Welding Engineering Technology

SCHOOL OF MANUFACTURING & AUTOMATION

Overview

Our rigorous Welding Engineering Technology program will equip you with skills in inspection, drafting, weld design and project management.

Guided by industry-experienced instructors, gain a comprehensive understanding of welding processes and train in quality control, welding metallurgy and fabrication techniques in state-of-the-art facilities.

As a student, you will learn the academic fundamentals of welding, structural steel design, advanced pressure vessel design, and construction and testing methodologies.

Through these lessons, you'll develop core skills in:

- practical welding and welding processes
- code and standards competencies for structural steel, piping, vessels and pipelines
- blueprint reading and interpretation
- the utilization of mechanized welding and robotics
- heat treatment and metallurgy
- welding process and procedure development
- non-destructive examination (NDE) techniques
- project management and welding economics
- failure analysis methods and applications.

As a graduate, you'll be primed for roles such as a welding specialist in engineering teams, researcher in welding technologies, supervisor in manufacturing environments, quality control and inspection officer and technical sales representative.

You'll be equipped to make meaningful contributions as a skilled technician across the manufacturing, construction, automotive and aerospace sectors.

Take the first step towards becoming a welding engineering technologist by enrolling today.

Traits, skills and aptitudes

Welding engineering technologists need:

- mechanical aptitude
- attention to detail
- manual dexterity and good hand-eye coordination to handle tools and materials precisely
- mathematical skills and proficiency in applying mathematical concepts such as geometry and trigonometry to practical situations
- problem-solving ability
- physical stamina and endurance to perform physically demanding tasks and the ability to work in various positions and environments
- safety consciousness.

Accreditations, designations and certifications

Certified Engineering Technologist (C.E.T.)

This program is accredited by Technology Accreditation Canada (TAC). Graduates are eligible to apply for their Certified Engineering Technology (C.E.T.) designation as long as they have completed at least two years of related technical work experience.

In Canada, a C.E.T. is an applied science, information or engineering technology professional capable of assuming responsibility and exercising independent judgment to perform technical tasks and solve problems in complex technological areas with limited direct

supervision.

The Association of Science and Engineering Technology Professionals of Alberta (ASET) represents applied science and engineering technology professionals in industry, educational institutions, the public, and the government within Alberta. ASET recognizes post-secondary programs accredited by Technology Accreditation Canada (TAC). Applicants for C.E.T. who graduated from a TAC-accredited program are not required to complete the ASET Certification Exam to validate technologist-level competency.

International Welding Technologist

This program is accredited as an International Institute of Welding (IIW) Authorized Training Body (ATB.) Our courses meet the approved training courses designed to meet all the requirements in the IIW syllabus.

The International Institute of Welding (IIW) is a worldwide network for welding and allied joining technologies, with a current membership of 56 countries from five continents. The world is harmonizing standards, and the IIW diplomas will be the international minimum used by most countries around the world.

Graduates of this program are eligible for the IWT Standard Route, the most direct route to becoming an International Welding Technologist (IWT). An IWT is recognized globally as having advanced knowledge and a critical understanding of welding and related technologies' theory, principles, and applicability.

Certified Welding Inspector

Graduates of this program are eligible to apply for certification under CSA W178.2 as a Level 1 Welding Inspector. A welding inspector's primary function is to monitor and perform examinations throughout a welding project.

To perform welding inspection activities in Canada, all welding inspectors must be certified to the CSA W178.2 standard set by the Canadian Welding Bureau CBW.) The CWB administers Canada's national welding standards, certifying welding companies that create products for use within Canada and the welders and welding consumables used in their creation.

Alberta Welding Examiner

Graduates of this program are eligible to apply to become a Welding Examiner, allowing them to conduct welder performance qualification tests and issue welder performance qualification cards on behalf of the Alberta Boilers Safety Association (ABSA.)

ABSA administers the Safety Codes Act and regulations to deliver safety programs related to pressure equipment. ABSA is also responsible for the certification of pressure welders and welding examiners.

Credentials

After successfully completing this program, you'll receive a SAIT Welding 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 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 Chemistry 20 or 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 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
1	2	$8,520	$1,764.50	$10,284.50
2	2	$8,520	$1,764.50	$10,284.50
			Total cost:	**$20,569**

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	$22,350	$1,764.50	$24,114.50
2	2	$22,350	$1,764.50	$24,114.50
			Total cost:	**$48,229**

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 $1,600 in the first year and $1,000 in the second 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.

Required equipment/tools

Your tools will be provided.

Required personal protective equipment (PPE)

You will require CSA-approved steel-toe boots and safety glasses, welding gloves, earplugs (supplied), a good-quality welding helmet and FR coveralls or an appropriate welding helmet.

We recommend waiting to purchase your equipment until after you start the program. We will discuss the industry-approved PPE in class.