Mechanical Engineering Technology

SCHOOL OF MANUFACTURING & AUTOMATION

Overview

Mechanical Engineering Technology is a rigorous, hands-on, two-year diploma program designed to equip you with the technical, analytical and problem-solving skills required for a variety of dynamic careers in mechanical engineering.

This program offers a foundation in the core principles of engineering, combined with practical application and design.

The first year serves as a comprehensive introduction to the field, covering essential subjects such as:

- fundamental mathematics and science for engineering applications
- computer-aided design (CAD) to bring designs to life using industry-standard software
- specialized courses that provide a deeper understanding of mechanical engineering principles.

After successfully completing your first year, you'll choose from one of three specializations - Design and Analysis, Design and Development, or Design and Automation.

While we try to accommodate everyone's specialization preference, selection is based on academic performance in relevant courses, particularly in cases where demand for a specific major exceeds available spots.

Design and Analysis

If you are interested in designing sophisticated mechanical systems, design and analysis is for you. You will:

- learn to create complex mechanical systems and components
- study the effects of vibrations on machinery and how to mitigate them
- explore energy systems and thermodynamics, the principles governing heat, work, temperature and energy
- understand the behaviour of fluids in motion and at rest and their interaction with solids.

Design and Automation

This is for those interested in automated processes in numerous industries. In design and automation, you will:

- delve into designing complex automated systems for manufacturing and other applications
- study programmable logic controllers, IEC61131-3 languages and their applications in automation
- understand the design and operation, and apply various robotics integrations for industrial and manufacturing settings.

Design and Development

This is for you if you want to make prototypes for products and systems. In design and development, you will:

- acquire skills in creating scale models for testing design concepts
- learn rapid prototyping techniques to bring ideas to tangible forms quickly
- focus on designing products and systems for optimal human use and comfort.

Regardless of your specialization, this program prepares you for immediate employment and provides a strong foundation for further studies.

Traits, skills and aptitudes

Those in the mechanical engineering technology field tend to be objective, innovative and methodical.

You need:

- the ability to perceive objects in 3D by looking at 2D drawings
- sketching or drawing skills
- an aptitude for math

- the ability to solve problems and think outside the box
- writing and speaking skills
- the ability to work as part of a team with minimal supervision.

You should enjoy doing precise work, obtaining and analyzing test results, finding creative solutions to problems, and taking a methodical approach to your work.

Practicum, Co-op and Work Integrated Learning

You'll participate in a capstone project where you'll work in teams to address a real-world challenge. In some cases, this project will include an industry partner.

Accreditations, designations and certifications

This program is nationally accredited by Technology Accreditation Canada (TAC).

Graduates may apply for their Certified Engineering Technologist (CET) designation after two years of appropriate work experience.

While attending SAIT, you can become members of the following societies:

- Association of Science and Engineering Technology Professionals (ASET)
- Society of Automotive Engineers (SAE)
- American Society for Quality (ASQ)

Credentials

After successfully completing this program, you'll receive a SAIT Mechanical Engineering Technology diploma.

Admission requirements

Applicants educated in Canada

Applicants must demonstrate English language proficiency and completion of the following courses or equivalents:

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

SAIT accepts high school course equivalents for admission for applicants educated outside of 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 estimated 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
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1	2	$6,930	$1,764.50	$8,694.50
2	2	$6,930	$1,764.50	$8,694.50
			Total cost:	**$17,389**

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	$19,680	$1,764.50	$21,444.50
2	2	$19,680	$1,764.50	$21,444.50
			Total cost:	**$42,889**

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 $1,500 per full-time year.

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.

This is a bring-your-own-device program with a custom computer hardware and software requirement.

The preferred hardware requirements for this program are as follows:

- Intel i7 (gen 7 or newer or AMD Ryzen 7)
- 16 GB RAM or greater
- 1 TB HD or greater
- Nvidia Quadro or AMD Radeon Pro video card
- Windows 10 PC (build 1906 or higher)

There is also required software, including SolidWorks.

During the program, you will use industry-standard software. Although the minimum specification will work, we recommend the best computer you can afford.

Required equipment/tools

The required tools will be provided.

Required personal protective equipment (PPE)

Safety glasses are required on the first day of class.