

CHEMICAL ENGINEERING TECHNOLOGY - LAB AND PROCESS CONTROL (CHLP)

Ontario College Advanced Diploma | 7 semesters | Barrydowne Campus

In this advanced diploma program, you will train for an exciting career as a chemical technologist that will have you extracting valuable metals from rock, operating chemical processes in nuclear plants, operating water/wastewater treatment plants, creating the next generation of pharmaceuticals, or developing new and improved fuels.

With our campus located in Sudbury, Ontario, the mining capital of Canada, our program has a unique focus that will build your knowledge and skills in analytical, inorganic and organic chemistry, and laboratory techniques.

You will learn industry-standard lab practices through group work and independent studies, including sampling, analysis, proper use of instruments, quality assurance/quality control, health and safety, and technical report writing.

As a graduate, you'll be prepared for a career in the fields of mining and water management, as well as nuclear energy, manufacturing, oil and gas, pharmaceuticals, and food and beverage.

Program Highlights

- 2 paid co-ops
- We are the only lab and process control program in the province that focuses on the mineral processing and water/wastewater areas of study
- 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 will complete two paid co-op work terms that will give you real-world, resume-building experience in a lab setting.

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

Recommended:

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

Advanced Standing

Graduates of Cambrian's Chemical Engineering Technician (CHLN) program may apply to enter directly into Semester 5 of the Chemical Engineering Technology - Lab and Process Control (CHLP) program. This is a competitive process.

Additional Information

Some employers require the students to provide proof of the completion of the WHMIS course and the First Aid/CPR certification prior to starting their first co-op placement. These courses are available through NORCAT and Continuing Education at Cambrian College.

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

Program Delivery

2023-2024

This program will be delivered in the following terms:

Fall Term Start

1. SEMESTER 1 Fall 2023
2. SEMESTER 2 Winter 2024
3. SEMESTER 3 Fall 2024
4. SEMESTER 4 Winter 2025
5. SEMESTER 5 Spring 2025
6. SEMESTER 6 Fall 2025
7. SEMESTER 7 Winter 2026

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 for 2023-24 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
MTH 1050	Algebra I	3
QUA 1002	Quality Assurance and Quality Control	3
CHM 1160	Occupational Health and Safety	3
CHM 1161	Introduction to Sampling Techniques	3
CHM 1162	Chemistry I	3
CHM 1163	Chemistry I Lab	3
ENG 1002	College Communications	3
Credits		21
Semester 2		
MTH 1250	Algebra II	3
CHM 1280	Physical Chemistry	3
CHM 1281	Physical Chemistry Lab	3
CHM 1282	Chemistry II	3
CHM 1283	Chemistry II Lab	3

CHM 1284	QA QC Data Analysis	3
ENG 1754	Technical Communication	3
One General Education Course ²		3
Credits		24
Semester 3		
CHM 1109	Mineral Processing ¹	4
CHM 1300	Analytical Chemistry I	3
CHM 1301	Analytical Chemistry I Lab	3
CHM 1302	Instrumental Analysis I	3
CHM 1303	Instrumental Analysis I Lab	3
WTR 2300	Water Treatment ¹	3
One General Education Course. ²		3
Credits		22
Semester 4		
CHM 1420	Organic Chemistry	3
CHM 1421	Organic Chemistry Lab	3
CHM 1422	Analytical Chemistry II	3
CHM 1423	Analytical Chemistry II Lab	3
CHM 1424	Instrumental Analysis II	3
CHM 1425	Instrumental Analysis II Lab	3
CHM 1426	Pyrochemistry	4
One General Education Course ²		3
Credits		25
Semester 5		
CHM 2500	Co-op Work Placement and Report	12
Credits		12
Semester 6		
CHM 3653	Inorganic Chemistry ¹	3
CHM 1600	Unit Operations and Calculations	4
CHM 1601	Industrial Organic Chemistry	3
CHM 1602	Industrial Organic Chemistry Lab	3
TEC 3603	Capstone Project	3
INT 1500	Lab and Process Automation	4
MTH 2400	Calculus I	3
One General Education Course. ²		3
Credits		26
Semester 7		
CHM 3700	Co-op Work Placement and Report II	12
Credits		12
Total Credits		142

¹ Course with Lab Component² 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.

Books & Supplies

The average cost of textbooks is approximately \$1000 per year. Personal protective equipment: Lab coat, safety glasses and safety boot, could cost around \$150. WHMIS, First Aid and CPR training 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 are prepared for employment opportunities as:

- Lab Technologist in Mineral Processing, Geochemistry, Nuclear, Petroleum, Pharmaceutical and Food Industries
- Water and Wastewater Analyst/Operator
- Researcher
- Chemical Process Control Operator

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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INTERNATIONAL ADMISSIONS

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