



# AIR CONDITIONING & REFRIGERATION

## PROGRAM DESCRIPTION

This program is designed to prepare air conditioning and refrigeration mechanics and apprentices for entry-level employment in a wide range of construction, maintenance, and service positions in business and industry. The program prepares students to install, service, and repair refrigeration and air conditioning systems. The program provides instruction in residential air conditioning, commercial air conditioning, heating systems, and commercial refrigeration. Students will be E.P.A. (Environmental Protection Agency) 608 and OSHA 10 certified. This program aligns with the Kansas Board of Regents curriculum.

## PROGRAM OUTCOMES

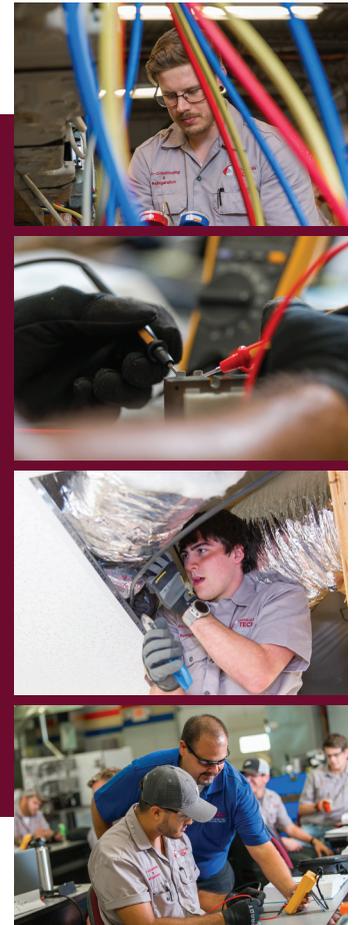
- Diagnose and repair electrical and mechanical problems in heating and cooling systems.
- Design residential heating and air conditioning systems.
- Operate heating and air conditioning equipment properly.
- Maintain a professional appearance in the workplace.
- Demonstrate interpersonal skills in greeting customers, explaining repairs and discussing the approximate cost of the service.
- Inspect work areas and correct safety hazards.
- Work cautiously and safely.
- Demonstrate safe removal procedures from electrical and mechanical components.

*This program aligns with the Kansas Board of Regents Curriculum.*

## ADMISSION REQUIREMENTS

- College Placement Assessment Criteria
- Current unrestricted driver's license
- A Window's-based device is required for the program

The mandatory cost of a required tool kit and uniform shirts will be added to student accounts during the semester the charges are incurred.



# Air Conditioning & Refrigeration Course Curriculum

## Associates in Applied Science

62 Credit Hours

### Technical Specialty Courses

34 Credit Hours

COURSE NO.	COURSE TITLE	CREDITS
<b>Fall Semester</b>		
HVA 103	Safety Orientation / OSHA10 ••	1
HVA 1044	HVAC Fundamentals	4
HVA 1104	Electrical Fundamentals	4
HVA 120	Domestic Refrigeration	3
HVA 140	Heating System Fundamentals	3
HVA 170	Design and Blueprint Reading	3
<b>Spring Semester</b>		
HVA 130	Controls and Motors	3
HVA 150	Cooling	3
HVA 151	Advanced Refrigeration	3
HVA 161	EPA608	1
HVA 181	Commercial Refrigeration	3
HVA 185	Workplace Skills	1
HVA 199	Occupational Work Experience	2

•• Online class - must be completed in order to enroll in the second semester.

### Suggested Technical Electives

13 Credit Hours

COURSE NO.	COURSE TITLE	CREDITS
ACC 100	Business Accounting	3
BUS 111	Personal Finance	3
BUS 126	Introduction to Business	3
BUS 185	Business Ethics and Human Relations	3
BUS 255	Principles of Management	3
CRT 100	Principles of Information Assurance	1

† Additional Technical Elective listed in [back of catalog](#); see an advisor for more information

### General Education Requirements

15 Credit Hours

COURSE NO.	COURSE TITLE	CREDITS
<b>English</b>		<b>3 Required</b>
COM 105	English Composition I	3
COM 110	Technical Writing	3
<b>Math</b>		<b>3 Required</b>
MAT 109	Technical Mathematics II	3
MAT 110	Intermediate Algebra or higher	3
<b>Additional General Education Courses</b>		<b>9 Required</b>

General education elective list is located on [page 028](#).

### Certificate B Requirements

40 Credit Hours

All Technical Specialty Courses	34	
COM 105 or COM 110	3	
MAT 101	Technical Mathematics I or higher	3