CHEMICAL ENGINEERING TECHNOLOGY - LAB AND PROCESS CONTROL (CHLP)

Hone your engineering and chemistry skills to design better chemical products.

Learn to extract valuable metals from rock, develop new and improved fuels, create the next generation of pharmaceuticals, or operate chemical processes in nuclear plants by training as a chemical technologist in the mining capital of Canada.

You'll build your knowledge and skills in the only lab and process control program in the province that focuses on mineral processing and pyrometallurgy methodologies used in the mining industry, as well as water and wastewater treatment methods and regulations. You'll complete two paid co-op work terms that give you real-world, résumé-building experience. Grads are prepared to work in mineral processing, geochemistry, nuclear, petroleum, pharmaceutical, manufacturing, oil and gas, and food and beverage industries.

Program highlights

- 2 paid co-ops
- Common first and second year with Cambrian's Chemical Engineering Technician program
- Grads are eligible to join the Ontario Association of Certified Engineering Technicians & Technologists (OACETT) and the Canadian Technical Employment Network (CTEN)
- Unique program in Ontario that focuses on mineral processing, pyrometallurgy, and water/wastewater

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**
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 2332	Applied Calculus	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 Component

[2] For more information regarding General Education courses, click here (https://cambriancollege.ca/general-electives/).

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)

Additional admission requirements

Recommendations:

- Any grade 12 physics (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
SEMESTER 5: Spring 2026
SEMESTER 6: Fall 2026
SEMESTER 7: Winter 2027

Winter term start

SEMESTER 1: Winter 2025
SEMESTER 2: Spring 2025
SEMESTER 3: Fall 2025
SEMESTER 4: Winter 2026
SEMESTER 5: Spring 2026
SEMESTER 6: Fall 2026
SEMESTER 7: Winter 2027

Specific program pathways

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://cambrian.s123.ca/supports-services/articulation-agreements/) details for further information.

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

Contacts

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INTERNATIONAL ADMISSIONS

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