

CAREER STUDIES CERTIFICATE (221-706-90)

Advanced Technology in Mechatronics

Purpose: The Advanced Technology in Mechatronics program is designed to challenge the student with hands-on experience and training in basic concepts of the electromechanical engineering technology field. This program offers not only general education courses but also offers exciting hands-on courses in advanced technology. At completion students should possess the basic level for skills required for continued training in the Advanced Technology in Mechatronics field. Graduates may seek immediate employment, continue their studies in the Technical Studies A.A.S. Mechatronics Technology specialization degree, or consider opportunities available to transfer to Bachelor of Technology programs offered by some four-year colleges and universities.

Occupational Objectives: Electromechanical equipment technicians install, maintain, troubleshoot, and repair a wide range of computer-driven manufacturing or automatic control equipment. Electromechanical equipment technicians must understand basic electronics and computer operating systems in order to work with a wide variety of equipment, systems, and manufacturing processes. Responsibilities may include estimating, inspecting, and testing engineering equipment; operating, maintaining, and repairing engineering plants; research and development; sales and representation; and training and education.

Admission Requirements: Applicants must meet the general requirements for admission to the college. To be successful in this program, students must have demonstrated Math competency to be placed in Algebra 1. Students not achieving this level will be required to take developmental courses.

CURRICULUM AND OTHER REQUIREMENTS

ADVANCED TECHNOLOGY AND RELATED COURSES	CREDITS
EGR 105Intro to Problem Solving in Tech.....	1
EGR 123Intro to Engineering Design	2
ETR 113*DC and AC Circuits	4
ETR 286*Prin. and Applications of Robotics	3
IND 108Technical Computer Applications (or EGR 216)	3
IND 113Materials and Processes of Manufacturing	3
IND 116Applied Technology	3
IND 250Intro to Basic Computer Integrated Manufacturing	3
IND 251Automated Manufacturing Sys I	4
MEC 162Applied Hydraulics & Pneumatics	3
Total Minimum Credits for Certificate	29

** This course has a prerequisite. Prerequisites for all courses are listed in the course description section at the back of the catalog.*

SUGGESTED SCHEDULE

FIRST YEAR

FALL

EGR 123
ETR 113
IND 108

SPRING

MEC 162

SECOND YEAR

FALL

ETR 286
IND 116
IND 250

SPRING

EGR 105
IND 113
IND 251

Note: Dual-enrolled high school students will not be able to officially enroll in and/or graduate from this program until the end of the last semester of their senior year.