

Mechatronics

Certificate

Why Mechatronics?

Mechatronics is a relatively new term used to describe how computers control electrical and mechanical systems. Mechatronics is present in any automated system, from HVAC (Heating, Ventilating and Air Conditioning) systems to robotic assembly lines. This program is designed to give students the basic technical knowledge and skills needed to install, repair, and maintain electromechanical, fluid power, process control systems. Students will have the opportunity to experience hands-on learning in a grant funded equipment lab where they will work on models of a multi-stage assembly line. Those interested can also continue to complete their AAS in Mechatronics and Robotic Systems.

Why Bay College?

The [Mechatronics certificate program](#) at Bay College is a Fanuc certified for robotics course. Students who complete ELEC 240 Real Time Robotic Systems and ELEC 245 Robotic Vision Systems will receive certification that is accepted as equal to Fanuc's industry leading robotics training. Eligible students can also complete a co-op or internship in the area of Mechatronics and Robotics Systems to gain real-world experience that can benefit them in future careers.

Beyond Bay College

Students interested in transferring to a four-year institution to obtain a bachelor's degree or higher may find opportunities in the following areas of study:

- **Electrical Engineering Technician**
- **Electronics Engineering Technician**
- **Robotics Technician**
- **Industrial Engineering Technologist**

Career Opportunities

Certificate holders can find employment in a variety of fields and industries as:

- **Industrial Maintenance Technicians**
- **Process Control Technicians**
- **Instrumentation Technicians**

Contact

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Escanaba, MI 49829

Bay College West Campus
2801 N US 2
Iron Mountain, MI 49801

Office of Admissions
906-217-4010
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baycollege.edu



Mechatronics, Certificate

Award Granted Upon Completion: Certificate in Mechatronics
Credits/Contacts Required: 32/32

Major code: 04/438
CIP Code: 150403

Requirements (Min. 32 Credits)

Course #	Course Name	Cr
ELEC 130	Circuit Fundamentals I	4
ELEC 180	Electrical Machinery & Controls	4
ELEC 285	Fluid Power	4
XXXX xxx	Approved Electives	16

*Approved Electives (16 Credits)

Course #	Course Name	Cr
CADD xxx	Any CADD Course	
CNSS 130	Introduction to Networks	4
CNSS 150	A plus Computer Maintenance	4
ELEC XXX	Any ELEC Course	
TECH XXX	Any TECH Course	
WELD 110	Introduction to Oxygen-Fuel Welding & Cutting	3
WELD 120	Arc Welding	4

Suggested Sequences Per Semester

First Semester

Course #	Course Name	Cr/Ct
ELEC 130	Circuit Fundamentals I	4
ELEC 285	Fluid Power	4
XXXX xxx	Approved Elective	4/4
XXXX xxx	Approved Elective	4/4

First Semester Total - Credit(s): 16 | Contacts: 16

Second Semester

Course #	Course Name	Cr/Ct
ELEC 180	Electrical Machinery & Controls	4
XXXX xxx	Approved Elective	4/4
XXXX xxx	Approved Elective	4/4
XXXX xxx	Approved Elective	4/4

Second Semester Total - Credit(s): 16 | Contacts: 16