MECHATRONICS CERTIFICATE

Program Description

Mechatronics is a multidisciplinary field that refers to the skill sets needed in the contemporary, advanced automated manufacturing industry. At the intersection of mechanics, electronics, and computing, mechatronics specialists create simpler, smarter systems. Mechatronics is an essential foundation for the expected growth in automation and manufacturing. Mechatronics deals with robotics, control systems, and electro-mechanical systems.

Program Outcomes

1. Demonstrate basic industrial assembly procedures.
2. Explain worker rights under OSHA, with emphasis on employment in manufacturing.
3. Explain the role of various mechanical components within a given system or module.
4. Explain the difference between relay logic and PLC ladder logic.

Career Considerations

Mechatronics engineering technologists use a combination of mechanical, electrical, computer and software skills to work with smart technologies, such as robots, automated guided systems and computer-integrated manufacturing equipment.

Program Course Requirements

First Year		
First Term		**Credits**
MEC 101	Introduction to Mechatronics	3
MEC 121	Mechanical Components	5
MEC 123	Automation Programming I	5
COM 218Z or PSY 101	Interpersonal Communication or Psychology of Human Relations	3-4
DRF 112	Drafting and Design I	3
	Credits	**19-20**
Second Term		
MTH 102	Math for the Trades (or higher)	4
WLD 140	Blueprint Reading	3
MEC 151	Electricity in Mechatronics	5
MEC 222	Hydraulics and Pneumatics	5
	Credits	**17**
Third Term		
MEC 118	Preventive Maintenance	3
ENGR 245	Engineering Graphics [1]	3
MEC 225	Automation Programming II	5
WR 117	Writing for Trades (WR 115 accepted)	4
	Credits	**15**
	Total Minimum Credits	**51-52**

[1] Choice of technical elective, see advisor for course list

Advising Notes

- See advisor for full list of course options