



Mechanical Engineering Technology - Design and Automation Major

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 specialized majors - 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 Automation major

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, operation, and apply various integrations of robotics for industrial and manufacturing settings.

This program prepares you for immediate employment and provides a strong foundation for further studies. If you are interested in automated processes in numerous industries, this program is for you.

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
- taking a methodical approach to your work
- liaising between company leadership, technical departments and the factory floor.

Academic path

The opportunity to advance your education by transferring into this program or gain credit for previous postsecondary courses may be available.

There may also be opportunities to further your education once you graduate.

Learn more about [program and institution transfer options](#).

Professional 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 with a major in Design and Automation.

Practicum, Co-op and Work Integrated Learning

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

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

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 out what educational documents are accepted and assessment options](#).

SAIT may also accept courses completed at certain [international post-secondary institutions](#).

Costs

2024/25 tuition and fees

The following estimated costs are effective as of July 1, 2024.

Domestic Students

Year	Number of semesters	Tuition fees	Additional fees	Total per year
1	2	\$6,390	\$1,608	\$7,998
2	2	\$6,390	\$1,608	\$7,998

Year	Number of semesters	Tuition fees	Additional fees	Total per year
Total cost:				\$15,996

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

International Students

Year	Number of semesters	Tuition fees	Additional fees	Total per year
1	2	\$18,930	\$1,608	\$20,538
2	2	\$18,930	\$1,608	\$20,538
Total cost:				\$41,076

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.

2023/24 tuition and fees

The following costs are effective until June 30, 2023.

Domestic Students

Year	Number of semesters	Tuition fees	Additional fees	Total per year
1	2	\$6,270	\$1,570	\$7,840

Year	Number of semesters	Tuition fees	Additional fees	Total per year
2	2	\$6,270	\$1,570	\$7,840
Total cost:				\$15,680

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

International Students

Year	Number of semesters	Tuition fees	Additional fees	Total per year
1	2	\$18,558.60	\$1,570	\$20,128.60
2	2	\$18,558.60	\$1,570	\$20,128.60
Total cost:				\$40,257.20

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