

# POWER ENGINEERING TECHNICIAN (PWTN)

## Ontario College Diploma | 4 semesters | Barrydowne

A registered 2nd Class power plant training facility on campus. Curriculum that is endorsed by the Technical Standards and Safety Authority (TSSA). A unique program located in northern Ontario. Just a few of the reasons Cambrian's Power Engineering Technician program is in high demand.

You'll gain knowledge and skills in all aspects of power plant operation and maintenance, both theoretical and practical, at the 4th Class level in first year and at the 3rd Class level in second year. Theoretical concepts discussed in class are further explained and reinforced during practical experience in the College's Power Plant Training Facility – a registered 2nd Class plant. Here you will help to operate and maintain working equipment in a safe and efficient manner.

Subjects of instruction closely follow the Standardized Power Engineers Examination Committee (SOPEEC) syllabus and help prepare you to challenge the Technical Standards and Safety Authority (TSSA) examinations required for 4th Class and 3rd Class certifications as an Operating Engineer. This program has been officially recognized and approved by the Technical Standards and Safety Authority (TSSA). This will grant a qualifying time reduction to you upon successful completion of the program. After successful completion of the first year of the program, you will complete an approved three month placement, which will enable you to obtain the necessary qualifying time for 4th Class certification. Students are responsible for completing the TSSA 4A and 4B testing requirements of the Operating Engineer certification. With 4th Class Operating Engineering certification received, students can begin obtaining the 3rd Class steam time reduction offered in the second year in the Power Plant Training Facility and continue their academic studies with curriculum is tailored to the 3rd Class examinations.

### Program Highlights

- 2 years – 4 semesters
- Program endorsed by the Technical Standards and Safety Authority (TSSA)
- One of a few colleges in Ontario to offer this program (only college in northern Ontario)
- Hands-on training in Cambrian's 2nd Class power plant
- Grads are eligible to challenge the TSSA examinations for 3rd Class certification as an Operating Engineer

### Fieldwork/Placement

After the first year, you will undertake an approved 3 month placement with an approved company or agency. This placement, when coupled with the qualifying time reduction granted to you upon successful completion of the program, will grant you the 12 month qualifying time required for 4th Class certification.

### Capped Enrolment

### Quick Links

How to Apply (<http://cambriancollege.ca/apply>)

Engineering Technology (<http://cambriancollege.ca/field-of-study/engineering-technology>)

## 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), (U), or (M)
- Any grade 12 mathematics (C) or (U) (MCT4C is highly recommended)
- Any grade 11 or 12 chemistry or physics (C), (U), or (M)

Recommended:

- Grade 12 technological design or manufacturing technology course (C), (U), or (M)

## Advanced Standing

Graduates of Cambrian's Power Engineering Techniques (PETQ) program or its equivalent who also possess a 4th Class Certificate of Qualification - in good standing with the TSSA (<https://www.tssa.org/regulated/operating/Default.aspx>) - may apply to enter directly into Semester 3 of the Power Engineering Technician (PWTN) or Power Engineering Technology (PWTY) program. This is a competitive process.

**APPLY NOW!** (<http://ontariocolleges.ca/apply>)

## Program Delivery

### 2018-2019

This program will be delivered in the following terms:

#### Fall Term Start

1. **SEMESTER 1** Fall 2018
2. **SEMESTER 2** Winter 2019
3. **SEMESTER 3** Fall 2019
4. **SEMESTER 4** Winter 2020

For specific term start/end dates and other key dates/deadlines, please see the Academic Schedule (<http://cambriancollege.ca/apply/how-to-apply/academic-schedule>) on our website.

## Program of Study

*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
PEG 1108	Power Plant Operation I <sup>1</sup>	11
PEG 1115	Applied Science	3
PEG 1121	Boilers Auxiliaries I	2
PEG 1126	Safety Administration I	2
PEG 1215	Applied Chemistry I	2
PEG 1225	Electricity Control Systems I	3
Term Credits:		23
Semester 2		Credits
ENG 1002	College Communications	3
PEG 1220	Heating, Refrig./Gas Compression I	3
PEG 1231	Power Plant Operations II <sup>1</sup>	11

PEG 1235	Prime Movers I	3
PEG 1006	Nuclear and Alternate Energy	3
PEG 1002	Field Placement I	1
The following General Education course:		3
BUS 1008	Personal Finance	3
Term Credits:		27
<b>Semester 3</b>		
PEG 2325	Math, Physics Thermodynamics	4
PEG 2330	Power Plant Operation III <sup>1</sup>	4
PEG 2420	Electricity Control Systems II	4
PEG 2430	Safety Administration II	4
ENG 1754	Technical Communication	3
PEG 1003	Credential Validation I	1
One of the following General Education courses:		3
BUS 1015	Negotiation Labour Relations	3
CET 1003	Cybernation	3
MUS 1009	Rock Music, Culture Technology	3
PSY 1001	Psychology of Evil	3
SCI 1000	Issues and Ethics in Science	3
Term Credits:		23
<b>Semester 4</b>		
PEG 2310	Applied Chemistry II	2
PEG 2315	Heating, Refrig. Gas Comp. II	4
PEG 2321	Boilers and Auxiliaries II	3
PEG 2426	Prime Movers II	3
PEG 2442	Power Plant Operation IV <sup>1</sup>	4
One of the following General Education courses:		3
BUS 1015	Negotiation Labour Relations	3
CET 1003	Cybernation	3
MUS 1009	Rock Music, Culture Technology	3
PSY 1001	Psychology of Evil	3
SCI 1000	Issues and Ethics in Science	3
Term Credits:		19
Total Credits:		92

<sup>1</sup> Course with Lab Component

## Fees

### Tuition and Ancillary Fees

Please see our fees page (<http://cambriancollege.ca/fees>) for the breakdown of tuition and mandatory ancillary fees by program and semester for both domestic and international students

### Books & Supplies

The cost of books and supplies for Year 1 is approximately \$2,000. This is the best information available at the time of publishing to the website and is subject to change.

## Graduate Options

### Furthering Your Studies

Students successfully completing the Power Engineering Technician program and obtaining a valid 3rd Class Operating Engineering certificate may enter directly into the Power Engineering Technology program. This will be of great assistance to those students considering certification at the second class level.

### Employment Opportunities

Graduates may find employment in industrial and non-industrial settings having power plants or boiler rooms registered by the TSSA and requiring services of a certified operating engineer. These settings may be located in:

- Manufacturing plants
- Cogeneration facilities
- Refrigeration plants
- Mining operations
- Pulp and paper mills
- Hospitals
- District heating plants

In addition to these traditional employers; non-registered plants located in high rise and commercial buildings are another employer of power engineers who operate and maintain their complex heating and cooling systems.

### College/University Degree Opportunities

Graduates from this program may continue their studies at college/university and may receive credit for their prior College education.

Refer to College/University Agreements (<http://www.cambriancollege.ca/agreements>) for further information.

## Contacts

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