# Electrical Power Generation Technician

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| **Program Location:** | Lindsay |
| **Program Code:** | EPG |
| **Contact:** | Kristine Hubers |
| **Credential:** | Ontario College Diploma |
| **Start Date:** | January 07, 2013 |
| **Tuition Fees:** | $5,527.25 per semester.<br>Tuition and fees subject to change. |

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**Electrical Power Generation technicians install, maintain and test electrical power generation units, and typically work for servicing companies that maintain power supply. It's a specialized field and the job market for qualified technicians is strong.**

## Program Highlights

The specialized, intensive Electrical Power Generation Technician diploma program will prepare you to install, maintain and test electrical power generation units up to 10,000 kilowatts used for emergency power, standby power and prime power generation, in compliance with regulated standards. You will also be able to maintain, service and install diesel, gasoline and natural gas powered generators. The job market for qualified specialists in the electrical and alternate power generation field is strong and growing, due to supply shortages, climate disruptions and the increase in energy demands. Power generator systems ensure consistent power generation in response to unreliable electricity grids or when traditional hydroelectricity is unavailable.

Employment opportunities include work with generator servicing companies that sell and service equipment for mining and aggregate production industries, the construction industry, manufacturing plants, hospitals, hotels and large buildings that require a continuous source of portable, standby and emergency power. The operation of these generators is a highly regulated area and only those trained in their use and service have the skills to deal with such equipment. Upon successful completion of this program, you will have acquired this expertise and will receive an Ontario College Diploma in Electrical Power Generation at the Technician level.

You will take the same program of study as the Heavy Equipment Techniques certificate during the first three semesters. Most of these courses are common to both areas of study. The second (summer) semester is a paid internship. The forth semester focuses intensively on the skills required to work in the field of electrical and alternate power generation.

***Students complete their paid internship over the summer semester. In this program, you pay tuition and fees for three semesters.***

## Success Stories

*"As a result of the paid internship, I was offered a job prior to graduation. This is a unique program in a highly specialized field. The industry is growing quickly and many companies are looking for skilled technicians. Fleming College provided a good balance in the curriculum between the necessary safety aspects and the knowledge of how to work with the generation systems."*

**- Andrew Kilgour,** 2008 program graduate.

## Why Choose Fleming

- The Centre for Heavy Equipment Technology at Frost Campus in Lindsay is the only one of its kind in Canada.
- The Centre is known for its up-to-date equipment, extraordinary hands-on learning opportunities, high industry employment rates, and skilled, knowledgeable faculty.
- The opportunity to acquire two specialized, in-demand skill sets, through a certificate in Heavy Equipment Techniques, and a diploma in Electrical Power Generation, will provide you with a unique, comprehensive and powerful combination of expertise when it comes to your job search.

Tours of the Heavy Equipment Centre are available every Wednesday from 2:30pm to 4:30pm. Tours are approximately 30 minutes. Book a tour by calling 1-866-353-6464 ext. 3234. You can also arrange a tour of the main campus and residence either before or afterwards.

## Is this You?

The following skills and characteristics are key to your success in this field:

- strong electrical skills
- safety training and awareness
- knowledge of and adherence to industry-approved standards and relevant codes
- math skills
- computing ability
- strong customer service orientation
- self-motivation, discipline
- good manual dexterity
- willingness to work long/various hours

Students would benefit by having basic computer skills including e-mail, word processing, file management and web browsing.

## Career Opportunities

Servicing companies that maintain power supply, such as Total Power, GENREP Ltd., Gal Power Systems, Toromont Energy, Harper Detroit Diesel, Cummins Onan, and Power Station, employ electrical power generation technicians. Hospitals, airports and buildings over five storeys high all require a backup, uninterrupted power supply to meet fire code regulations. Mining and aggregate production industries, which are frequently operating in remote locations, also require technicians to install and maintain generators and electrical power supply. With rising energy demands, the instability of the power grid, and mining industry growth in Alberta and the north, it is easy to understand why the need for qualified technicians is on the increase in Ontario and across the country. Starting salaries range from $16.00 to $18.00 per hour, with plenty of overtime potential. Job titles include:

- electrical power generation technician
- service technician
- maintenance technician
- generator maintenance technician
- emergency and standby generator technician

- diesel mechanic.

## Minimum Admission Requirements

OSSD with the majority of credits at the College (C) and Open (O) level, including:

- 2 College (C) English courses (Grade 11 or Grade 12)
- 1 College (C) Math course (Grade 11)

When (C) is the minimum course level for admission, (U) or (U/C) courses are also accepted.

## 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 neccessary to meet specific course requirements for this program.

## Related Programs

Students who have successfully completed the following programs (or their equivalent) may apply for direct entry into the fourth semester of the Electrical Power Generation Technician program:

- Heavy Equipment Techniques/ Motive Power Techniques
- Other Motive Power Techniques Certificates, such as Automotive Service Technician, Truck and Coach Technician or Farm Equipment Technician.

## Transfer Agreements

We are committed to providing students and graduates with flexible options to get maximum recognition of their college studies. Through joint programs and transfer agreements with the following universities, you can apply the learning you acquire at Fleming College to earn a related degree in less time, and at less cost.

- University of New Brunswick
- University of Ontario Institute of Technology

# Curriculum for Electrical Power Generation Technician

### Semester 1

| Code | Course Name | Hours |
|---|---|---|
| MECH 6 | Basic Shop Practice | 42 |
| ELCT 8 | Electrical Systems I | 75 |
| MECH 19 | Engines I | 75 |
| MECH 30 | Hydraulic Systems I | 75 |
| MECH 46 | Parts, Maintenance and Service | 45 |
| MECH 48 | Powertrains I | 75 |
| MECH 71 | Welding & Materials | 18 |

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|---|---|---|
| GNED 33 | Professional Portfolio Development | 45 |

## Semester 2

| Code | Course Name | Hours |
|---|---|---|
| APST 31 | HET Internship | 450 |

## Semester 3

| Code | Course Name | Hours |
|---|---|---|
| ELCT 9 | Electrical Systems II | 75 |
| ELCT 11 | Electronic Engine Management | 60 |
| MECH 20 | Engines II | 75 |
| MECH 31 | Hydraulic Systems II | 75 |
| MECH 49 | Powertrains II | 75 |
| MECH 52 | Shop Practice | 45 |
| GENED | General Education Elective | |

## Semester 4

| Code | Course Name | Hours |
|---|---|---|
| ELCT 61 | Electrical Systems III | 90 |
| ELCT 64 | Installation, Code and Safety | 75 |
| ELCT 62 | Power Generation | 60 |
| MECH 164 | Prime Movers | 75 |
| ELCT 63 | System Controls | 105 |
| GENED | General Education Elective | |