

# ELECTRICAL ENGINEERING TECHNICIAN - INDUSTRIAL (EETN)

## Ontario College Diploma | 4 semesters | Barrydowne

Our program is modeled after the Level 1 and 2 Trade School portions of the Ontario Electrician Apprenticeship. It includes practical, hands-on experience and in-class theoretical learning. 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.

### Program Highlights

- 2 years – 4 semesters
- Upon successful completion of our program, your diploma equates to two of the three levels of Trade School required towards an electrical apprenticeship
- Hands-on electrical labs feature industry-standard 120 to 208/240 volt equipment
- Graduates are eligible to apply to Cambrian's Electrical Engineering Technology program

### 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 an Electrical Techniques (EETQ) program or its equivalent may apply to enter directly into Semester 3 of the Electrical Engineering Technician - Industrial (EETN) program. This is a competitive process.

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

## Program Delivery

### 2021-2022

This program will be delivered in the following terms:

#### Winter Term Start

1. SEMESTER 1 Winter 2022
2. SEMESTER 2 Spring 2022
3. SEMESTER 3 Fall 2022
4. SEMESTER 4 Winter 2023

### 2022-2023

This program will be delivered in the following terms:

#### Fall Term Start

1. SEMESTER 1 Fall 2022
2. SEMESTER 2 Winter 2023
3. SEMESTER 3 Fall 2023
4. SEMESTER 4 Winter 2024

#### Winter Term Start

1. SEMESTER 1 Winter 2023
2. SEMESTER 2 Spring 2023
3. SEMESTER 3 Fall 2023
4. SEMESTER 4 Winter 2024

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 2022-23 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 <sup>1</sup>	2
ELC 1125	Electrical Installation I <sup>1</sup>	5
ELR 1121	Electrical Fundamentals <sup>1</sup>	6

ENG 1002	College Communications	3
MTH 1152	Electrical Math I	3
<b>Credits</b>		<b>24</b>
<b>Semester 2</b>		
ELC 1211	Electrical Installation II <sup>1</sup>	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. <sup>2</sup>		3
<b>Credits</b>		<b>24</b>
<b>Semester 3</b>		
ELC 1011	Prints and Electrical Code III	3
ELN 2320	Power Electronics I <sup>1</sup>	5
ELC 2316	Electrical Systems Lab <sup>1</sup>	4
ELC 2317	Electrical Systems Theory	3
ENG 1754	Technical Communication	3
INT 1006	Instrumentation I <sup>1</sup>	4
MTH 2352	Electrical Math III	3
One General Education course. <sup>2</sup>		3
<b>Credits</b>		<b>28</b>
<b>Semester 4</b>		
ELC 1012	Prints and Electrical Code IV	3
ELC 2425	PLC Basic Programming	4
ELC 2413	AC and DC Machines Lab <sup>1</sup>	4
ELC 2414	AC and DC Machines Theory	3
ELN 2419	Power Electronics II <sup>1</sup>	4
INT 1007	Instrumentation II <sup>1</sup>	4
One General Education course. <sup>2</sup>		3
<b>Credits</b>		<b>25</b>
<b>Total Credits</b>		<b>101</b>

<sup>1</sup> Course with Lab Component

<sup>2</sup> 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 Levels 1 and 2 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

Electrical Engineering Technician graduates can apply for Certified Technician certification through OACETT (Ontario Association of Certified Engineering Technicians and Technologists).

### Furthering Your Studies

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

### 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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