ELECTROMECHANICAL ENGINEERING TECHNICIAN - MECHATRONICS (EMTN)

Mechatronics: where mechanics, electronics, and computing intersect.

Mechatronics is an evolving field that combines mechanical engineering and electronics with elements of automation, computer programming, robotics, and telecommunications. Working in our state-of-the-art mechatronics lab, you will develop your problem-solving skills and data analysis abilities to become a valuable contributor to a wide variety of industrial applications, from industrial equipment and machinery design and/or maintenance to robotics and automation.

You'll learn to use computer-aided design (CAD) to create mechanical components and assemblies in 2D and 3D, then go a step further and fabricate your design in our machining and fabrication labs. You'll also have unique opportunities to practice your skills by working on real community and applied research projects.

Program highlights

- State-of-the-art lab facilities
- Opportunities to participate in community and applied research projects
- Careers available in variety of industries including mining, health care, manufacturing, and more
- Graduates may be eligible to register as a Certified Technician (C.Tech) with the Ontario Association of Certified Technicians and Technologists (OACETT)
- Computer-aided design (CAD) tools like AutoCAD and SolidWorks

Program of study for 2025-26 Academic Year

Semester 1		Credits
CAD 1001	Engineering Graphics [1]	3
ELC 1013	Electrical Fundamentals [1]	4
ENG 1002	College Communications	3
MEC 1000	Mechatronics I [1]	4
MEC 1002	Introduction to Metrology and Geometric Dimensioning	3
MEC 1003	Engineering Materials	3
MTH 1050	Algebra I	3
	Credits	**23**
Semester 2		
CAD 1003	Solid Modeling [1]	3
ELC 1215	Motor Control Fundamentals [1]	4
FAB 1000	Fabrication Processes [1]	4
MEC 1001	Mechatronics II [1]	4
MTH 1250	Algebra II	3
WHS 1002	Workplace Safety and Standards	3
One General Education course. [2]		3
	Credits	**24**
Semester 3		
ELN 2320	Power Electronics I [1]	5
MTH 2332	Applied Calculus	3
MEC 2425	PLC Basic Programming	4
ENG 1754	Technical Communication	3
MCH 1001	Mechanics [1]	4
MTH 2325	Technical Math III	3
One General Education course. [2]		3
	Credits	**25**
Semester 4		
CAD 1004	Advanced Solid Modelling	4
CMP 1015	Intermediate PLC [1]	3
INT 1001	Instrumentation I	3
MCH 1002	Thermodynamics	3
MCH 1005	Introduction to Fluid Power	4
One General Education course. [2]		3
	Credits	**20**
	Total Credits	**92**

1 Course with Lab component.
2 For more information regarding General Education courses, click here (https://cambriancollege.ca/general-electives/).

Admission requirements

For graduates of the new curriculum (OSS): Ontario Secondary School Diploma (30 credits) or equivalent or mature student status, including:

- Any grade 12 English (U) or (C)
- Any grade 12 mathematics (C) or (U) (MCT4C is highly recommended)

Additional admissions requirements

Recommendations

- Any grade 11 physics (U) or grade 12 physics (C) or (U)

Program delivery

2025-2026

Fall term start

SEMESTER 1: Fall 2025
SEMESTER 2: Winter 2026
SEMESTER 3: Fall 2026
SEMESTER 4: Winter 2027

Winter term start

SEMESTER 1: Winter 2026
SEMESTER 2: Spring 2026
SEMESTER 3: Fall 2026
SEMESTER 4: Winter 2027

Specific program pathways

College or university degree opportunities

If you are a graduate of this program, you may apply for advanced standing into semester five of Cambrian's Electromechanical Engineering Technology – Mechatronics (EMTY) program. You may also continue your studies at a college or university, and you may receive credit(s) for your prior college education. Refer to Cambrian's college and university agreement (https://cambriancollege.ca/supports-services/articulation-agreements/universities-in-canada/) details for further information.

Employment opportunities

Graduates are prepared for employment opportunities as:

- Automation technician
- Electromechanical design technician
- Robotics technician
- Robotics programmer
- Control designer/technician
- Custom machine design and/or integration

Contacts

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INTERNATIONAL ADMISSIONS

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