



Heating and Air Conditioning A.A.S.

Curriculum Code: 0836

Effective: Fall 2020 – Summer 2025

Description

Heating, Ventilating, Air Conditioning and Refrigeration (HVAC/R) technicians work on systems that control temperature, humidity, and air quality of enclosed spaces. They are required to design, install, service, and maintain the various types of equipment used to control human comfort, preservation of food products, critical medical supplies, and computer and mechanical processes in residential, commercial, industrial, and institutional environments. Technicians must have a strong mechanical aptitude, be self-motivated, willing to accept challenges, and have a structured approach to problem solving. They should also have good communication skills, the ability to work well with others, and understand all aspects of the construction trade. Students completing this curriculum may also be eligible to apply for a Certificate of Achievement in Heating and Air Conditioning (0832).

Additional Information

Students who have already completed DCTM 102, ELTE 102, METS 102, or WELD 102 with a grade of 2.0 or higher may substitute one of these courses for HVAC 102. Any of these courses may also be used to fulfill the prerequisite for HVAC 110, HVAC 113, and HVAC 115.

Contact Information

Contact the Heating and Air Conditioning Program, West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degree, Recommended Choices

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (Second Course)/Communications or Applied Communications – *Select one*
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
GEOG 200, World Regional Geography, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Math II, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
PHYS 120, The Art of Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
HVAC 100	Fundamentals of HVAC	3 / 3
HVAC 102	Industrial/Construction Safety	2 / 3
HVAC 110	Applied Electricity I	3 / 4
HVAC 111	Applied Electricity II	3 / 4
HVAC 113	HVAC/R Piping	3 / 4
HVAC 115	Sheet Metal Fab & Installation	2 / 3
HVAC 120	Heating I	3 / 4
HVAC 130	Air Conditioning I	3 / 4
HVAC 201	Mechanical Code	4 / 4
HVAC 220	Heating II	3 / 4
HVAC 221	Introduction to Hydronics	3 / 4
HVAC 230	Air Conditioning II	3 / 4
HVAC 231	Heat Pump	3 / 4
HVAC 240	Refrigeration I	3 / 4
HVAC 241	Refrigeration II	3 / 4
HVAC 251	Fund of Direct Digital Control	3 / 4

Program of Study Required Courses, Limited Choice - *Select two*

Course Code	Course Title	Credit / Billing Hours
AEET 120	Residential Energy	3 / 4
DCTM 100	Intro to the Built Environment	3 / 4
DCTM 101	Drafting/Intro to CAD	3 / 4
ELTE 141	National Electric Code I	4 / 4
ELTE 150	Electric Motor Maintenance	2 / 3
WELD 103	Combination Welding	4 / 6

Total Credit Hours

70-73 credits / 87-90 billing hours

Recommended Course Sequence

Semester I	Semester II
Gen Ed – English Composition	Gen Ed – Mathematics or Applied Mathematics
HVAC 100	HVAC 111
HVAC 102	HVAC 120
HVAC 110	HVAC 130
HVAC 113	Limited Choice
HVAC 115	

Semester III	Semester IV
Gen Ed – English Composition (Second Course)/Communications HVAC 220 HVAC 221 HVAC 230 HVAC 240 Limited Choice	Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab HVAC 201 HVAC 231 HVAC 241 HVAC 251