Civil Engineering Technology - Virtual Design and Construction Major

SCHOOL OF CONSTRUCTION

Overview

Our Civil Engineering Technology program is designed to forge professionals equipped to design, draft, cost, and manage the construction of various infrastructure projects, including buildings, roads, bridges, and more.

This two-year, intensive program offers hands-on learning combined with theoretical knowledge and the use of advanced technology. Embark on a journey encompassing all facets of civil engineering design and construction management, from foundational building science to 2D and 3D drafting, supported by the latest virtual and augmented technology.

Apply your learning in real-world construction engineering scenarios, mastering structural and geotechnical engineering principles, construction estimating, and project scheduling.

The program offers several intakes each year to accommodate your schedule. The program structure adjusts depending on your start date, allowing for semester breaks or continuous study with short breaks.

Ahead of your second year, you'll select one of three specialized majors - construction management, municipal, or virtual design and construction. While we'll do our best to accommodate your preference, selection for each major is determined by the cumulative grade point average (GPA) from your first year, should a specific specialization be in high demand.

Virtual Design and Construction major

Virtual Design and Construction majors focus on:

- advanced construction communication technology
- digital drafting
- design delivery in the virtual world from 2D to 3D in augmented reality (AR) or virtual reality (VR).

You will be prepared for a variety of civil engineering jobs and roles in commercial construction, from site management to project leadership positions. The curriculum is built with industry input, ensuring your acquired skills are relevant and sought after.

This diploma program is not just about gaining a credential; it's about building a career. If you aspire to be at the forefront of the construction industry, innovating and leading in civil engineering design and construction management, this program is your gateway.

Traits, skills and aptitudes

Those in civil engineering technology tend to be innovative, methodical, and directive.

You need:

- math and science skills, specifically an aptitude for physics
- organizational abilities
- an analytical mind
- problem-solving skills
- the ability to work alone
- the flexibility and commitment to work overtime when required to meet deadlines
- the ability to communicate effectively with project managers and contractors.

You should enjoy taking a systematic approach to your work, finding innovative solutions to problems, and providing direction to others.

SAIT program pathways

Graduates of this program with a minimum 2.3 cumulative GPA (67% or C+) may apply for SAIT's Bachelor of Science Construction Project Management program.

Practicum, Co-op and Work Integrated Learning

You'll participate in a capstone project where you'll develop a proposal through research, data collection and analysis and present your findings to faculty and industry guests.

Accreditations, designations and certifications

This program is nationally accredited, at the technologist level, by Technology Accreditation Canada.

Graduates are eligible to join The Association of Science and Engineering Technology Professionals in Alberta (ASET).

The Canadian Institute of Quantity Surveyors recognizes the program as training for qualified estimators and quantity surveyors.



Credentials

Upon successful completion of this program, you'll receive a SAIT Civil Engineering Technology diploma with a major in Virtual Design and Development.

Admission requirements

Applicants educated in Canada

All applicants must demonstrate English language proficiency and meet the following requirements or equivalents:

- at least 60% in Math 30-1, and
- at least 60% in English Language Arts 30-1 or at least 75% in English Language Arts 30-2, and
- at least 60% in Science 30 or Physics 20.

SAIT accepts high school course equivalents for admission for applicants educated outside Alberta.

Applicants educated outside of Canada

All applicants who were educated outside of Canada must demonstrate English language proficiency and provide proof they meet the program admission requirements with an international document assessment. Find accepted educational documents and assessment options.

SAIT may also accept courses completed at certain international post-secondary institutions.

Costs

2026/27 tuition and fees

The following costs are effective as of July 1, 2026.

The estimated total cost of tuition and fees is based on the suggested schedule of study. Following a modified schedule will impact the fees you pay per semester and may alter final costs.

Domestic Students

Year	Number of semesters	Tuition fees	Additional fees	Total per year
1	2	$6,457.50	$1,764.50	$8,222
2	2	$6,150	$1,764.50	$7,914.50

Year	Number of semesters	Tuition fees	Additional fees	Total per year
			Total cost:	**$16,136.50**

The estimated total cost of tuition and fees for domestic students is based on the recommended course load per year.

International Students

The program total is based on the estimated amount you will pay if you enter this program during the 2026/27 academic year. The program total amount listed on your letter of admission may appear higher. This amount is your maximum tuition guarantee for the program. SAIT will not exceed this maximum, regardless of changes in tuition and fees between academic years.

Year	Number of semesters	Tuition fees	Additional fees	Total per year
1	2	$20,664	$1,764.50	$22,428.50
2	2	$19,680	$1,764.50	$21,444.50
			Total cost:	**$43,873**

The estimated total cost of tuition and fees for international students is based on the recommended course load per year.

Books and Supplies

Books and supplies are approximately $1,000 - $1,500 per full-time year.

This is a bring-your-own-device program with workstation computer hardware and software requirements. See the specific requirements on our computers and laptops page.

Textbooks and reading materials will be discussed with your instructors during the first week of classes.

Required personal protective equipment (PPE)

The industry-approved PPE you'll need will be discussed during your first few days of classes.

You'll need CSA-approved, above-ankle steel-toe boots, a hard hat, and safety classes for labs and site visits.