

MASSACHUSETTS REFRIGERATION APPRENTICE

IMPORTANT CMR UPDATE

For Applicants whose application for examination is dated on or after November 9, 2026: Shall have successfully completed a formal 450 hour course of study in a refrigeration education course approved by the Bureau. Furthermore, he or she shall have obtained an EPA Section 608 Universal certification and have completed refrigeration work experience totaling a minimum of 6,000 clock hours as a validly licensed Refrigeration Apprentice, such work time to be verified by a licensed Master Refrigeration Technician/Refrigeration Contractor employer.

Refrigeration/Air Technician License Requirements

- High School Diploma or its equivalent
- 100 Refrigeration Theory classroom hours**
- 150 Electrical Code classroom hours
- 6,000 field hours
- Two different cards must be obtained prior to the start of school. Apprentices MUST apply for an apprentice license through the Bureau of Pipefitters, Refrigeration Technicians, and Sprinklerfitters AND register as an apprentice through the Division of Apprenticeship Standards.

Refrigeration Contractor License Requirements

- 100 Refrigeration Theory classroom hours
- 2,000 field hours

BUREAU OF PIPEFITTERS, REFRIGERATION TECHNICIANS, AND SPRINKLERFITTERS

Address: One Federal Street, Suite 600 Boston, MA 02110 Phone: (617) 727-3200 mass.gov/dps - Engineering Division

REFRIGERATION TECH1 *not offered this year*

Course Curriculum Areas of Study:

- Basic Safety
- Introduction to Construction Math
- Introduction to Hand Tools
- Introduction to Power Tools
- Introduction to Construction Drawings
- Basic Rigging
- Basic Communication Skills
- Basic Employability
- Skills Introduction to Materials Handling

- Introduction to HVAC
- Trade Mathematics
- Basic Electricity
- Introduction to Heating
- Introduction to Cooling
- Introduction to Air Distribution Systems
- Basic Copper and Plastic Piping Practices
- Soldering and Brazing
- Basic Carbon Steel Piping Practices

REFRIGERATION TECH 2

Course Curriculum Areas of Study:

- Alternating Current
- Compressors
- Refrigerants and Oils
- Leak Detection, Evacuation, Recovery, and Charging
- Metering Devices
- Heat Pumps
- Basic Maintenance

- Chimneys, Vents, and Flues
- Sheet Metal Duct Systems
- Fiberglass and Flexible Duct Systems
- Commercial Airside Systems
- Air Quality Equipment
- Introduction to Hydronic Systems

REFRIGERATION TECH 3

Course Curriculum Areas of Study:

- Fasteners, Hardware, and Wiring Terminations
- Control Circuit and Motor Troubleshooting
- Troubleshooting Cooling
- Troubleshooting Heat Pumps
- Troubleshooting Gas Heating
- Troubleshooting Oil Heating

- Troubleshooting Accessories
- Zoning, Ductless, and Variable Refrigerant Flow Systems
- Commercial Hydronic Systems
- Steam Systems
- Retail Refrigeration System
- Customer Relations

REFRIGERATION TECH 4 *not offered this year*

Course Curriculum Areas of Study:

- Water Treatment
- Indoor Air Quality
- Energy Conservation Equipment
- Building Management Systems
- System Air Balancing
- System Startup and Shutdown

- Construction Drawings and Specifications
- · Heating and Cooling System Design
- Commercial/Industrial Refrigeration
 Systems
- Alternatives and Specialized Heating and Cooling Systems
- Fundamentals of Crew Leadership

REFRIGERATION CONTRACTOR - ONLINE

Course Curriculum Areas of Study:

- Refrigeration Theory
- Evaporators
- Metering Devices
- Condensers
- Compressors
- Refrigeration Accessories
- Refrigerants

- Operation, Pressures & Temperatures
- AC and Refrigeration Math
- Multi Temperature Systems
- Other Refrigeration Systems
- Motors
- Purgers and Absorption Systems
- Definitions from ASHRAE 15 & 34
- The Mass Refrigeration Code