Geomatics Engineering Technology

SCHOOL OF CONSTRUCTION

Overview

The Geomatics Engineering Technology program offers practical skills and a comprehensive theoretical foundation in geomatics, enabling you to master the collection, analysis, and application of spatial data.

Through hands-on learning with graphic information systems (GIS), global positioning systems (GPS), and remote sensing, you'll learn to map and interpret the environment, supporting fields like urban planning and environmental monitoring.

In this program, you will learn:

- land surveying methods to precisely determine point locations and measure distances/angles on earth
- remote sensing techniques for information gathering using satellite and aerial sensors
- cartography, which is the practice of mapmaking and illustrating spatial links between features
- how to use GIS for the management and presentation of geographic data
- how to use global navigation satellite systems (GNSS) and GPS technologies for global geo-spatial positioning
- how to use photogrammetry for precise measurements of areas
- geography by analyzing spatial patterns and human-environment interactions
- how to create a digital map and use it for interactive analysis.

Possible career paths available once you graduate include surveying, mapping technology, energy, civil engineering, GIS, government roles, and engineering technologist jobs. This two-year diploma consists of four 15-week semesters, with intakes every September.

If you are skilled in math, comfortable with technology, collaborative, communicative, and an outdoor enthusiast, this SAIT program is for you.

Traits, skills and aptitudes

Those in the geomatics engineering technology field are objective, innovative and directive.

You need:

- math skills
- the ability to think logically and critically
- the ability to study spatial problems and measurements
- problem-solving skills
- speaking and listening skills
- the ability to work as part of a multidisciplinary team.

You should enjoy working outdoors, analyzing information to find innovative solutions to problems, and taking a step-by-step approach to your work.

Professional designations and certifications

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

Graduates are eligible for certification by the Alberta Society of Surveying and Mapping Technologies (ASSMT) and the Association of Science and Engineering Technology Professionals in Alberta (ASET).

Credentials

After successfully completing this program, you'll be awarded a SAIT Geomatics Engineering Technology diploma.

Practicum, Co-op and Work Integrated Learning

During your final semester, you'll complete a capstone project where you'll perform research, analysis, drafting and editing to create a

formal report. You'll then present your report to instructors, other students and industry guests.

Admission requirements

Applicants educated in Canada

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

- at least 50% in Math 30-1 or at least 70% in Math 30-2, and
- at least 50% in English Language Arts 30-1 or English Language Arts 30-2, and
- at least 50% 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

2025/26 tuition and fees

The following costs are effective as of July 1, 2025.

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	$6,120	$1,668.60	$7,788.60
2	2	$6,120	$1,668.60	$7,788.60
			Total cost:	**$15,577.20**

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 2025/26 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	$21,300	$1,668.60	$22,968.60
2	2	$21,300	$1,668.60	$22,968.60
			Total cost:	**$45,937.20**

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

Year	Number of semesters	Tuition fees	Additional fees	Total 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 a standard computer hardware and software requirement. See the specific requirements on our computers and laptops page.

Find your booklist on the SAIT Bookstore's website. The booklist will be available closer to the program start date.

Can't find your program or course? The bookstore didn't receive a textbook list. Contact your program directly to determine if they're still refining course details or if you're in luck; no textbook purchase is required this term.