

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 and 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 two of the three levels of required theory towards your apprenticeship Certificate of Qualification for Construction and Maintenance Electrician apprenticeship and all three levels of required theory for an Industrial Electrician apprenticeship

Program of study for 2025-26 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 1226	Digital Electronics Theory	3
MTH 1252	Electrical Math II	3
ELC 1221	Motor Control Fundamentals	5
ELC 2311	Prints & Electrical Code II	4
One General Education course. ²		3
Credits		23

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 1765	Workplace 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
ELC 3504	Industrial Wiring Practices ¹	6
ELC 3511	Electronic Drives ¹	3
ITM 1100	Electrical Networking	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
ELC 1016	Electrical Protection & Dist.	2
ELC 3515	Electrical Systems Monitoring	4
ELC 3609	Fundamental Hydraulics ¹	3
ENE 1014	Alternative Energy	3
INT 3505	Instrumentation III ¹	3
MTH 3552	Electrical Math V	3
TEC 3601	Technical Report	1
Credits		24
Total Credits		146

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

2025-2026

Fall term start

SEMESTER 1: Fall 2025
SEMESTER 2: Winter 2026
SEMESTER 3: Fall 2026
SEMESTER 4: Winter 2027
SEMESTER 5: Fall 2027
SEMESTER 6: Winter 2028

Winter term start

SEMESTER 1: Winter 2026
SEMESTER 2: Spring 2026
SEMESTER 3: Fall 2026
SEMESTER 4: Winter 2027
SEMESTER 5: Fall 2027
SEMESTER 6: Winter 2028

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://cambriancollege.ca/supports-services/articulation-agreements/universities-in-canada/>) 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 and Air Conditioning

Contacts

Scott MacLennan

Program Coordinator Years 1 & 2
705-566-8101 ext 6453
scott.maclennan@cambriancollege.ca

Tom Fahey

Program Coordinator Year 3
705-566-8101, ext 7524
tom.fahey@cambriancollege.ca

INTERNATIONAL ADMISSIONS

mailboxadmissions@cambriancollege.ca