



*“The ECTC Team assists students in developing skills to become independent and self-sufficient adults who will succeed and contribute responsibly in a global community with a high-skill, high-wage, and high-demand career.”*

**Construction Academy: HVAC-R**

**Career Cluster: Architecture & Construction / Manufacturing**

**Career Pathways: Maintenance & Operations / Maintenance, Installation, & Repair**

- Manage the concepts of heating, cooling, distributing, filtering, humidifying, and dehumidifying the air while developing the skills needed to trouble shoot and diagnose problems within heating and air conditioning systems as well as installing motors, blowers, and assemblies.
- Replace, install, and repair the basic components of a refrigeration system while assessing the temperature and pressure in each component.
- Build an electrical circuit and tubing assembly; work with soldering and brazing equipment; and trouble shoot electrical circuits, motors, capacitors, relays, starters, PC boards, and solenoids.

**Career Focus:**

Prepared for advanced certification, entry-level employment, and further education

**Two-Year Course Sequence:**

<b>Year One</b>		
<b>Fall</b>	<b>Introduction to Heating, Ventilation, Air-Conditioning, &amp; Refrigeration Systems (HVAC-R)</b>	<b>Basic Compression Refrigeration</b>
<b>Spring</b>	<b>Introduction to Electricity for HVAC-R</b>	<b>HVAC-R Electrical Components &amp; Controls</b>
<b>Year Two</b>		
<b>Fall</b>	<b>Commercial Refrigeration</b>	<b>Heating &amp; Heat Pump Systems</b>
<b>Spring</b>	<b>HVAC-R Maintenance</b>	<b>Plumbing &amp; Pipe-Fitting I</b>

**Student Organizations:**

SkillsUSA and National Technical Honor Society (NTHS)

**Credentialing:**

NCCER (National Center for Construction Education and Research) Certification, OSHA Forklift Certification, and NOCTI (National Occupational Competency Testing Institute)

*The ECTC HVAC-R Program operates in conjunction with the Construction Academy. Enrollment in the HVAC-R Program will enable the student to be exposed to introductory-level concepts in Carpentry, Welding, and Masonry.*