ELECTRICAL ENGINEERING TECHNOLOGY - INDUSTRIAL (EETY)

Put your electrical engineering career on the fast track

Our technology-level program is designed to meet the needs of a wide range of industries that rely on electrical technologists to support day-to-day operations and project work. Using actual equipment used by industry, our courses include an in-depth study of power electronics, electrical control systems, and instrumentation. Gain hands-on experience using AutoCAD, PLCs, and instrumentation tools in our electrical labs featuring industry-standard 120 to 208/600-volt equipment. Focusing on commercial and industrial installations, you'll master how to install, maintain, and troubleshoot today's modern electrical systems.

Upon successfully completing our immersive program, your advanced diploma equates to two levels toward a Construction and Maintenance Electrician apprenticeship and all three levels toward an Industrial Electrician apprenticeship. Our program features an optional, paid co-op directly in a real-world work environment.

Program highlights

- Capped enrolment
- Be positioned for faster career advancement opportunities with an advanced diploma
- Hands-on experience using AutoCAD, PLCs, and instrumentation tools
- Learn report writing techniques that meet Canadian Council of Technicians & Technologists standards
- Optional paid co-op to gain industry experience
- Common first and second year with Cambrian's Electrical Engineering Technician – Industrial program
- Diploma equates to 2 of the 3 levels of required theory towards your apprenticeship Certificate of Qualification for Construction & Maintenance Electrician apprenticeship and all 3 levels of required theory for an Industrial Electrician apprenticeship

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

Additional admission requirements

Recommendations

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

Program delivery

2024-2025
Fall term start

SEMESTER 1: Fall 2024
SEMESTER 2: Winter 2025
SEMESTER 3: Fall 2025
SEMESTER 4: Winter 2026
SEMESTER 5: Fall 2026
SEMESTER 6: Winter 2027

Winter term start

SEMESTER 1: Winter 2025
SEMESTER 2: Spring 2025
SEMESTER 3: Fall 2025
SEMESTER 4: Winter 2026
SEMESTER 5: Fall 2026
SEMESTER 6: Winter 2027

Specific program pathways

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 Technologist 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

Contacts

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INTERNATIONAL ADMISSIONS

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