

CIVIL ENGINEERING TECHNOLOGY (CVTY)

Ontario College Advanced Diploma | 6 semesters | Barrydowne

If you have a vision for how the world should be constructed, below and above ground, consider a career in Civil Engineering – one of the world’s oldest engineering disciplines! In our nationally-accredited Civil Engineering Technology program, you’ll gain the skills and knowledge to become a member of civil engineering teams that are responsible for building, maintaining, and restoring roads, bridges, buildings, water distribution systems, and pipelines. Courses are focused on applying professionalism towards drafting, surveying, construction methods, costing, quality control, inspections, and laboratory testing.

You will gain practical, hands-on experience in the College’s Geographic Information Systems (GIS) and Computer-Aided Drafting (CAD) laboratories and through surveying training using Light Detection and Ranging (LiDAR) scanning equipment, point cloud management software, and electronic survey equipment that’s interfaced with survey and drafting software. In addition, to meet the demand for structural steel detailers, you will learn automated structural detailing.

Qualified students may have the opportunity to gain summer work experiences in the construction, consulting, and government sectors through the Infrastructure Opportunities Program (IOP) and the Municipal Engineering Opportunities Program (MEOP).

Accreditation

This program is nationally accredited, which enables graduates to work as technologists across Canada. A civil engineering technologist may seek membership with OACETT (Ontario Association of Certified Engineering Technicians and Technologists) to become certified as a C.E.T. (Certified Engineering Technologist). A technologist can also pursue a Bachelor of Applied Science in Civil Engineering at Canadian universities.

Program Highlights

- 3 years – 6 semesters
- National accreditation since 2003. Current accreditation through Technology Accreditation Canada
- Two-week field methods surveying course following the end of the second semester
- Industry-experienced faculty
- Hands-on experience in a modernized lab
- Opportunity to gain summer employment through the Infrastructure Opportunities Partnership (IOP) and Municipal Engineering Opportunities Partnership (MEOP)
- Field trips to local civil engineering companies and completed project sites
- Courses cover design, project management, technical research and report writing, and more
- Hands-on experience with Geographic Information Systems (GIS) and computer-aided drafting (CAD)
- Grads may be eligible to become members of the Ontario Association of Certified Engineering Technicians and Technologists (OACETT) and the Canadian Technical Employment Network (CTEN)

4D Learning Opportunities

CANstruction competition (if running) – Students compete against other organizations in the community to design and build a 3D structure out of food cans, which are then donated to the Sudbury Food Bank.

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)

Recommended:

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

Advanced Standing

Graduates of Cambrian’s Civil Engineering Technician Program (CVTN) or its equivalent may apply to enter directly into Semester 5 of the Civil Engineering Technology (CVTY) program. This is a competitive process.

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

Program Delivery

2022-2023

This program will be delivered in the following terms:

Fall Term Start

1. SEMESTER 1 Fall 2022
2. SEMESTER 2 Winter 2023
3. SEMESTER 3 Fall 2023
4. SEMESTER 4 Winter 2024
5. SEMESTER 5 Fall 2024
6. SEMESTER 6 Winter 2025

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 2022-23 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 |
|------------|---------------------------------|---------|
| CIV 1200 | Concrete & Asphalt ¹ | 4 |
| CIV 2331 | Construction Technology | 4 |
| ENG 1002 | College Communications | 3 |
| MTH 1050 | Algebra I | 3 |
| SUR 1116 | Surveying I ¹ | 5 |

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|--|-------------------------------------|------------|
| One General Education course. ² | | 3 |
| Credits | | 22 |
| Semester 2 | | |
| CAD 1001 | Engineering Graphics | 3 |
| ENG 1754 | Technical Communication | 3 |
| MCH 1205 | Mechanics | 5 |
| MTH 1250 | Algebra II | 3 |
| SUR 1220 | Surveying II ¹ | 5 |
| SUR 1232 | Survey Field Methods | 1 |
| One General Education course. ² | | 3 |
| Credits | | 23 |
| Semester 3 | | |
| CAD 1200 | Computer Aided Drafting II | 2 |
| CIV 2300 | Soil Mechanics I ¹ | 4 |
| CIV 2302 | Civil Engineering Applications | 3 |
| CIV 2421 | Basic Hydraulics | 3 |
| MCH 2310 | Strength Of Materials I | 4 |
| MTH 2325 | Technical Math III | 3 |
| ENV 1027 | Sustainability Practices | 3 |
| Credits | | 22 |
| Semester 4 | | |
| CIV 2431 | Municipal Planning | 4 |
| CIV 2403 | Structural Behaviour & Detailing | 4 |
| CIV 2404 | Computer Aided Structural Detailing | 3 |
| CIV 3500 | Special Projects ¹ | 4 |
| CIV 3520 | Contracts Law & Specifications | 4 |
| One General Education course. ² | | 3 |
| Credits | | 22 |
| Semester 5 | | |
| CIV 2410 | Soil Mechanics II | 4 |
| CIV 2430 | Municipal Services | 4 |
| CIV 3510 | Structural Design | 4 |
| MCH 2410 | Strength Of Materials II | 4 |
| CIV 3560 | Construction Project Management | 3 |
| TEC 3501 | Technical Report Research | 1 |
| CIV 3511 | Infrastructure Asset Management | 3 |
| Credits | | 23 |
| Semester 6 | | |
| CIV 3600 | Foundations | 5 |
| CIV 3630 | Reinforced Concrete | 4 |
| CIV 3640 | Highway Design | 4 |
| GIS 3600 | GIS Applications | 3 |
| MTH 2332 | Applied Calculus | 3 |
| TEC 3601 | Technical Report | 1 |
| Credits | | 20 |
| Total Credits | | 132 |

¹ Course with Lab Component

² 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 cost of books and supplies for Year 1 is approximately \$700. 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 with:

- Consulting engineering firms
- Municipal engineering offices
- Construction firms
- Manufacturing organizations
- Provincial and Federal Government agencies
- Inspection and testing companies

For more information about Civil Engineering as a career, including employment opportunities, and more, visit Ontario Civil Construction Careers Alliance (<http://www.myocca.ca/>).

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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