

# POWER ENGINEERING TECHNICIAN (PWTN)

## Ontario College Diploma | 4 semesters | Barrydowne

A TSSA-registered, on-campus 2nd Class power plant. 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 why Cambrian's Power Engineering Technician program is in high demand.

Over four semesters, 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. This facility is where you will operate and maintain working equipment in a safe and efficient manner.

Course subjects 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.

The program has been officially recognized and approved by the Technical Standards and Safety Authority (TSSA). This approval 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

- Program length is 2 years (4 semesters); or 1 year (2 semesters) if TSSA certification as a 4th Class Operating Engineer is already possessed
- Program endorsed by the Technical Standards and Safety Authority (TSSA)
- One of a few colleges in Ontario to offer this program and the 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

#### 2019-2020

This program will be delivered in the following terms:

#### Fall Term Start

1. **SEMESTER 1** Fall 2019
2. **SEMESTER 2** Winter 2020
3. **SEMESTER 3** Fall 2020
4. **SEMESTER 4** Winter 2021

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 1007	Boilers & Auxiliaries I	4
PEG 1126	Safety & Administration I	2
PEG 1225	Electricity & Control Systems I	3
	Credits	23
Semester 2		
ENG 1002	College Communications	3

PEG 1220	Heating, Refrig./Gas Compression I	3
PEG 1231	Power Plant Operations II <sup>1</sup>	11
PEG 1002	Field Placement I	1
PEG 1008	Prime Movers I	4
PEG 1215	Applied Chemistry I	2
The following General Education course:		3
BUS 1008	Personal Finance	
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	
CET 1003	Cybernation	
MUS 1009	Rock Music, Culture & Technology	
PSY 1001	Psychology of Evil	
SCI 1000	Issues and Ethics in Science	
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
PEG 1006	Nuclear and Alternate Energy	3
One of the following General Education courses:		3
BUS 1015	Negotiation & Labour Relations	
CET 1003	Cybernation	
MUS 1009	Rock Music, Culture & Technology	
PSY 1001	Psychology of Evil	
SCI 1000	Issues and Ethics in Science	
Credits		22
Total Credits		95

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

For students who wish to continue their education in Power Engineering Technology; an additional 1-credit course "Field Placement II" is necessary between second and third year. Placement officers will provide assistance in obtaining placement opportunities for these students.

## 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.

The program will schedule TSSA examination dates at appropriate times during the semesters. This will allow the student to sit the TSSA exam on-site at Cambrian College. A sitting fee will be required to avail yourself of

this service. Fee costs and the exam registration process will be provided during orientation.

## 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 pressure plants 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 provide yet another employment opportunity to power engineers. Third class operating engineers are also able to find employment in the pressure vessel inspection industry.

### 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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