

# POWER ENGINEERING TECHNOLOGY (PWTY)

## Ontario College Advanced Diploma | 7 semesters | Barrydowne Campus and Online

Cambrian's award-winning combination of an on-campus power plant combined with proven, accredited curriculum produces graduates who meet with success in their careers and are in high demand from industry.

Over three years of study, the Power Engineering Technology program will supercharge your career opportunities by preparing you to successfully challenge roles in the operation and supervision of power plants and other industrial settings.

Theoretical / practical knowledge and skills will be honed throughout your three years of study in both classroom and lab settings.

Theoretical concepts introduced in class are more fully explained and illustrated in the College's Power Engineering Training Facility. This facility is where you will learn to operate and maintain working equipment in a safe and efficient manner.

Depending on how the student wishes to proceed with their studies; the third year of study is available as a combination of online or classroom environments. This delivery alternative provides students the flexibility to learn from the convenience of their home communities.

Graduates meeting the requirements of this TSSA accredited program will earn three different levels of qualifying time reduction. These entitlements will significantly reduce the amount of time necessary for our graduates to achieve certification and will dramatically accelerate their careers to the next level.

### Program Highlights

- 3 years – 7 semesters,
- Theory subjects offered online to students who are interested in obtaining the utmost of flexibility with their studies,
- Hands-on training in Cambrian's power plant during each of the three years of instruction,
- Advanced level courses will introduce the student to the management of power plant operations as well as compiling and producing technical reports and presentations,
- Qualifying time entitlements are available at the end of each year of instruction.

### Fieldwork/Placement

Students in the Power Engineering Technology program will have opportunities to gather further qualifying time during industrial work placements. These placements are traditionally obtained over the summer period between the end of year one and the start of year two; or during the summer period between the end of year two and the start of year three.

*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 (OSSD): 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)

Recommended:

- Grade 11 (U) or 12 (U) or (C) chemistry or physics
- Grade 12 technological design or manufacturing technology course (C) or (U)

**Missing an Admission Requirement? We can help! APPLY NOW!**  
Visit <https://www.cambriancollege.ca/upgrading/> for more information about our **FREE Academic Upgrading Program.**<sup>1</sup>

## Advanced Standing

Graduates of Cambrian's Power Engineering Technician (PWTN) program (OR graduation from an equivalent program) OR the possession of a 3rd Class Certificate of Qualification in good standing with the TSSA may allow a candidate to enter directly into the third year of the Power Engineering Technology (PWTY) program.

APPLY NOW! (<https://www.ontariocolleges.ca/en/apply-now/>)

<sup>1</sup> Please note Academic Upgrading is only available for domestic students.

## Program Delivery

### 2024-2025

This program will be delivered in the following terms:

#### Fall Term Start

1. SEMESTER 1 Fall 2024
2. SEMESTER 2 Winter 2025
3. SEMESTER 3 Fall 2025
4. SEMESTER 4 Winter 2026
5. SEMESTER 5 Fall 2026
6. SEMESTER 6 Winter 2027
7. SEMESTER 7 Fall 2027

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 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 2410	Power Plant Simulation Operations	3
PEG 2310	3B1 - Applied Chemistry II	2
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>

**Semester 5**

PEG 3541	Power Plant Operations V <sup>1</sup>	3
TEC 3501	Technical Report Research	1
PEG 3610	2A3 - Industrial Water Treatment	4
PEG 3620	2A3 - Boilers & Auxiliaries III	4
PEG 3625	2B1 - Prime Movers III	4
PEG 3630	2B1 - Piping Systems & Mechanical Drawing	4
<b>Credits</b>		<b>20</b>

**Semester 6**

PEG 3641	Power Plant Operations VI <sup>1</sup>	3
TEC 3601	Technical Report	1
PEG 3712	2B2 - Fuels Combust. & Envir. Protection	4
PEG 3725	2B2 - Power Plant Systems & Controls	4
PEG 3722	2B3 - Electrotechnology	4
PEG 3715	2B3 - Refrigeration & Gas Compression	4
<b>Credits</b>		<b>20</b>

**Semester 7**

PEG 1000	2A1 - Applied Mechanics	3
PEG 3530	2A1 - Indust. Admin & Code Calculations	4
PEG 3525	2A2 - Thermodynamics	4
PEG 1001	2A2 - Metallurgy & Testing of Materials	2
<b>Credits</b>		<b>13</b>
<b>Total Credits</b>		<b>152</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/>).

**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. Any voluntary student testing costs, such as the TSSA Operating Engineering certifications, will have additional fees. This is the best information available at the time of publishing to the website and is subject to change.

**Graduate Options****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

In addition to these traditional employers, further employment opportunities may be found in related industries such as pressure vessel inspection.

**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**

### **Greg Rickard**

Program Coordinator

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### **INTERNATIONAL ADMISSIONS**

[mailboxadmissions@CambrianCollege.ca](mailto:mailboxadmissions@CambrianCollege.ca)