The Heating, Ventilation, Air Conditioning and Refrigeration Technology Certificate Program prepares individuals to apply technical knowledge and skills to install, service, repair and maintain the equipment used in heating, air conditioning and refrigeration systems. The curriculum includes instruction in system operations; diagnostic techniques; the use of testing equipment; principles of mechanics; and electricity and electronics as they relate to heating, air conditioning and refrigeration systems.

ADMISSIONS REQUIREMENTS
- Student will be required to purchase a selection of hand tools.
- Student should have a basic understanding of mathematics and have completed the MT003 level or higher.
- Students should possess a basic understanding of English language skills. A student should be able to read, speak, and write clearly. Students must achieve the EN022 level or higher on the English Placement Test.
- Basic mechanical ability is beneficial.

PROGRAM COMPETENCIES
Upon completion of this certificate, the student will be able to:
- Install, identify, categorize, operate, maintain and troubleshoot building mechanical and electrical systems using diagnostic analysis methods;
- demonstrate an understanding of basic refrigeration theory and the operation of an HVAC/R system;
- demonstrate an understanding of basic electrical theory and circuitry with the ability to read and interpret schematic diagrams;
- demonstrate an understanding of the proper methods used for refrigerant recovery, reclaiming and recycling; and
- demonstrate an understanding of the importance of establishing good safe working practices and maintaining good customer relations.

CURRICULUM
Total Degree Credits: 31.0

FIRST YEAR, FALL SEMESTER
BM 101 Tools, Equipment and Materials ........................................ 3 cr
BM 105 Refrigeration Principles .................................................. 3 cr
BM 120 Electricity for HVAC/R .................................................. 3 cr
BM 243 Heating Systems I ....................................................... 3 cr
Approved Technical Elective, choose (1) below: .................. 3-4 cr
  BM 225 Energy Management
  BM 240 Plumbing Systems
  BM 252 Mechanics of Energy II
  BM 266 Green HVAC & Plumbing
  BM 281 Facilities Maintenance & Environmental Topics
ME 120 Industrial Refrigeration I
CO 120 Architectural Blueprint Reading

FIRST YEAR, SPRING SEMESTER
BM 142 Refrigerant Handling Certification .................................. 1 cr
BM 210 Commercial Air Conditioning Systems ...................... 3 cr
BM 215 Workplace Practicum .................................................. 3 cr
BM 241 Electrical Systems II ................................................... 3 cr
BM 244 Air Conditioning and Ventilation .............................. 3 cr
BM 246 Heating Systems II .................................................... 3 cr

CONTACT
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CAREER PATHS
Heating and air conditioning mechanics and installers;
refrigeration mechanics and installers.