

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. Describe what electrical components/systems comprise a mechatronic system or module
4. Explain the role of various mechanical components within a given system or module
5. 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

Course	Title	Credits
First Year		
First Term		
MEC 102	Mechanical Fabrication	3
MEC 120	Industrial Safety	3
MEC 151	Electricity in Mechatronics	5
WLD 101	Welding Processes-Apps	4
Credits		15
Second Term		
COM 105	Listening	3
MEC 121	Mechanical Components	5
MTH 052	Industrial Applications-MTH	4
PSY 101	Psychology of Human Relations	3
WLD 140	Blueprint Reading	3
Credits		18
Third Term		
MEC 118	Preventive Maintenance	3
MEC 123	Automation Programming I	5
MEC 222	Hydraulics and Pneumatics	5
WR 115	Intro to Expos Writing	4
Credits		17
Total Minimum Credits		50

Advising Notes

- See advisor for full list of course options