditioning mechanic II certificate is designed to prepare students for entry level positions in the HVAC&R field. In the classroom and through lab experiences the student will learn the types of refrigerants used in the industry, the basic refrigeration cycle, how to fabricate ductwork, and how to utilize control circuitry. The students will also learn to install and service hydronic systems.

### Career Opportunities

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

### Program Learning Outcomes

**This curriculum is designed to prepare students 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, salesman, and fellow employees.
- Describe the general principles and terminology of HVAC systems.
- Demonstrate the ability to read blueprints for residential and commercial structures.
- Identify and interpret occupational health and safety standards in the entry level occupation.
- Read and interpret electrical ladder and pictorial diagrams to wire and troubleshoot HVAC systems.
- Design, install and maintain hydronic heating and cooling equipment.
- Use control logic to find and repair electrical problems in air conditioning and heat pump systems.
- Identify and demonstrate the proper use of HVAC hand tools, meters and gauges.
- Become certified in EPA Refrigerant Handling by preparing to pass the EPA Refrigeration Exam.
- Demonstrate the ability to fabricate ductwork.

Seq #	Course	Course Title	Credits	Type	Term Offered	Pre-Req	Options Available
1	HAC 105	Blueprint Reading for HVAC Technicians	2	Major	Sp		
2	HAC 170	HVAC&R Control Sys	2	Major	Sp		
3	HAC 255	Air Conditioning/Heat Pumps	4	Major	Sp		
4	HAC 260	Hydronics	4	Major	Sp		
5	HAC 290	EPA Refrigerant Exam Prep.	3	Major	Sp		

**Total Program Credits** 15

**Total Pathway Credits** 15