



Diagnostic Medical Sonography

SCHOOL OF HEALTH AND PUBLIC SAFETY

Overview

The Diagnostic Medical Sonography program provides comprehensive knowledge and practice in ultrasound technology, a critical component of modern healthcare diagnostics.

It will equip you with the technical expertise and interpersonal skills necessary to assess and evaluate body organs and structures, which will assist physicians in the medical diagnosis and ongoing health management of patients.

In this program, you will:

- learn the science behind high-frequency sound waves and their application in sonography and the instrumentation that produces ultrasound images
- assess and image fetal and gynecologic structures
- assess and image the intricacies of the heart
- assess and image the abdominal cavity, focusing on organs such as the liver, kidneys and pancreas
- assess and image the body's circulatory system (arteries and veins)
- assess and image superficial tissues, including the thyroid gland and breast tissue
- develop skills to provide quality patient care, from bedside manner to handling sensitive situations
- get an in-depth understanding of the human body's structure and function to enhance imaging
- learn to participate in medical research and maintain high standards of quality control in imaging
- master the performance of a variety of ultrasound scanning procedures with precision and care.

You will get hands-on training and practical learning experiences in labs and clinical settings. Upon graduation, you will be prepared for a fulfilling career in diagnostic medical sonography in hospitals and community clinics.

You will gain experience in sonography theory and techniques within clinical practice in patient care teams, enhancing collaborative skills vital in healthcare.

If you seek a career combining technology with direct patient care, are detail-oriented, enjoy working with advanced technology, and have strong communication skills, this program will prepare you to enter the workforce as a diagnostic medical sonographer, making a difference in the lives of patients every day.

Traits, skills and aptitudes

Those in diagnostic medical sonography tend to be objective, methodical and innovative.

You need:

- good health and upper body and shoulder strength
- physical dexterity to be able to use your hand, wrist, and arm for prolonged periods
- strong hand-eye coordination
- communication and observation skills
- the ability to visualize in three dimensions
- extensive knowledge of anatomy and physiology
- to be comfortable with human blood and tissue
- attention to detail
- critical thinking skills
- perseverance
- the ability to handle unpleasant situations and work under pressure
- teamwork skills
- to adhere to a high standard of medical ethics at all times.

You should enjoy working with all types of people, using technical equipment and compiling information.

As a diagnostic medical sonographer, you may work in environments where a considerable amount of time is spent standing or sitting while performing tasks that may be repetitive. In this profession, you should observe safety precautions and ergonomics to reduce the risk of exposure and injury. Individuals with previous chronic or repetitive strain injuries have experienced re-injury or aggravation of these conditions in this program or as a sonographer.

All medical personnel should be comfortable assessing injuries, performing patient care procedures which may be sensitive, and wearing personal protective equipment (PPE) for extended periods. This includes exposure to latex and other disinfectant materials.

You are strongly encouraged to refer to the [ALIS website for career, learning, and employment information for diagnostic medical sonographers](#) to ensure you can successfully meet the occupational requirements for the program and profession.

Professional designations and certifications

Graduates of this program are eligible to write the Sonography Canada registry exams in:

- Core (Physics), and
- Generalist, and
- Adult Echocardiography or Vascular, depending on the practicum pathway you completed within the program.

In addition, graduates are eligible to write the American Registry of Diagnostic Medical Sonography exams.

The Diagnostic Medical Sonography program delivered by SAIT is accredited by Accreditation Canada.

Our program administrators work closely with our Diagnostic Imaging Advisory Committee to ensure our curriculum continues to meet or exceed provincial and national accreditation standards.

Credentials

Upon successful completion of this program, you'll be awarded a SAIT Diagnostic Medical Sonography diploma.

Practicum, Co-op and Work Integrated Learning

You will complete required clinical practicums and rotate through different clinical settings to achieve specific clinical objectives.

By completing all practicum rotations, you will specialize in Generalist Sonography. In addition, you will complete a practicum pathway within the program, in which you'll specialize in either Adult Echocardiography or Vascular Sonography. You will be assigned your pathway selection before your first practicum.

You will practice all competencies associated with the practicum pathway you are assigned, though these competencies may not fully align with those detailed in your course outlines. Additionally, each competency associated with your practicum pathway will not necessarily be practiced consistently in all of your practicum rotations.

You will be assigned practicum placements with consideration given to your preference of location. However, due to limited availability in Calgary, it might be necessary for you to travel or relocate outside the city. Special considerations will not be accommodated.

In compliance with the practica agreements with our clinical partners, you will be required to provide specific documentation before you can participate in your practicum. [Find out what requirements you need for this program.](#)

Specialized Intakes

Some seats in this program are reserved for applicants currently residing in Saskatchewan to help meet the healthcare needs of that province.

Learn more about our [interprovincial health training agreements](#).

Admission requirements

Applicants educated in Canada

Applicants must demonstrate [English language proficiency](#) and completion of the following courses or equivalents:

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

- at least 75% in Biology 30, and
- at least 75% in Physics 30.

You must also achieve at least 50% in the [School of Health and Public Safety entrance tests](#).

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

2024/25 tuition and fees

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

Domestic Students

| Year | Number of semesters | Tuition fees | Additional fees | Total per year |
|--------------------|---------------------|--------------|-----------------|-----------------|
| 1 | 2.5* | \$8,475 | \$1,913 | \$10,388 |
| 2 | 2** | \$7,119 | \$1,589 | \$8,708 |
| 3 | 1 | \$2,373 | \$979 | \$3,352 |
| Total cost: | | | | \$22,448 |

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

*.5 indicates a combination of full-time semester(s) and part-time semester(s) in the same academic year. In many cases, you'll complete your practicum during this part-time semester. Part-time students are those taking less than nine (9) course credits in a semester.

** The second year of this program is broken up into three semesters, with semesters five and six focused on clinical practicum. Practicum-only semesters are considered part-time studies based on credit load. The two part-time semesters are equivalent to one full-time semester. You are not eligible for the UPass during your practicum semesters.

Books and Supplies

Books, supplies, and uniforms are approximately \$2,700 for the first year, \$600 for the second year, and \$500 for the final semester.

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](#). A laptop (non-Android) or Apple tablet is required, and a phone is not a suitable alternative.

Find your booklist on the [SAIT Bookstore's](#) website. Booklists are created by semester and available approximately two weeks before classes begin.

Required uniforms and personal protective equipment (PPE)

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

Additional fees

- A fee is associated with obtaining a police information check, including a vulnerable sector check, payable to the police or the

Royal Canadian Mounted Police (RCMP).

- You must have your immunizations reviewed by the SAIT Health Clinic. There is a \$75 charge to review vaccine history. Any vaccines you need to be administered will result in additional charges.
- A fee of approximately \$50 to \$100 is associated with an electronic student permit checking submission required for clinical practicum placements, payable to Synergy Gateway through the Verified software platform.
- A fee is associated with the CompTracker application used in this program.
- You are responsible for additional expenses related to your practicum, including pre-practicum requirements and relocation costs to practicum sites outside of Calgary.
- Sonography Canada certification exam fees are approximately \$1,525. Sonography Canada association dues are \$175 per year, with the option to purchase professional liability insurance.