

AIR CONDITIONING AND REFRIGERATION TECHNOLOGY - ASSOCIATE IN SCIENCE

This program is designed to develop the appreciation, knowledge, and skills essential for employment in the air conditioning and refrigeration industry. Instruction includes both theory and practical work with refrigeration and air conditioning machinery, electrical equipment, and related mathematics.

A grade of "C" or better is required for each course in the major or area of emphasis. A "P" (Pass) grade is an acceptable grade for courses in the major or area of emphasis if the course is taken on a Pass/No Pass basis.

Upon successful completion of this program, students will be able to:

- Recognize the components that constitute Residential and Commercial Air Conditioning and Refrigeration systems. Perform Maintenance and Repair on complex Air Conditioning and Refrigeration systems.
- Demonstrate competence in analyzing, maintaining, servicing and commissioning Air Conditioning and Refrigeration systems. Problem solve and troubleshoot complex Air Conditioning and Refrigeration systems using analytical and methodical practices.
- Interpret and process Wiring Diagrams and Pipe Diagrams. Demonstrate proficiency in writing service reports in both hard and soft copy.
- Demonstrate competence and skill in maintaining energy efficient Air Conditioning and Refrigeration equipment. Recognize and be capable of implementing modern technologies so as to maintain proper and efficient functionality of Air Conditioning and Refrigeration systems
- Demonstrate the ability to work as an individual and in groups of all social and economic backgrounds. Demonstrate awareness of Global Warming, Green House Gases Effect and Ozone Depletion as related to use of common Refrigerants.
- Demonstrate honesty and integrity when dealing with customers and employers. Exercise professional courtesy in the workplace.

Major Requirements

Course	Title	Credits
<i>Required Core:</i>		29.5
AIRC 121	Air Conditioning Principles	
AIRC 122	Refrigeration Principles	
AIRC 131	Intermediate Air Conditioning	
AIRC 132	Refrigeration Service	
AIRC 133	EPA Section 608 Refrigerant Recovery Certification Program	
AIRC 141	Hydronics and Air Distribution	
AIRC 142	Air Conditioning Control Systems	
FMT 100	Introduction to Facilities Maintenance	
<i>Complete one of the following courses:</i>		2-2.5
AIRC 145	Sheet Metal Principles	

FMT 105	Introduction to Industrial Electronics and Controls	
FMT 130	Management of People in Technical and Building Services Industries	
<i>Approved Program Electives as needed to reach 60 units:</i>		1.5
Total Units		31.5-32

Approved Program Electives

Course	Title	Credits
AIRC 138	Work Experience	
CIS 041	Introduction to Computer Information Systems	
CNSTR 102A	Residential Plumbing Systems	
CNSTR 102B	Residential/Commercial Wiring	
FMT 104	Electrical Concepts for Facilities Maintenance Technicians	
FMT 120	Low and High Pressure Boilers	
FMT 122	Introduction to Programmable Logic Controllers	
FMT 123	Intermediate Programmable Logic Controllers	

AS Degree Requirements

Course	Title	Credits
Major Requirements		31.5-32
Approved Program Electives as needed to reach 60 units:		1.5
General Education Requirements		27
Complete two courses for the U.S. History, Constitution, and American Ideals Requirement (US-1, US-2, and US-3)		
Total Units		60-60.5