HEATING VENTILATION AIR CONDITIONING AND REFRIGERATION HVACR - ASSOCIATE OF APPLIED SCIENCE DEGREE

Program Description

The Associate of Applied Science (AAS) Degree in Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR) at College of the Mainland prepares students for employment as skilled technicians in the installation, maintenance, troubleshooting, repair, and operation of residential, commercial, and industrial HVACR systems. The program combines technical coursework, laboratory experiences, and hands-on training to develop the competencies required by today's heating, cooling, refrigeration, and building environmental control industries.

Students gain practical experience in refrigeration systems, electrical circuits and controls, heating systems, air distribution, system diagnostics, preventive maintenance, energy efficiency, indoor air quality, and HVACR troubleshooting. Instruction emphasizes safety, regulatory compliance, industry best practices, customer service, and emerging technologies used throughout the HVACR field.

The program is designed to support multiple entry and exit points through stackable credentials. Students may earn a Level I Certificate that provides foundational HVACR knowledge and skills for entry-level employment, continue to a Level II Certificate that expands technical competencies and service capabilities, and ultimately complete the Associate of Applied Science Degree to enhance career advancement opportunities and prepare for supervisory and leadership roles within the industry.

Graduates of the program are prepared to work in a variety of settings, including HVAC service and installation companies, commercial and industrial facilities, manufacturing operations, healthcare institutions, educational facilities, government agencies, energy-related industries, and property management organizations. The program also provides a foundation for industry certifications and continued professional development.

Stackable Credentials

- Associate of Applied Science - Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR) (p. 1)
- Level 2 Certificate - Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR)
- Level 1 Certificate - Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR)

Course	Title	Semester Credit Hours
Semester #1		
HART 1445	Gas and Electric Heating	4
HART 1301	Basic Electricity for HVAC	3
HART 1341	Residential Air Conditioning	3
HART 1307	Refrigeration Principles	3
SPCH 1315 or SPCH 1321	Public Speaking [1] or Business & Professional Communication	3
	Semester Credit Hours	**16**
Semester #2		
HART 2436	Air Conditioning Troubleshooting	4
TECM 1343	Technical Algebra and Trigonometry	3
HART 2443	Industrial Air Conditioning	4
HART 2442	Commercial Refrigeration	4
	Semester Credit Hours	**15**
Semester #3		
HART 2431	Advanced Electricity for Hvac	4
ENGL 1301	Composition I	3
HART 1356	Epa Recovery Certification Preparation	3
PHYS 1401 or PHYS 1410	College Physics I or Elementary Physics	4
	Semester Credit Hours	**14**
Semester #4		
HART 2334	Advanced Air Conditioning Controls	3
HART 2338	Air Conditioning Installation and Start	3
HART 2382 or POFT 1300	Cooperative Education - Heating, Air Con or Career Exploration/Planning	3
PHIL 2306 or HUMA 1301	Introduction to Ethics or Introduction to the Humanities I	3
PSYC 2301 or SOCI 1301	General Psychology or Introduction to Sociology	3
	Semester Credit Hours	**15**
	Total Semester Credit Hours	**60**

[1] Course(s) listed in the Texas Common Course Numbering System