MECHATRONICS, CERTIFICATE

Program Code: CC.MECHATRONICS

This certificate prepares students to work in automated industrial environments, by building skills related to diagnosis and repair of automated systems and application of programming for industrial automation. The program also provides an introduction to robotics and industrial motion control, giving students the opportunity to learn basic operation, programming, and applications of a typical FANUC six-axis robot. Many of the courses are also part of the Computer-Aided Manufacturing, Electronics Engineering Technology, and Industrial Maintenance Technology programs.

Outcomes

Program Outcomes

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

- use appropriate tools to measure dimensions, force, work, torque, and power;
- select and integrate linear motion and power transmission components to create an automated manufacturing system;
- create software applications of automation and data acquisition, perform software simulations to verify correct motion and timing of programs;
- interface robotics hardware with a CNC machine tool to facilitate automated machining.

Requirements

Fall Term		Credits
EET-137 or MFG-130	Electrical Fundamentals I or Basic Electricity I	3.00-4.00
EET-215	Technical Mechanics	3.00
	Credits	**6-7**
Winter Term		
EET-225	Mechatronics I	2.00
MFG-209	Programming & Automation for Manufacturing	3.00
Select one of the following:		3.00
MTH-080	Technical Mathematics II	
Higher Level Math or Statistics		
	Credits	**8**
Spring Term		
EET-235 or MFG-OSU	Mechatronics II or Introduction to Mechatronics	2.00-3.00
MFG-219	Robotics	3.00
	Credits	**5-6**
	Total Credits	**19-21**

MFG-OSU Introduction to Mechatronics is a course taken at Oregon State University. MFG-OSU Introduction to Mechatronics must be taken at Oregon State University and there may be prerequisites that need to be taken prior. Work with an academic advisor to help you determine if you meet the prerequisites for this course.

Careers

Career opportunities include:

- electromechanical technician
- automation specialist
- manufacturing engineering technician
- system integrator
- robotics technician
- industrial maintenance mechanic