

# HEATING, VENTILATION, AIR CONDITIONING/ REFRIGERATION (HVAC/R), SC

## Program Description

The Skill Certificate, Heating, Ventilation, Air-Conditioning/Refrigeration (HVAC/R) will help prepare students for entry-level positions to install, service, or repair air conditioning/heating systems. Students will gain a basic knowledge of electrical systems and components, schematic reading, and troubleshooting techniques in air conditioning/heating.

The skills certificate will prepare students to take the certification exams for: ©HVAC/R Excellence-Electrical and ©HVAC/R Excellence-Heating, Electrical, Air, Technology (H.E.A.T.). Students must pass all courses with a score of 70% or higher.

This program is not eligible for financial aid. However, it may be eligible for scholarship funding if the student is awarded scholarships.

Air Conditioning Career Map (<https://sites.tmcc.edu/flipbook/career-maps/>)

## Recommended Course Schedule

1st semester		Units
AC 102	Refrigeration Theory	3
AC 107	Electrical and Controls for HVAC	6
AC 113	Schematic Reading for HVAC/R	3
<b>Semester Total</b>		<b>12</b>
2nd semester		Units
AC 106	Residential Gas Heating	6
AC 150	Basic Refrigeration Servicing	6
<b>Semester Total</b>		<b>12</b>
<b>Total Units</b>		<b>24</b>

## Program Requirements

Skills Certificates can consist of a single course or a short set of courses that provide training for entry-level positions or career advancement. These short-term certificates may also prepare students to take state, national and/or industry-recognized certifications or licensing exams.

Skills certificates are awarded upon completion of coursework and marked on a student's transcripts at the end of the semester. Students cannot declare a skills certificate as one's major. Skills Certificates are not eligible for Financial Aid.

To earn a skills certificate, students must:

1. Maintain a minimum cumulative GPA of 2.0.
2. Have no financial or library obligation to the college.

Code	Title	Units
<b>Certificate Requirement</b>		
AC 102	Refrigeration Theory	3
AC 106	Residential Gas Heating	6
AC 107	Electrical and Controls for HVAC	6

AC 113	Schematic Reading for HVAC/R	3
AC 150	Basic Refrigeration Servicing	6
<b>Total Units</b>		<b>24</b>

## Program Outcomes

Students completing the certificate will:

PSLO1: Identify, explain, troubleshoot, repair electrical systems and controls in HVAC/R systems and controls.

PSLO2: Identify and apply the elements of design techniques in HVAC/R.

PSLO3: Identify, troubleshoot and repair HVAC/R.