ELECTRICAL TECHNIQUES

Program: ELTQ
Credential: Ontario College Certificate
Delivery: Full-time
Length: 2 Semesters
Duration: 1 Year
Effective: Fall 2023
Location: Midland, Owen Sound

Description

Students are introduced to the theoretical and practical aspects of the electrical industry so they can perform most basic electrical techniques under the supervision of a qualified person. Upon completion of the program, students can apply for work as an electrical apprentice, or they may choose to continue their education and apply for an Electrical Engineering Technician or Technologist post-secondary program. Students study health and safety, applied math, entrepreneurship, electrical and electronic theory.

Career Opportunities

Graduates pursuing an apprenticeship may find a range of occupations in the electrical field including construction, maintenance, service and industrial. Graduates choosing to continue their education may find additional opportunities in power generation and transmission, alternate energy, green technologies and automation sectors. Job estimator, project coordinator and electrical salesperson are also areas of career opportunity.

Program Learning Outcomes

The graduate has reliably demonstrated the ability to:

1. assist in the interpretation and preparation of electrical drawings including other related documents and graphics;
2. analyze and solve simple technical problems related to basic electrical systems by applying mathematics and science principles.
3. use and maintain test and instrumentation equipment;
4. assemble basic electrical circuits and equipment to fulfill requirements and specifications under the supervision of a qualified person;
5. assist in the installation and troubleshooting of basic electrical machines and associated control systems under the supervision of a qualified person;
6. assist in testing and troubleshooting electrical and electronic circuits, equipment, and systems by using established procedures under the supervision of a qualified person;
7. assist in the troubleshooting of control systems under the supervision of a qualified person;
8. use computer skills and tools to solve basic electrical related problems;
9. assist in conducting quality assurance procedures under the supervision of a qualified person.
10. assist in the preparation and maintenance of records and documentation systems;
11. install and assist in testing telecommunication systems under the supervision of a qualified person;
12. apply health and safety standards and best practices to workplaces;
13. perform tasks in accordance with relevant legislation, policies, procedures, standards, regulations, and ethical principles;
14. apply basic electrical cabling requirements and install and test system grounding for a specified number of applications under the supervision of a qualified person;
15. identify problems and troubleshoot electrical systems under the supervision of a qualified person;
16. assist in the selection of electrical equipment, systems and components to fulfill the requirements and specifications under the supervision of a qualified person;
17. examine the impact on the environment of traditional and renewable energy sources, technologies and electrical trade practices;
18. apply basic entrepreneurial strategies to identify and respond to new opportunities.

Program Progression

The following reflects the planned progression for full-time offerings of the program.

Fall Intake

- **Sem 1:** Fall 2023
- **Sem 2:** Winter 2024

Admission Requirements

OSSD or equivalent with

- Grade 12 English (C or U)

Mature students, non-secondary school applicants (19 years or older), and home school applicants may also be considered for admission. Eligibility may be met by applicants who have taken equivalent courses, upgrading, completed their GED, and equivalency testing. For complete details refer to: www.georgiancollege.ca/admissions/academic-regulations/ (https://www.georgiancollege.ca/admissions/academic-regulations/)

Applicants who have taken courses from a recognized and accredited post-secondary institution and/or have relevant life/learning experience may also be considered for admission; refer to the Credit for Prior Learning website for details: www.georgiancollege.ca/admissions/credit-transfer/ (https://www.georgiancollege.ca/admissions/credit-transfer/)

Graduation Requirements

10 Program Courses
1 Communications Course
1 General Education Course

Graduation Eligibility

To graduate from this program, the passing weighted average for promotion through each semester, and to graduate is 60%. Additionally, a student must attain a minimum of 50% or a letter grade of P (Pass) or S (Satisfactory) in each course in each semester unless otherwise stated on the course outline.

Program Tracking

The following reflects the planned course sequence for full-time offerings of the Fall intake of the program. Where more than one intake is offered contact the program co-ordinator for the program tracking.

Semester 1		Hours
Program Courses		
DRFT 1003	Introduction to Technical Drafting	42
ELEC 1013	Electrical Trade Practices	42
ELEN 1000	DC Circuit Fundamentals	56
ENVR 1003	Environmental Health and Safety	42
MATH 1007	Mathematics Techniques	42
Communications Course		
Select 1 course from the communications list during registration.		42
	Hours	**266**
Semester 2		
Program Courses		
ELEC 1002	Electrical Systems and Control	56
ELEC 1003	Electrical Installations	42
ELEC 1004	Electronics 1	42
ELEC 1006	Prints and Electrical Code	42
ELEC 2015	Basic Electricity	42
General Education Course		
Select 1 course from the general education list during registration.		42
	Hours	**266**
	Total Hours	**532**

Graduation Window

Students unable to adhere to the program duration of one year (as stated above) may take a maximum of two years to complete their credential. After this time, students must be re-admitted into the program, and follow the curriculum in place at the time of re-admission.

Disclaimer: *The information in this document is correct at the time of publication. Academic content of programs and courses is revised on an ongoing basis to ensure relevance to changing educational objectives and employment market needs.*

Program outlines may be subject to change in response to emerging situations, in order to facilitate student achievement of the learning outcomes required for graduation. Components such as courses, progression, coop work terms, placements, internships and other requirements may be delivered differently than published.