Chemical Laboratory Technology

MACPHAIL SCHOOL OF ENERGY

Overview

Our Chemical Laboratory Technology program will get a positive reaction from those drawn to the chemical sciences and seeking a role that combines experimentation with practical application.

You will master the fundamentals of chemical laboratory techniques and develop hands-on expertise with sophisticated analytical instrumentation to analyze laboratory samples.

Engage in extensive hands-on laboratory training with the cutting-edge analytical instruments used in modern laboratory practices.

In this program, you will:

- gain comprehensive knowledge of chemical substances and their properties, reactions and safety protocols
- become proficient in the use of advanced analytical techniques and equipment for sample analysis
- develop a versatile skill set applicable to a wide range of scientific settings, from research and development to quality control.

Take advantage of the opportunity to participate in an optional 12-month paid work placement, giving you real-world experience, a taste of your future career and networking opportunities.

This program will prepare you to work as a chemical laboratory technologist or chemical laboratory technician across various sectors, such as industrial corporations, service laboratories, government agencies or educational institutions.

If you are an aspiring laboratory scientist or technician, technologist, or someone interested in research and development in chemical sciences, pharmaceuticals, or chemical technology, this program is for you.

Traits, skills and aptitudes

Those who work in laboratory technology tend to be methodical, innovative, and objective.

You need:

- integrity and a professional attitude
- a liking for science (especially human biology) and a keen interest in scientific work
- the ability to do detailed work accurately
- good colour and form perception (to study blood cells, etc.)
- the ability to listen and speak well
- the ability to get along with different people
- the ability to adapt to change quickly and easily.

You should enjoy taking a step-by-step approach to your work, studying results and developing procedures, and using computers and instruments for accurate and precise testing.

Professional designations and certifications

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

Graduates can also register with the Alberta Society of Engineering Technologists and Chemical Institute of Canada.

Credentials

After successfully completing this program, you'll receive a SAIT Chemical Laboratory Technology diploma.

Practicum, Co-op and Work Integrated Learning

You'll have the option to participate in a 12-month work term after your second semester.

During this work term, you'll perform a chemical laboratory technology technical project in an industrial, service, government or university laboratory under the supervision of a lab supervisor.

This work term is not required to graduate from the program.

Admission requirements

Applicants educated in Canada

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

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

2025/26 tuition and fees

The following estimated 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	$7,161	$1,668.60	$8,829.60
2	2	$6,184.50	$1,668.60	$7,853.10
			Total cost:	**$16,682.70**

TThe 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	$22,077	$1,668.60	$23,745.60

Year	Number of semesters	Tuition fees	Additional fees	Total per year
2	2	$19,066.50	$1,668.60	$20,735.10
			Total cost:	**$44,480.70**

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 for the first year and $500 for 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 personal protective equipment (PPE)

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

PPE is required in various labs. You'll need a lab coat and CSA-approved safety glasses (with UVEX and side shields) by the first day of class to enter the chemistry labs.