State-Approved (Chapter 74)
Program Overview

Heating, Ventilation, Air Conditioning & Refrigeration

Air Conditioning and heating technicians install and maintain commercial, industrial and residential heating and air conditioning equipment.

What Students Learn & Do

Heating, Ventilation, Air Conditioning and Refrigeration (HVAC/R) programs provide students with the knowledge and entry-level skills they need to install, maintain, and repair the systems that control the heat, humidity, and air quality within buildings. Using tools such as wrenches, drills, metal snips, pipe cutters and torches, students learn to repair components such as air compressors, condensers, evaporators and piping. Students also learn how to read blueprints and follow design specifications and manufacturers instructions.

Topics covered during students technical training include electricity and control wiring, refrigeration, air conditioning, gas and oil fired heating equipment, appliance technology, and industry safety standards. HVAC/R programs also introduce students to modern Energy Management Systems that help to ensure energy efficiency.

Students in HVAC/R programs are required to meet the same high academic standards as their peers outside of these programs. These standards are set by the State of Massachusetts. In addition, the program reinforces concepts from science, math and engineering.

Licenses & Certifications

Programs will prepare students to earn industry-recognized credentials, and typically students will be able to complete one or more before they graduate from high school.

- R-410 Refrigeration Certification
- EPA Refrigerant Recovery and Recycling Certification
- OSHA 10 hour - General
- Credit towards Massachusetts Refrigeration Technician License
- Credit toward Massachusetts Sheet Metal License requirements

Options After High School

State-Approved (Chapter 74) programs provide precise training needed for entry-level employment in this in-demand career field. Here are some possible career opportunities.

High School Diploma

- Duct Cleaner
- Gas Fitter Mechanic
- Control Systems Installer

Apprenticeship (Learning through paid work)

- Plumber/Pipefitter
- HVAC Technician
- Refrigeration Technician

Associate Degree (2 Years of College)

- Home Energy Consultant

Bachelor's Degree (4 Years of College)

- Mechanical Engineer
- Architectural Specifications Writer

Questions to Ask a Program You Are Considering

1. **What workplace experiences do you offer to students - at school, or with an employer?**
2. **What are some common next steps for graduates of this program and how do you support them to get there?**

MASSACHUSETTS DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION

FEDERATION FOR CHILDREN WITH SPECIAL NEEDS

Learn about the differences between State-Approved (Chapter 74) and Local programs:
http://www.doe.mass.edu/ccte/cvte/cte-families/state-vs-local.html