FACILITIES MAINTENANCE TECHNOLOGY (FMT)

FMT 100   Introduction to Facilities Maintenance   3.5 Units
Students are introduced to industrial maintenance and operations including OSHA-approved industrial safety procedures and practices. Students acquire knowledge in and apply the use of basic tools and specialized equipment for use in lubrication, maintenance, electrical operation, and repair for industrial facilities equipment.

Lecture Hours: 3 Lab Hours: 1.5 Repeatable: No Grading: L
Recommended: Mechanical aptitude and good command of communication skills
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU   Degree Applicable: AA/AS
For General Education (GE) information, please refer to assist.org (https://assist.org) or consult a counselor.

Credit by Exam: Yes

FMT 104   Electrical Concepts for Facilities Maintenance Technicians   2.5 Units
Students are introduced to the concepts of electricity and its safe use as commonly used in large facilities. These concepts will include single phase and three phase generation, electrical distribution, single phase motors, electrical efficiency, and power factor correction.

Lecture Hours: 2 Lab Hours: 1.5 Repeatable: No Grading: L
Prerequisite: FMT 100 with C or better
Recommended: Prior completion of AIRC 121 and AIRC 122
Advisory Level: Read: 3 Write: 3 Math: 1
Transfer Status: CSU   Degree Applicable: AA/AS
For General Education (GE) information, please refer to assist.org (https://assist.org) or consult a counselor.

Credit by Exam: Yes

FMT 105   Introduction to Industrial Electronics and Controls   2.5 Units
Students will develop a working knowledge of the common electronic control devices used in industry. They will gain skills in using electronic test equipment.

Lecture Hours: 2 Lab Hours: 1.5 Repeatable: No Grading: L
Prerequisite: FMT 100 with C or better
Advisory Level: Read: 3 Write: 3 Math: None Recommended: Completion of AIRC-121 and AIRC-122
Transfer Status: CSU   Degree Applicable: AA/AS
For General Education (GE) information, please refer to assist.org (https://assist.org) or consult a counselor.

Credit by Exam: Yes

FMT 120   Low and High Pressure Boilers   3 Units
The student will learn to identify, maintain, and operate small and large heating systems used in commercial, institutional, and industrial applications. Types of equipment include hot water, low-pressure and high-pressure steam boilers, auxiliary, safety and flame safeguard controls, steam traps, condensate return, and water treatment systems. Safe and efficient operation of boilers and related central plant machinery and equipment will be emphasized.

Lecture Hours: 3 Lab Hours: 1 Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU   Degree Applicable: AA/AS
For General Education (GE) information, please refer to assist.org (https://assist.org) or consult a counselor.

Credit by Exam: Yes

FMT 122   Introduction to Programmable Logic Controllers   4 Units
Students will study principles of programmable logic controllers (PLCs) operation. Students learn control applications using PLCs in a systematic approach involving problem analysis, ladder diagrams, selection of PLC input and output modules, programming logic functions, and testing. Students will focus on implementation of simple applications in the laboratory.

Lecture Hours: 3 Lab Hours: 3 Repeatable: No Grading: L
Recommended: Experience using a PC and completion of CIS 041
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU   Degree Applicable: AA/AS
For General Education (GE) information, please refer to assist.org (https://assist.org) or consult a counselor.

Credit by Exam: Yes

FMT 123   Intermediate Programmable Logic Controllers   4 Units
Students continue the study of programmable logic controllers (PLCs). Students examine applications of control systems for factory automation and robotics. They will focus on digital and analog inputs and outputs.

Lecture Hours: 3 Lab Hours: 3 Repeatable: No Grading: L
Prerequisite: FMT 122 with C or better
Advisory Level: Read: 3 Write: 3 Math: None Recommended: Student should feel comfortable working with office applications on Windows 2000 desktop. Familiarity with the Rockwell Automation RSLogix 5000 integrated development environment is a plus.
Transfer Status: CSU   Degree Applicable: AS
For General Education (GE) information, please refer to assist.org (https://assist.org) or consult a counselor.

FMT 130   Management of People in Technical and Building Services Industries   2 Units
Students will study management of people in the technical and building services industries. There will be emphasis on team-building, worker motivation, and leadership skills. The course highlights conflict management, selection and development of workers, and dealing with technological changes and skills advancement.

Lecture Hours: 2 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: 2
Transfer Status: CSU   Degree Applicable: AA/AS
For General Education (GE) information, please refer to assist.org (https://assist.org) or consult a counselor.

FMT 160   Smart Home Technology and Automation   2 Units
Students will study smart home technology and automation systems, such as home security systems, environmental control and monitoring systems, and energy monitoring and control. The course highlights selection, planning, safety practices, building codes, permits, do-it-yourself (DIY), and professional installation. The student will also learn about wireless networking, smart phone monitoring, controlled lighting systems, infant, pet and elder care monitoring systems, emergency power back up, and smart appliance monitoring.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: No Grading: L
Recommended: Basic understanding of simple control systems
Advisory Level: Read: 3 Write: 3 Math: 2
Transfer Status: None   Degree Applicable: NAA
For General Education (GE) information, please refer to assist.org (https://assist.org) or consult a counselor.