

# POWER ENGINEERING TECHNICIAN (PWTN)

## Our TSSA-registered power plant is your classroom

Train for an in-demand career as a power engineering technician with a curriculum endorsed by the Technical Standards and Safety Authority (TSSA), and a power plant right on campus. You'll gain theoretical concepts in the classroom reinforced with practical experience in the Power Engineering Training Facility, where you will learn to operate and maintain working equipment safely and efficiently.

Courses taught will prepare you to challenge the TSSA examinations required for the 4th and 3rd Class levels of certification as an Operating Engineer.

## Program highlights

- Capped enrolment
- Accredited by the Technical Standards and Safety Authority (TSSA)
- Hands-on training in our on-campus TSSA-registered power plant
- Opportunities for industrial work placements
- Students are eligible to challenge the TSSA exams at the 4th & 3rd Class Operating Engineer certification levels.

## Program of study for 2024-25 Academic Year

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 1225	Electricity & Control Systems I	3
PEG 1115	Applied Science	3
PEG 1007	Boilers & Auxiliaries I	4
PEG 1126	Safety & Administration I	2
ENG 1002	College Communications	3
	<b>Credits</b>	<b>26</b>
Semester 2		
PEG 1220	Heating, Refrig./Gas Compression I	3
PEG 1231	Power Plant Operations II <sup>1</sup>	11
PEG 1261	Building Systems	3
PEG 1008	Prime Movers I	4
PEG 1215	Applied Chemistry I	2
One General Education course. <sup>2</sup>		3
	<b>Credits</b>	<b>26</b>
Semester 3		
ENG 1754	Technical Communication	3
PEG 2330	Power Plant Operation III <sup>1</sup>	4
PEG 2325	3A1 - Math, Physics & Thermodynamics	4
PEG 2420	3A2 - Electricity & Control Systems II	4
PEG 2430	3A2- Safety & Administration II	4

One General Education course. <sup>2</sup>		3
	<b>Credits</b>	<b>22</b>
Semester 4		
PEG 2442	Power Plant Operation IV <sup>1</sup>	4
PEG 2310	3B1 - Applied Chemistry II	2
PEG 2410	Power Plant Simulation Operations	3
PEG 2321	3B1 - Boilers and Auxiliaries II	3
PEG 2315	3B2 - Heating, Refrig. & Gas Comp. II	4
PEG 2426	3B2 - Prime Movers II	3
PEG 1006	Nuclear and Alternate Energy	3
One General Education course. <sup>2</sup>		3
	<b>Credits</b>	<b>25</b>
	<b>Total Credits</b>	<b>99</b>

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

<sup>2</sup> For more information regarding General Education courses, click here (<https://cambriancollege.ca/general-education-electives/>).

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.

## 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) or (U)
- Any grade 12 mathematics (C) or (U) (MCT4C is highly recommended)

## Additional admission requirements

### Recommendations

- Any grade 11 (U) or 12 (U) or (C) chemistry or physics

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

## Program Delivery

### 2024-2025

#### Fall term start

SEMESTER 1: Fall 2024  
SEMESTER 2: Winter 2025  
SEMESTER 3: Fall 2025  
SEMESTER 4: Winter 2026

## Specific program pathway

### Furthering your studies

If you are a student who has successfully completed the Power Engineering Technician program, you may enter directly into the Power Engineering Technology program. This will be helpful if you are considering further education and higher certification levels in power engineering.

Graduates of Cambrian's Power Engineering Techniques (<https://cambriancollege.ca/programs/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/>) - may apply to enter directly into Semester 3 of the Power Engineering Technician (PWTN) or Power Engineering Technology (<https://cambriancollege.ca/programs/power-engineering-technology/>) (PWTY) program. This is a competitive process.

### **College or university degree opportunities**

If you are a graduate of this program, you may continue your studies at a college or university and you may receive credit(s) for your prior college education. Refer to Cambrian's college and university agreement (<https://cambriancollege.ca/supports-services/articulation-agreements/>) details for further information.

### **Employment opportunities**

Graduates may find employment in industrial and non-industrial settings operating, maintaining and managing complex energy systems. These types of systems may be located in:

- Manufacturing, extractive resource facilities and processing plants
- Power plants, alternative energy and cogeneration facilities
- Refrigeration, liquification and gas compression plants
- Petrochemical facilities, refineries and paper mills
- Institutional and commercial operations such as hospitals, correctional facilities, research facilities and universities
- District energy facilities and heating / cooling plants

### **Contacts**

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#### **INTERNATIONAL ADMISSIONS**

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