

# SUPERMARKET REFRIGERATION (AS DEGREE S0967)

## Technology and Health Division

### Degree S0967

The A.S. Degree in Supermarket Refrigeration is designed to prepare students to enter the refrigeration industry as commercial and supermarket refrigeration technicians. The program prepares students to work with commercial and supermarket refrigeration systems based on the vapor-compression refrigeration cycle for multiplex refrigeration systems using direct expansion evaporators and multiple compressors with common suction and discharge lines. Refrigerant safety and natural refrigerant alternatives are learned which include CO<sub>2</sub> as the refrigerant, the safety, handling, and storage of CO<sub>2</sub>, refrigeration system types that use CO<sub>2</sub>, equipment applications, CO<sub>2</sub> components, and pressure and temperature controls that manage the system in the transcritical mode. Field trips and program supported work-based learning are required to complete this degree.

## Required Courses

Course Prefix	Course Name	Units
AIRC 10	Technical Mathematics in Air Conditioning and Refrigeration	2
AIRC 11	Welding for Air Conditioning and Refrigeration	2
AIRC 20	Refrigeration Fundamentals	4
AIRC 25	Electrical Fundamentals for Air Conditioning and Refrigeration	5
AIRC 31	Commercial Electrical for Air Conditioning and Refrigeration	4
AIRC 50	Commercial Refrigeration	4
AIRC 52	Supermarket Refrigeration Systems	3
AIRC 54	Transcritical CO <sub>2</sub> Refrigeration Systems	3
AIRC 95	Work Experience in Air Conditioning and Refrigeration *	2
<b>Total Units</b>		<b>29</b>

\* Variable unit course. 2 units required.

## Program Learning Outcomes

Upon successful completion of this program, a student will:

- Define High Risk Operations when working on CO<sub>2</sub> refrigeration systems.
- Illustrate the refrigeration cycle for a CO<sub>2</sub> transcritical booster system.
- Examine the purpose of parallel compressors in transcritical CO<sub>2</sub> refrigeration systems.
- Acquire employment as a commercial or supermarket refrigeration technician.

Review Student Learning Outcomes (SLOs) (<https://www.mtsac.edu/slo/>) for this program.