ELECTROMECHANICAL ENGINEERING TECHNOLOGY - MECHATRONICS (EMTY)

Ontario College Advanced Diploma | 6 semesters | Barrydowne Campus

Mechatronics is an emerging field that combines Mechanical Engineering and Electronics, with elements of automation, computer programming, robotics, and telecommunications. Working in the College's state-of-the-art lab facilities, you will develop the problem-solving skills and data analysis abilities in order to become a valuable contributor to a wide variety of industrial applications; from industrial equipment design and maintenance to robotics and automation. You will learn how to use computer-aided design (CAD) to design mechanical components and assemblies in 2D & 3D. You will then take it one step further, and fabricate your design(s) in our machining and fabrication labs. You will work independently and in groups to build the self-directed study and teamwork skills that you will require within various workplace settings. You will also have unique opportunities to put your skills into practice by working on applied research projects and, in your final year, hone your skills in a capstone project.

Graduates from the Technology diploma may be eligible to register as a Certified Engineering Technologist (C.E.T) with the Ontario Association of Certified Technicians and Technologists (OACETT)

Quick Links

How to Apply (http://cambriancollege.ca/apply/)

Engineering Technology (http://cambriancollege.ca/field-of-study/engineering-technology/)

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)

Recommended:

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

APPLY NOW! (https://www.ontariocolleges.ca/en/apply-now/)

Program Delivery

2023-2024

This program will be delivered in the following terms:

Fall Term Start

1. **SEMESTER 1** Fall 2023
2. **SEMESTER 2** Winter 2024
3. **SEMESTER 3** Fall 2024
4. **SEMESTER 4** Winter 2025
5. **SEMESTER 5** Fall 2025
6. **SEMESTER 6** Winter 2026

For specific term start/end dates and other key dates/deadlines, please see the Academic Schedule (http://cambriancollege.ca/apply/how-to-apply/academic-schedule/) on our website.

Program of Study for 2023-24 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
MCH 1005	Introduction to Fluid Power	4
One General Education course. [2]		3
	Credits	**25**
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		
CMP 1015	Intermediate PLC [1]	3
MCH 1002	Thermodynamics	3
WHS 1002	Workplace Safety and Standards	3
CAD 1004	Advanced Solid Modelling [1]	4
INT 1001	Instrumentation I	3
One General Education course. [2]		3
	Credits	**19**
Semester 5		
CMP 1026	Data Communication	4
MCH 1004	Manufacturing Systems	4
MEC 1004	Mechatronics Design [1]	4
CMP 1063	Programming	4
MTH 1180	Advanced Calculus	4
MEC 1010	Automation System Design	4
	Credits	**24**
Semester 6		
CMP 1016	Advanced PLC [1]	4
MEC 1011	Automation Capstone Project	4

CMP 1027	Data Analysis Tools	4
MCH 1003	Advanced Mechanics	3
MCH 1006	Quality Assurance	3
	Credits	**18**
	Total Credits	**134**

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

Fees

Tuition and Ancillary Fees

Please see our fees page (http://cambriancollege.ca/fees/) for the breakdown of tuition and mandatory ancillary fees by program and semester for both domestic and international students.

Books & Supplies

In your first year, you can expect to spend approximately $1100 on textbooks, materials, and Personal Protective Equipment (PPE). Please note that this does not include any BYOD computer requirements.

Graduate Options

Employment Opportunities

Graduates are prepared for employment opportunities as:

- Automation technologist / specialist
- Electromechanical design technologist
- PLC programmer
- Robotics programmer
- Control designer / technologist
- Custom machine design / integrators

College/University Degree Opportunities

Graduates from this program may continue their studies at college/university and may receive credit for their prior College education.

Refer to College/University Agreements (http://www.cambriancollege.ca/agreements/)for further information.

Contacts

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INTERNATIONAL ADMISSIONS

mailboxadmissions@cambriancollege.ca