

HEATING, VENTILATION, AIR CONDITIONING

This program of study emphasizes the skills needed for employment in the heating, ventilation, air conditioning and refrigeration industry.

- **Technical Certificate Option** – The Technical Certificate in Heating, Ventilation, and Air Conditioning, is a two semester program that contains technical and advanced technical courses.
- **Associate of Applied Science Degree Option**- The Associate of Applied Science degree, with a major in Heating, Ventilation, and Air Conditioning, is a four semester program that contains technical, advanced technical and general education courses.

Admission Criteria: Placement test and preadmission advising.

Technical Education Courses

Fall Semester			Spring Semester		
Course Title		Credits	Course Title		Credits
ENV 102	Safety Orientation (OSHA 10)	1	HVA 154	Gas Heating	4
HVA 104	Electrical Fundamentals	4	HVA 159	A/C, Heat Pumps, Electric Heat	4
HVA 109	Controls and Motors	2	HVA 164	RTU Heating and A/C	1
HVA 114	Heating Systems Fundamentals	3	HVA 169	Commercial Refrigeration, Evaporators, Recovery, Condensers	2
HVA 119	HVAC Fundamentals	4	HVA 174	EPA 608	1
HVA 124	Compressor and Refrigeration Controls	2	HVA 179	Commercial Refrigeration Compressors, Metering Devices and Controls	2
HVA 129	Sheet Metal Layout and Fabrication	1	HVA 184	Workplace Skills	1
HVA 134	Refrigeration Fundamentals	1	HVA 189	Commercial Refrigeration Troubleshooting, Motor Controls and Ice Machines	3
Semester Total		18	Semester Total		18
			Total Technical Certificate Credits		
			36		

General Education Courses.....Credits

COM 102 Interpersonal Communication or COM 105 Public Speaking.....	3
CSA 105 Introduction to Computer Applications and Concepts	3
ENG 100 Technical Writing or ENG 101 English Composition I	3
HUM 101 Ethics in the Workplace or PSY 101 General Psychology.....	3
MAT 101 Technical Math or MAT 150 College Algebra	3

TOTAL GENERAL EDUCATION CREDITS.....15

TOTAL RELATED ELECTIVE CREDITS9

TOTAL AAS PROGRAM CREDITS60

PROGRAM OUTCOMES

- Obtain EPA Universal certification.
- Demonstrate a working knowledge of residential heating systems to include installation, troubleshooting and repair skills.
- Demonstrate a working knowledge of commercial heating systems to include installation, troubleshooting and repair skills.
- Demonstrate working knowledge of residential cooling systems to include installation, troubleshooting, and repair skills.
- Demonstrate a working knowledge of commercial cooling systems to include installation, troubleshooting, and repair skills.
- Demonstrate a working knowledge of sheet metal lay out and fabrication.
- Demonstrate a working knowledge of commercial refrigeration systems to include installation, troubleshooting and repair skills.
- Demonstrate a working knowledge of Work Place Skills/Ethics.

GENERAL EDUCATION PROGRAM OUTCOMES

- Compose coherent written communication.
- Deliver coherent oral communication.
- Show proficiency in locating, analyzing, documenting, and ethically using information sources.
- Perform and interpret calculations.
- Develop logical problem solving skills and/or critical thinking skills.
- Identify appropriate strategies for gathering, analyzing, and displaying data to draw conclusions from scientific data.
- Collaborate effectively, which cultivates a respect for human diversity.
- Demonstrate technology literacy appropriate to area of study.