

**AIR CONDITIONING and REFRIGERATION
TECHNOLOGY**

San José City College offers two certificates and an Associate in Science (A.S.) in Air Conditioning/Refrigeration Technology. 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 in each course in the major and in approved major electives for each certificate and degree.

Upon 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.
- 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.
- Ability to interpret and process Wiring Diagrams and Pipe Diagrams. Demonstrate proficiency in writing service reports in both hard and soft copy.
- 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.
- Recognize proper attire and etiquettes expected of Professional Air Conditioning and Refrigeration Technicians and Engineers. Perform Mechanical and Electrical installations of Air Conditioning and Refrigeration systems that are both safe and aesthetically pleasing.

CAREERS OPTIONS:

Refrigeration Technician
Air Conditioning Technician
Facilities Technician
Estimator
Counter Sales

RELATED OCCUPATIONS:

Stationery Engineer
Sheet Metal Technician
Plumber and Pipe Fitter
Electrician
Facilities Maintenance Technician

FOR ADDITIONAL INFORMATION, SEE A COUNSELOR, VISIT THE CAREER/TRANSFER CENTER, OR CONTACT THE FOLLOWING:

Business and Workforce Development Division
San José City College Web Page

408-288-3131
www.sjcc.edu

AIR CONDITIONING and REFRIGERATION TECHNOLOGY

CERTIFICATE OF ACHIEVEMENT - LEVEL 2:**UNITS**

This certificate can be completed in two semesters by taking the Day Time Accelerated Program

AIRC	121	Air Conditioning Principles	4
AIRC	122	Refrigeration Principles	4
AIRC	131	Intermediate Air Conditioning	4.5
AIRC	132	Refrigeration Service	4.5
FMT	100	Introduction to Facilities Maintenance	<u>3.5</u>
TOTAL			20.5

CERTIFICATE OF ACHIEVEMENT - LEVEL 3:

COMPLETION OF CERTIFICATE - LEVEL 2			20.5
AIRC	141	Hydronics and Air Distribution	3
AIRC	142	Air Conditioning Control Systems	4
<u>Plus one of the following courses:</u>			
AIRC	145	Sheet Metal Principles - OR -	2
FMT	105	Introduction to Industrial Electronics and Controls - OR -	2.5
FMT	130	Management of People in the Technical and Building Services Industries	2
APPROVED MAJOR ELECTIVES			<u>0 - .5</u>
TOTAL			30

A.S. DEGREE REQUIREMENTS:

COMPLETION OF CERTIFICATE OF ACHIEVEMENT - LEVEL 3			30
APPROVED MAJOR ELECTIVES			5
GENERAL EDUCATION PATTERN/GRADUATION REQUIREMENTS			24
PHYSICAL ACTIVITY			<u>1</u>
TOTAL REQUIRED UNITS			60

APPROVED MAJOR ELECTIVES:

AIRC	138	Work Experience	1-2
CIS	041	Introduction to Computer Information Systems	3
CNSTR	102A	Residential Plumbing Systems	3
CNSTR	102B	Residential/Commercial Wiring	4
FMT	104	Electrical Concepts for Facilities Maintenance Technicians	2.5
FMT	120	Low and High Pressure Boilers	3
FMT	122	Introduction to Programmable Logic Controllers	4
FMT	123	Intermediate Programmable Logic Controllers	4