ELECTRICAL ENGINEERING TECHNICIAN - INDUSTRIAL (EETN)

Become a key player in electrical equipment and power systems servicing and design

Modelled after the Level 1 and 2 Trade School portions of the Ontario Basic Electrician Apprenticeship, you'll gain hands-on experience and in-class know-how in the design, installation, troubleshooting, repair, and maintenance of typical electrical circuits, working your way up to complex electrical machinery.

You'll learn about electrical safety codes and print reading, and gain exposure to residential, commercial, and industrial installations. An introduction to AutoCAD Electrical, Programmable Logic Controllers (PLCs), power electronics, and instrumentation rounds out your learning. Our program features an optional, paid co-op where you'll apply your skills in an actual work environment.

Program highlights

- Capped enrolment
- Diploma equates to 2 of the 3 levels of required theory towards your apprenticeship Certificate of Qualification
- Hands-on electrical labs feature industry-standard 120 to 208/240 volt equipment
- Optional paid co-op to gain industry experience
- Grads get advanced standing in Cambrian's Electrical Engineering Technology to earn an advanced diploma in just 1 year

Program of study for 2024-25 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 [1]	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**
	Total Credits	**101**

[1] Course with Lab Component

[2] For more information regarding General Education courses, click here.

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)

Additional admission requirements

Recommendations
- Any grade 12 physics (C) or (U)
- Computer competency in relevant software

Program delivery

2024-2025
Fall term start

SEMESTER 1: Fall 2024
SEMESTER 2: Winter 2025
SEMESTER 3: Fall 2025
SEMESTER 4: Winter 2026

Winter term start

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

Specific program pathway

Graduates of Cambrian's EETN program may apply to enter directly into Semester 5 of Electrical Engineering Technology - Industrial (https://cambriancollege.ca/programs/electrical-engineering-technology-industrial/) (EETY) program. This is a competitive process.

College or university degree opportunities

If you are a graduate of this program, you may 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://cambrian.s123.ca/supports-services/articulation-agreements/) details for further information.

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).

Contacts

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INTERNATIONAL ADMISSIONS

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