

CIVIL ENGINEERING TECHNICIAN (CVTN)

Ontario College Diploma | 4 semesters | Barrydowne

Use science and technology to help build the world around us! Our Civil Engineering Technician program is focused on the design, construction, maintenance, and rehabilitation of infrastructure facilities including: roads, bridges, buildings, dams, storm/sanitary/water systems, pipelines, and deep and shallow foundations.

You will gain practical, hands-on experience in design and drafting in our Computer Aided Drafting (CAD) laboratory. In addition, you will receive surveying training with state-of-the-art electronic survey equipment that will be interfaced with survey software. You'll also be introduced to Light Detection and Ranging (LiDAR) scanning equipment and point cloud management software.

You'll also have opportunities to enhance your skills and network with industry through opportunities to volunteer at community events or by participating in applied research projects. Want to see how your skills stack up against your classmates? Test your engineering abilities in second year by competing in a headframe competition where you will design, build, and test a structure to failure during Cambrian's Spring Open House.

Extend your studies after graduation by applying to enter directly into the final year of Cambrian's Civil Engineering Technology (CVTY) program. You'll boost your leadership and technical skills and open the door to more career opportunities!

Program Highlights

- 2 years – 4 semesters
- Industry-experienced faculty
- Hands-on experience in modernized lab
- Two-week field methods surveying course following the end of the second semester
- Courses cover industry compliant CAD drafting, surveying, construction methods, estimating, quality control, inspections, materials testing, structural detailing, and hydraulics
- Gain extensive experience using computer-aided drafting (CAD) to meet industry compliant standards
- Graduates can seek membership with OACETT (Ontario Association of Certified Engineering Technicians and Technologists) to become certified as a C.Tech. (Certified Technician)

Fieldwork/Placement

You will participate in a two-week field camp during the first part of May at the end of the second semester (CSA approved safety boots mandatory). Attendance is compulsory to complete the program. Students are urged to let employers know that they are not available for summer employment until the course is officially completed.

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), (U)
- Computer competency in relevant software

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

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
One General Education course. ²		3
Credits		22

Semester 2		Credits
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. ¹		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 2403	Structural Behaviour & Detailing	4
CIV 2404	Computer Aided Structural Detailing	3
CIV 2431	Municipal Planning	4
CIV 3500	Special Projects ¹	4
CIV 3520	Contracts Law & Specifications	4
One General Education course. ¹		3
Credits		22
Total Credits		89

¹ Course with Lab Component

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

College/University Degree Opportunities

Graduates of 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**Jeff Walker**

Program Coordinator
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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 \$1,700. This is the best information available at the time of publishing to the website and is subject to change.

Graduate Options**Employment Opportunities**

Civil Engineering Technicians usually work in surveying, material testing, drafting, design, construction, estimating, inspection, or sales and service. Graduates are prepared for employment opportunities in:

- Consulting engineering firms
- Government departments
- Municipal engineering departments
- Construction firms

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

Furthering Your Studies

Graduates of Cambrian's CVTN program may apply to enter directly into Semester 5 of the Civil Engineering Technology (CVTY) program. This is a competitive process.