

Heating, Ventilation, Air Conditioning & Refrigeration

General description: The HVAC&R Program is designed to prepare students for a career in the heating, ventilation, air conditioning and refrigeration industry. Toward this end, the comprehensive curriculum blends "leading-edge" HVAC&R theory with a large amount of practical, hands-on experiences for the purpose of developing confident, professional HVAC&R technicians/installers. In addition, this program is ideal for existing technicians/installers who need a thorough review of HVAC&R fundamentals or experienced technicians/installers who would like a refresher course. This program has three primary areas of concentration: Residential Heating & Air Conditioning, Commercial Heating & Air Conditioning, and Refrigeration. Additionally, career-laddering certificates are offered in each of these areas.

Sample of job titles with this degree: Commercial Heating & AC Technician, Residential Heating & AC Technician, Commercial Refrigeration Technician, Heating & AC Estimator, HVAC&R Counter Salesperson, HVAC&R Outside Salesperson.

This is a career and technical education program. Some of the courses may not transfer to four-year institutions.

Suggested Full-Time Course Sequence:

<u>Fall Semester</u>	<u>Credit Hours</u>
CIS 110	3
ENGT 105	3
HVAC 100	3
HVAC 107	3
HVAC 130	3

<u>Spring Semester</u>	
ENGL 110 (or ENGL 101 or ENGL 105)	3
HVAC 140	3
HVAC 202	3
HVAC 230	3
HVAC 240	3

<u>Fall Semester</u>	
COMM 120 (or COMM 101)	3
PREL 100	3
HVAC 132	3
HVAC 242	3
MATH 104	4

<u>Spring Semester</u>	
HVAC 251	3
HVAC 204	3
HVAC 206	3
HVAC 290 (or HVAC 295)	3
P REL110	3

Additional Program Information:

Students who begin in Spring may not finish in a two-year time frame.

A Fast Track option exists for HVAC students to take five (5) HVAC courses during fall semester and five (5) HVAC courses during spring semester to accelerate certificate and/or degree completion. The courses run 4 hours, 40 minutes MTWR, one course taught at a time, from beginning to end of semester.

Fall semester Fast Track sequence of courses: HVAC 100, 107, 130, 132 and 242.

Spring semester Fast Track sequence of courses: HVAC 140, 202, 230, 240 and 251.

Students who successfully complete the fall and spring Fast Track sequences of courses plus ENGT105 will earn the HVAC Residential Installer Certificate 058E and the Residential HVAC Certificate 058C.

HVAC&R Courses		Credit Hours	HVAC AAS 058A	Commercial HVAC Cert. 058B	Residential HVAC Cert. 058C	HVAC Residential Installer Cert. 058E
CIS 110	Computer Business Applications	3	X			
COMM 120	Business & Professional Speaking (or COMM 101)	3	X			
ENGL 110	Professional & Technical Writing (or ENGL 101 or ENGL 105)	3	X			
ENGT 105	Occupational Safety	3	X	X	X	X
HVAC 100	Refrigeration Fundamentals	3	X	X	X	X
HVAC 107	HVAC/R Installation	3	X	X	X	X
HVAC 130	Electricity Fundamentals	3	X	X	X	X
HVAC 132	Control Applications	3	X	X	X	X
HVAC 140	Troubleshooting Air Conditioning Systems	3	X	X	X	
HVAC 202	Residential and Self-Contained Refrigeration	3	X		X	
HVAC 204	Commercial Refrigeration	3	X	X		
HVAC 206	Troubleshooting Refrigeration Systems	3	X			
HVAC 230	Motors and Controls	3	X	X	X	
HVAC 240	Residential Air Conditioning	3	X	X	X	X
HVAC 242	Residential Heating Systems	3	X	X	X	X
HVAC 251	Commercial HVAC/R	3	X	X		
HVAC 290	Work Experience & Seminar (or HVAC 295)	3	X			
MATH 104	Technical Mathematics	4	X			
P REL 100	Human Relations	3	X			
P REL 110	Supervision	3	X			
Total Hours			61	33	30	21