

# FACILITIES MAINTENANCE - ASSOCIATE IN SCIENCE

San José City College offers a certificate and an Associate in Science (AS) in Facilities Maintenance. The Facilities Maintenance Program will provide students with the skills to begin or advance in a career in facilities maintenance. It was designed by the advisory committee to meet industry requirements. Students will learn the skills and concepts necessary to install, operate, maintain and repair control, piping, and mechanical systems in large commercial, medical, institutional, and industrial buildings. Students will also learn trouble shooting skills, problem solving methods and electrical concepts. Continuous improvement techniques and effective written, verbal, and electronic communication skills will be stressed across the curriculum. Classes are designed in lecture and lecture/lab format to give students a solid foundation in general maintenance skills including HVAC/R.

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.

## CAREER OPTIONS:

- Building Maintenance Supervisor
- Building Operations Manager
- Facilities Manager
- Maintenance Operator

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

- Recognize the main Mechanical, Hydronic, Electrical, Controls and HVAC equipment associated with large Commercial Buildings. Perform in a safe and efficient manner Technical Maintenance duties associated with the operation of Commercial Buildings.
- Competence in analyzing, maintaining and servicing sophisticated Commercial Building equipment. Use sound judgment to execute competent repairs to Commercial Buildings.
- Ability to interpret and process Wiring Diagrams, Logic Control Diagrams and Pipe Diagrams. Demonstrate proficiency in writing service reports in both hard and soft copy. Ability to verbally communicate with Building Owners and Management.
- Competence and skills in performing retrofits to existing Control Systems. Integrating leading edge technology to enhance smooth efficient Facilities Maintenance Management.
- 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 efficient use of Water and other natural resources.
- Demonstrate honesty and integrity when dealing with Building Owners, Building Managers, and Building occupants. Exercise professional courtesies in the workplace.
- Recognize proper attire and etiquettes expected of Professional Building Services Technicians. Perform Building Maintenance procedures that are safe and aesthetically acceptable.

## Major Requirements

Course	Title	Credits
AIRC 121	Air Conditioning Principles	4
AIRC 122	Refrigeration Principles	4
AIRC 131	Intermediate Air Conditioning	4.5
AIRC 138	Work Experience	2
AIRC 142	Air Conditioning Control Systems	4
FMT 100	Introduction to Facilities Maintenance	3.5
FMT 104	Electrical Concepts for Facilities Maintenance Technicians	2.5
FMT 105	Introduction to Industrial Electronics and Controls	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
Complete one of the following courses:		2
AIRC 145	Sheet Metal Principles	
or FMT 130	Management of People in Technical and Building Services Industries	

**Total Units** **40**

## AS Degree Requirements

Course	Title	Credits
Major Requirements		40
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** **67**