



Wayne
County
Community
College
District

Mechatronics Technology

PAY

The median annual wage for electro-mechanical technicians was \$58,350 in May 2019.

JOB OUTLOOK

Employment of electro-mechanical technicians is projected to show little or no change from 2018 to 2028. Electro-mechanical technicians are generalists in technology, and their broad skill set will help sustain demand for their services. Job prospects are likely to be best for electro-mechanical technicians who train in a field known as mechatronics, which provides an understanding of four key systems:

- Mechanical systems
- Electronic systems
- Control systems
- Computer systems

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, May 2020, Electro-mechanical Technicians, on the Internet at <http://www.bls.gov/ooh/architecture-and-engineering/electro-mechanical-technicians.htm>

ABOUT THE PROGRAM

The Mechatronics Technology Associate of Applied Science is designed to prepare technicians through cross-training to work in the diverse fields of mechanical, electrical, and industrial automation. Mechatronics technology and industrial automation is a combination of mechanical systems, electrical systems, fluid power control systems and computer control technology with sensors, transducers and actuators which are integrated to perform some facet of manufacturing. Robot sensors, conveyor systems and software are all components of Computer Integrated Manufacturing (CIM) which is an

outcome of Mechatronics. Students with this diverse set of skills are better prepared for the evolving manufacturing industry and will be trained to manufacture a product or perform a task with minimal human intervention through automation. Students who complete the program are prepared for work in a variety of industries to include food processing, pulp and paper metals manufacturing and automated warehousing.



WHAT DO ELECTRO-MECHANICAL TECHNICIANS DO?

Electro-mechanical technicians combine knowledge of mechanical technology with knowledge of electrical and electronic circuits. They install, troubleshoot, repair, and upgrade electronic and computer-controlled mechanical systems, such as robotic assembly machines.

WHERE DO THEY WORK?

Electro-mechanical technicians work closely with electrical and mechanical engineers. They work primarily in manufacturing, utilities, and research and development.



Recommended Sequence of Courses

Mechatronics Technology:

Associate of Applied Science (A.A.S)

CR. No.	COURSE TITLE	CREDITS
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SEMESTER 1

CT 203	Digital Logic	4
EE 101	Circuit Analysis I	4
EE 107	Mathematics for Electrical/ Electronics I	4
ENG 119	English I	3
SEMESTER TOTAL		15

SEMESTER 2

EE 102	Circuit Analysis II	4
EE 111	Solid State Fundamentals	3
EE 115	Mathematics for Electrical/ Electronics II	4
MCT 202	Introduction to Robotics	3
SEMESTER TOTAL		14

SEMESTER 3

CT 205	Introduction to Microprocessors	4
MCT 203	Electrical Machinery and Controls	3
MCT 207	Introduction to Hydraulics and Pneumatics	2
MCT 208	Programmable Logic Controllers	3
PS 101	American Government	3
SEMESTER TOTAL		15

SEMESTER 4

MCT 212	Advanced Robotics	3
MCT 215	Advanced Programmable Logic Controllers	3
MCT 210	Programmable Logic Controllers -Siemens	3
ENG 120	English II	3
SEMESTER TOTAL		12

SEMESTER 5

PHY 235	General Physics I	4
Elective:	Humanities	3
SEMESTER TOTAL		7
A.A.S. PROGRAM TOTAL		63

Note: Program total hours may not include prerequisites.