Fleming College

Electrical Techniques
Ontario College Certificate (2 semesters)

START IN SEPTEMBER 2020
Classes begin: September 08, 2020
Offered at: Sutherland Campus
Program code: ETQ
Tuition (Domestic): $2,476.92*
Tuition (International): $8,470.56*  
* Tuition and fees subject to change.

PROGRAM COORDINATOR
Warren Cottrell  
705-749-5530 ext. 1661  
Warren.Cottrell@flemingcollege.ca

The Electrical Techniques program provides pathways into a variety of occupations or training in the electrical industry. Develop basic competencies in electricity, network cabling and electrical system installation.

Each student is strongly recommended to have their own personal computer for course work with an internet connection. The recommended computer should be an Intel Core i5 or AMD Ryzen 5, 8GB memory and 250GB storage, with Windows 10 operating system. SSD provides better performance than HDD.

An integral or external webcam and microphone for video conferencing is also recommended.

Program Highlights
The electrical field is growing in response to increased construction work in Ontario and other provinces. The 2-semester (30 week) Electrical Techniques program will provide you with the introductory and fundamental skills and knowledge to assist with the installation, maintenance and repair of electrical equipment in residential, commercial and construction settings.

» The program provides several pathways into a variety of occupations and other college training programs in the electrical industry, including electronics, electrical mechanical and electrical apprenticeship.
» You will develop basic competencies in electricity, network cabling and electrical system installation.
» Related instruction in mathematics, prints and installations, safety and trade calculations is included to meet employers’ qualifications.

Students in the Electrical Techniques Certificate program take the same courses as the first two semesters of the Electrical Engineering Technician diploma program. As a result, graduates of the Electrical Techniques program can enter into third semester of Electrical Engineering Technician (subject to enrolment capacity).
**Minimum Admission Requirements**

Students applying to Electrical Techniques must meet the following requirements:

» OSSD with majority of credits at the Workplace (E) level including Gr 12 (E) English plus Gr 11 C Math

OSSD with majority of courses at College (C) or Open (O) unless otherwise stated.
Grade 12 C courses will be accepted where Gr 11 C course requirements are listed.
Where College level courses are listed, U and M courses will be accepted.

**IMPORTANT NOTICE**

**New admission requirements effective September 2021.**

Students applying to Electrical Techniques must meet the following requirements:

» OSSD with Gr 12 (E) English plus Gr 11 (C) Math

Effective September 2021, Electrical Techniques (ETQ) will not be equivalent to the first year of Electrical Engineering Technician (EE), but it will be a pathway to either Electrician Apprenticeship or Electrical Engineering Technician (EE) entry with a final grade of 60% in Math courses.

**Mature Students**

If you are 19 years of age or older before classes start, and you do not possess an OSSD, you can write the Canadian Adult Achievement Test to assess your eligibility for admission. Additional testing or academic upgrading may be necessary to meet specific course requirements for this program.
Vocational Learning Outcomes

» Assist in the interpretation and preparation of electrical drawings including other related documents and graphics.
» Analyze and solve simple technical problems related to basic electrical systems by applying mathematics and science principles.
» Use and maintain test and instrumentation equipment
» Assemble basic electrical circuits and equipment to fulfill requirements and specifications under the supervision of a qualified person.
» Assist in the installation and troubleshooting of basic electrical machines and associated control systems under the supervision of a qualified person.
» Assist in testing and troubleshooting electrical and electronic circuits, equipment, and systems by using established procedures under the supervision of a qualified person.
» Assist in the troubleshooting of control systems under the supervision of a qualified person.
» Use computer skills and tools to solve routine electrical related problems.
» Assist in conducting quality assurance procedures under the supervision of a qualified person.
» Assist in the preparation and maintenance of records and documentation systems.
» Install and assist in testing telecommunication systems under the supervision of a qualified person.
» Apply health and safety standards and best practices to workplaces.
» Perform tasks in accordance with relevant legislation, policies, procedures, standards, regulations, and ethical principles.
» Apply basic electrical cabling requirements and install and test system grounding for a specified number of applications under the supervision of a qualified person.
» Identify problems and troubleshoot electrical systems under the supervision of a qualified person.
» Assist in the selection of electrical equipment, systems and components to fulfill the requirements and specifications under the supervision of a qualified person.
# Courses and Descriptions

## SEMESTER 1

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<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Applied Mathematics for Technology I</td>
<td>MATH 18</td>
<td>60</td>
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<tr>
<td>Communications I</td>
<td>COMM 201</td>
<td>45</td>
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<tr>
<td>Computer for Technologies</td>
<td>COMP 577</td>
<td>45</td>
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<tr>
<td>Drafting Applications and AutoCAD</td>
<td>ELCT 90</td>
<td>60</td>
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<tr>
<td>Electricity</td>
<td>ELCT 84</td>
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<tr>
<td>Installation Practices</td>
<td>ELCT 107</td>
<td>75</td>
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<tr>
<td>Technology and Labour: Your Success, Your Future</td>
<td>GNED 152</td>
<td>45</td>
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## SEMESTER 2

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<td>Alternating Current Theory</td>
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<tr>
<td>Applied Mathematics for Technology II</td>
<td>MATH 37</td>
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<tr>
<td>Electrical Prints and Code</td>
<td>ELCT 77</td>
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<tr>
<td>Electronic Circuits</td>
<td>ELCT 105</td>
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<td>Health and Safety Theory Applications</td>
<td>CNST 159</td>
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<tr>
<td>Instrumentation I</td>
<td>ELCT 101</td>
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<td>Measurements</td>
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<td>Environmental Issues for Industry</td>
<td>GNED 14</td>
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