

# CHEMICAL ENG. TECHNOLOGY - LAB AND PROCESS CONTROL (CHLP)

## Ontario College Advanced Diploma | 7 semesters | Barrydowne

Imagine a career working in a laboratory environment developing the next generation of medications, developing new and improved fuels, extracting valuable metals from raw materials, or working on environmental sustainability. Chemical engineering is a broad field that delves into all of these areas and more.

Cambrian's Chemical Engineering Technology program is the only one of its kind in Ontario and is designed to develop the skill sets you will need to work in any of these exciting fields. It couples fundamental theory with the necessary hands-on, practical laboratory training required for employment in various chemical industries and environmental sectors. You will work independently and in groups to build the self-directed study and team work skills you will need within various workplace settings.

### Program Highlights

- 3 years – 7 semesters
- 2 paid co-ops
- The only lab and process control program in Ontario
- Quality control practices embedded throughout the program
- Master report writing techniques that meet the standards set by the Canadian Council of Technicians and Technologists

### Fieldwork/Placement

You are required to complete two co-operative work terms upon meeting the course pre-requisites. You may complete the two work placements during any of the non-academic semesters prior to graduation. These work terms provide you with the opportunity to apply classroom studies to an actual work situation.

### 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 (C) or (U)

Recommended:

- Any grade 12 physics (C) or (U)
- Computer competency in relevant software

### Additional Information

Students are responsible for the completion of the WHMIS course and a safety orientation course prior to going out on their first co-op placement. These courses are available through NORCAT. The students are also responsible for obtaining First Aid/CPR certification prior to the first co-op placement. This course is available through Continuing Education at Cambrian College. Proof of the completion of these courses must be presented to the Program Coordinator.

**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
5. **SEMESTER 5** Spring 2020
6. **SEMESTER 6** Fall 2020
7. **SEMESTER 7** 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>) which posted 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
CHM 1100	General Chemistry I	4
CHM 1101	General chemistry I <sup>1</sup>	2
ENG 1002	College Communications	3
MTH 1050	Algebra I	3
PHY 1112	Physical Principles <sup>1</sup>	4
CHM 2455	O.S.H.A	1
The following General Education course:		3
PSY 2700	Client Comm. Leadership Develop	3
Term Credits:		20
Semester 2		
CHM 1201	General Chemistry II Lab <sup>1</sup>	2
CHM 1211	General Chemistry II <sup>1</sup>	4
ENG 1754	Technical Communication	3
INT 3101	Instrumentation I for Chemists <sup>1</sup>	3
MTH 1250	Algebra II	3
PHY 1271	Physical Aspects of Chemistry <sup>1</sup>	4
CHM 1109	Mineral Processing <sup>1</sup>	4
Term Credits:		23
Semester 3		
CHM 2320	Analytical Chemistry <sup>1</sup>	5

CHM 2435	Chemical Instrumentation I <sup>1</sup>	4
EPT 2407	Field Sampling Camp <sup>1</sup>	1
INT 2310	Instrumentation II <sup>1</sup>	3
MTH 2400	Calculus I	3
CHM 2445	Smelting and Refining <sup>1</sup>	4
One of the following General Education courses:		3
FIT 1115	Health Wellness	3
BIO 1000	Fungus Among Us	3
PSY 1125	Positive Psychology	3
PSY 1001	Psychology of Evil	3
	Term Credits:	23
<b>Semester 4</b>		
CHM 1008	Unit Operations Calculations I <sup>1</sup>	4
CHM 2421	Analytical Chemistry II <sup>1</sup>	5
CHM 3601	Chemical Instrumentation II <sup>1</sup>	4
INT 3201	Instrumentation Practices for Chem <sup>1</sup>	3
TEC 3501	Technical Report Research	1
MTH 2325	Technical Math III	3
CHM 2335	Organic Chemistry I <sup>1</sup>	6
	Term Credits:	26
<b>Semester 5</b>		
CHM 2500	Co-op Work Placement and Report	12
	Term Credits:	12
<b>Semester 6</b>		
CHM 1009	Unit Operations Calculations II <sup>1</sup>	4
CHM 3635	Industrial Organic Chemistry <sup>1</sup>	5
CHM 3653	Inorganic Chemistry <sup>1</sup>	3
PHY 1272	Fluid Mechanics <sup>1</sup>	4
TEC 3601	Technical Report <sup>1</sup>	1
WTR 2300	Water Treatment	3
MTH 3631	Calculus II	3
One of the following General Education courses:		3
ECN 1002	Economics	3
BIO 1000	Fungus Among Us	3
FIT 1115	Health Wellness	3
	Term Credits:	26
<b>Semester 7</b>		
CHM 3700	Co-op Work Placement and Report II	12
	Term Credits:	12
	Total Credits:	142

<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

1 The cost of books and supplies for Year 1 is approximately \$1,000. 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 as:

- Chemical technologists/technicians in mineral processing, petrochemicals, nuclear energy, food processing and testing, water treatment, pharmaceuticals, composite materials, and/or environmental conservation and control
- Water and wastewater operators
- Water quality analysts

## 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

### Hadi Fergani

Program Coordinator  
705-566-8101, ext 7478  
hadi.fergani@cambriancollege.ca