

ELECTRICAL TECHNIQUES

Program: ELTQ

Credential: Ontario College Certificate

Delivery: Full-time

Length: 2 Semesters

Duration: 1 Year

Effective: Fall 2018

Location: Midland, Owen Sound

Description

This program provides students with the theoretical and practical training to perform most basic electrical techniques. At the completion of the program, students are ready to apply for work as an Electrician's helper or apprentice, or they may choose to continue their education and apply for an Electrical Engineering Technician or Technologist post-secondary program. Students will be exposed to topics including health and safety, reading of drawings, applied math, communications, electrical theory, electronic theory, installation practices, CAD and basic control system principles.

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 will find additional opportunities in power generation and transmission, alternate energy, green technologies and automation sectors.

Program Learning Outcomes

The graduate has reliably demonstrated the ability to:

1. identify, select, and use various electrical products, supplies, and materials commonly found in residential and commercial settings;
2. use required work site tools in a proper and safe manner;
3. use basic electrical test equipment in a proper and safe manner
4. read and interpret wiring and schematic diagrams and drawings;
5. describe the health and safety requirements of the electrical field including, and not limited to: WHIMIS, Fall Arrest, Basic First Aid/CPR, etc.;
6. use basic electrical measuring instruments to test, troubleshoot and diagnose electrical problems;
7. identify, select and organize the necessary tools and equipment in preparation for common electrical installations;
8. perform most aspects of residential wiring installations with guidance of the site electrician;
9. read and interpret the Ontario and Canadian Electrical Codes as they apply to residential installations;
10. use the correct techniques for various electrical installations;
11. discuss the advantages and disadvantages of traditional and renewable energy sources, current resources, technologies, and their limitations and a realistic appreciation of what energy sources and technologies will be in the future.

The Program Progression

Fall Intake

- Sem 1: Fall 2018
- Sem 2: Winter 2019

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/policies-procedures/ (<http://www.georgiancollege.ca/admissions/policies-procedures/>)

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 Transfer Centre website for details:

www.georgiancollege.ca/admissions/credit-transfer/ (<http://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

| Semester 1 | | Hours |
|---|---------------------------------------|-------|
| Program Courses | | |
| DRFT 1003 | Introduction to Technical Drafting | 42 |
| ELEC 1004 | Electronics 1 | 42 |
| ELEN 1000 | DC Circuit Fundamentals | 56 |
| ENVR 1003 | Environmental Health and Safety | 42 |
| MATH 1018 | Introduction to Technical Mathematics | 42 |
| Communications Course | | |
| Select 1 course from the communications list during registration. | | 42 |
| Hours | | 266 |
| Semester 2 | | |
| Program Courses | | |
| ELEC 1001 | AC Circuit Fundamentals | 56 |
| ELEC 1002 | Electrical Systems and Control | 56 |
| ELEC 1003 | Electrical Installations | 42 |
| ELEC 1005 | Electronics 2 | 42 |
| ELEC 1006 | Prints and Electrical Code | 42 |
| General Education Course | | |

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| Select 1 course from the general education list during registration. | 42 |
| Hours | 280 |
| Total Hours | 546 |

Information contained in College documents respecting programs 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. The college reserves the right to add or delete programs, options, courses, timetables or campus locations subject to sufficient enrolment, and the availability of courses.