

CIVIL ENGINEERING TECHNICIAN (CVTN)

Join science with technology to build the world around you

Develop the skills to get the framework of the world on solid footing by training to become a member of civil engineering teams that are responsible for the design, construction, maintenance, and rehabilitation of infrastructure. You'll focus on improving roads, bridges, buildings, dams, storm and sanitary water systems, pipelines, deep and shallow foundations, and apply sustainability practices.

Gain hands-on experience in design and drafting in our Computer Aided Drafting (CAD) laboratory, and train with state-of-the-art electronic survey equipment interfaced with survey software. You'll be introduced to Light Detection and Ranging (LiDAR) scanning equipment and point cloud management. You'll also learn automated structural detailing to meet the demand. A two-week surveying field camp at the end of the second semester is compulsory.

Program highlights

- Two-week surveying field camp gives you work-integrated learning experience
- Networking opportunities within the community, including participation in the optional competitive co-op program
- Industry-experienced faculty
- Hands-on experience in a modernized lab
- Compete against classmates in headframe building competition in second year
- Graduates can seek membership with the Ontario Association of Certified Engineering Technicians and Technologists (OACETT) to become certified as a C.Tech. (Certified Technician)

Program of study for 2025-26 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	Sustainable 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-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)

Additional admission requirements

Recommendations:

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

Program delivery

2025-2026

Fall term start

SEMESTER 1: Fall 2025
SEMESTER 2: Winter 2026
SEMESTER 3: Fall 2026
SEMESTER 4: Winter 2027

Specific program pathways

Graduates of Cambrian's CVTN program may apply to enter directly into Semester 5 of the Civil Engineering Technology (<https://cambriancollege.ca/programs/civil-engineering-technology/>) (CVTY) program. This is a competitive process.

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://cambriacollege.ca/supports-services/articulation-agreements/universities-in-canada/>) details for further information.

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/>).

Contacts

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INTERNATIONAL ADMISSIONS

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