

ELECTRICAL ENGINEERING TECHNOLOGY - INDUSTRIAL (EETY)

Ontario College Advanced Diploma | 6 semesters | Barrydowne Campus

Our program is accepted as equivalent to the Trade School portions of the Ontario Electrician Apprenticeship – Levels 1 and 2 for Construction and Maintenance Electrician, and Levels 1, 2 and 3 for Industrial Electrician. You will gain knowledge in the design, installation, troubleshooting, repair, and maintenance of typical electrical circuits, all the way up to complex electrical machinery. You will also apply electrical safety code and print reading knowledge to residential, commercial and industrial installations. In addition, you will be introduced to AutoCAD Electrical, Programmable Logic Controllers (PLCs), power electronics, and Instrumentation.

Completing this technology-level program will help position you for faster career advancement opportunities.

Program Highlights

- 3 years – 6 semesters
- Your diploma equates to 2 levels towards a Construction and Maintenance Electrician Apprenticeship and all 3 levels towards an Industrial Electrician apprenticeship.
- Hands-on electrical labs feature industry-standard 120 to 208/600 volt equipment
- Hands-on experience using AutoCAD, PLCs, and instrumentation tools
- Learn to write reports that meet standards set by the Canadian Council of Technicians and Technologists

Optional Paid Co-op

Our program features an optional, paid co-op directly related to your program of study. During this work-integrated learning experience, you'll apply your skills and knowledge in an actual work environment, giving you industry training that you can showcase to potential employers when you graduate.

You will be required to complete work preparation sessions prior to the work term to help you develop an industry-specific resume and effective interviewing skills. Cambrian's Career Centre (<https://cambriancollege.ca/campus-life/career-centre/>) will support you through this process and will also help you to source and apply for placement opportunities.

International students: Study permits prohibit international students from participating in optional co-ops. However, if you are an international student and are interested in work-integrated learning opportunities, visit Cambrian's Career Centre (<https://cambriancollege.ca/campus-life/career-centre/>) to discuss available options with a career advisor. Opportunities may include volunteer positions or part-time or full-time jobs during academic breaks and/or during the academic year.

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

Recommended:

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

Advanced Standing

Graduates of Cambrian's Electrical Engineering Technician - Industrial (EETN) program or its equivalent may apply to enter directly into Semester 5 of the Electrical Engineering Technology - Industrial (EETY) program. This is a competitive process.

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

Winter Term Start

1. SEMESTER 1 Winter 2024
2. SEMESTER 2 Spring 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

Students are required to successfully complete an online Lab Safety course (in Moodle) when starting their program at Cambrian. This course must be completed prior to entering the labs (as identified in the table below) in the Schools of Skills Training, Engineering Technology and Environmental Studies.

Semester 1		Credits
CAD 1002	Electrical CAD	2
ELC 1004	Prints & Electrical Code I	3
ELC 1009	Electrical Workplace Safety	2
ELC 1125	Electrical Installation I ¹	5
ELR 1121	Electrical Fundamentals ¹	6
ENG 1002	College Communications	3

MTH 1152	Electrical Math I	3
Credits		24
Semester 2		
ELC 1211	Electrical Installation II ¹	5
ELC 1215	Motor Control Fundamentals	4
ELC 1226	Digital Electronics Theory	3
ELC 2308	Prints & Electrical Code II	3
INT 1008	Instrumentation Fundamentals	3
MTH 1252	Electrical Math II	3
One General Education course. ²		3
Credits		24
Semester 3		
ELC 1011	Prints and Electrical Code III	3
ELN 2320	Power Electronics I ¹	5
ELC 2316	Electrical Systems Lab ¹	4
ELC 2317	Electrical Systems Theory	3
ENG 1754	Technical Communication	3
INT 1006	Instrumentation I ¹	4
MTH 2352	Electrical Math III	3
One General Education course. ²		3
Credits		28
Semester 4		
ELC 1012	Prints and Electrical Code IV	3
ELC 2425	PLC Basic Programming	4
ELC 2413	AC and DC Machines Lab ¹	4
ELC 2414	AC and DC Machines Theory	3
ELN 2419	Power Electronics II ¹	4
INT 1007	Instrumentation II ¹	4
One General Education course. ²		3
Credits		25
Semester 5		
ELC 1006	Intermediate PLC	6
ENE 1014	Alternative Energy	3
ELC 3504	Industrial Wiring Practices ¹	6
ELC 3511	Electronic Drives ¹	3
MTH 2353	Electrical Math III (TECH)	3
TEC 3501	Technical Report Research	1
Credits		22
Semester 6		
ELC 1007	PLC Projects & Troubleshooting ¹	5
INT 3505	Instrumentation III ¹	3
ELC 1008	Electrical Protection & Dist.	3
ELC 3609	Fundamental Hydraulics ¹	3
MTH 3552	Electrical Math V	3
ELC 3515	Industrial Networking	4
TEC 3601	Technical Report	1
Credits		22
Total Credits		145

¹ Course with Lab Component² 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

Personal protective equipment - including safety boots, safety glasses and cut-resistant gloves - is required, at a cost of about \$150. The cost of textbooks (hard copy or electronic) is currently under review; please contact the program coordinators or bookstore for more information. Any voluntary student certification or apprenticeship membership will have additional fees. A complete electrical tool kit is provided; this fee (approximately \$500) is paid by the student as an ancillary fee with tuition. This is the best information available at the time of publishing to the website and is subject to change.

Graduate Options

Employment Opportunities

Graduates will be capable of performing the electrical design functions of an Electrical Engineering Technician in an engineering environment. They will also have completed the equivalent of all three levels of Electrical Trade School, which will make them desirable candidates as Apprentice Electricians on residential, commercial or industrial jobs.

Graduates are also prepared for employment opportunities in:

- Telecommunications
- Fire and Security Alarm Systems
- Renewable Energy
- Power Distribution
- Heating, Ventilation & Air Conditioning

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

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