



# Integrated Water Management

Create solutions for global and local water issues with a career in water management. This program will prepare you for various roles such as water management specialist, water quality technician, watershed planner, flood planning technologist or junior hydrologist.

Get the training to become a water management expert and develop a strong understanding of the complex solutions and decisions required to balance the preservation of water-related ecosystems. Learn water management best practices to manage hazards, safeguard human health and well-being, and support economic activities. You'll gain applied knowledge and market-sought skills developed through a final capstone project working directly with industry, as you specialize in either Water Environmental Technologies or Advanced Industry Applications. Your expertise will develop through a combination of classroom and hands-on learning including field school and virtual reality labs.

Some of the key skills or competencies developed in the Integrated Water Management program include:

- develop a water monitoring program
- conduct key field measurements in hydrology, hydrogeology, soils, and vegetation using commonly used and emerging equipment and technology
- water data acquisition, management, and analysis to inform design and decision-making
- perform hydrological and hydrogeological calculations to inform design such as surface flow, stormwater control or restoration measures
- fundamental applications of GIS, Excel, HEC-RAS, and historical imagery
- stakeholder engagement and conflict resolution
- project planning and management
- select appropriate water management strategies and applications using multi-criteria analysis and systems thinking
- support water-related permitting applications and reporting, such as wetland assessments and Water Act approvals
- comprehensive understanding of the social, cultural, health, safety, and environmental aspects of water management, including Indigenous water stewardship
- develop emergency response and recovery plans incorporating increasing risks of extreme events and climate change
- conduct an emergency response adhering to incident command structure protocols
- apply tools, approaches, and resources for both climate adaptation and mitigation to water management

## What is integrated water management?

Integrated water management is the coordinated management of water in an integrative, cross-sectoral, participatory and adaptive manner. This is a widely adopted management approach endorsed by the United Nations and utilized globally. SAIT, in combination with a multi-stakeholder advisory group and Imperial, has created the Integrated Water Management diploma program to give students the tools and expertise they need to work on solutions for both local and global water issues.

This initiative is the first integrated water program diploma in Canada. Graduates will have transferable skills for working in a multitude of industries such as energy, government, non-profit, consulting, health, agriculture, education, food and beverage, manufacturing, transportation, engineering and construction.

As a graduate of the Integrated Water Management diploma program you will recognize the role of total water management in identifying local solutions for global water issues. You will demonstrate knowledge of the complex elements, interfaces, and approaches considered in supporting practical integrated water management. As a student, you will acquire specialized applied knowledge and market-sought skills developed through a work-integrated capstone research project in either Water Environmental Technologies or Advanced Industry Applications.

## Is this the right fit for me?

Students with an aptitude and interest in science and mathematics tend to excel in this program. This program promotes interdisciplinary perspectives and includes work across various energy sectors; diversity and different perspectives are encouraged. Students should be prepared to spend as many hours studying and completing coursework as they do in class.

## Accreditation

Graduates are eligible for membership in the following professional associations:

- Association of Science and Engineering Technology Professionals of Alberta (ASET) through certification exam.
- ECO Canada as a Professional in-training.

## Credentials

After successfully completing this program, graduates will receive a SAIT diploma in Integrated Water Management.

## Admission requirements

### Admission dates

This program may not have an intake every semester. See available intakes above.

Intake semester	Semester begins	Applications open	Domestic applications close*	International applications close
Winter 2023	Jan. 9, 2023	March 30, 2022	Oct. 27, 2022	Now closed
Spring 2023	May 8, 2023	June 13, 2022	Feb. 24, 2023	Now closed
Summer 2023	July 4, 2023	Oct. 5, 2022	April 28, 2023	June 20, 2023
Fall 2023	Sept. 5, 2023	Oct. 5, 2022	June 28, 2023	May 23, 2023
Winter 2024	Jan. 8, 2024	March 29, 2023	Oct. 26, 2023	Sept. 28, 2023
Spring 2024	May 6, 2024	June 12, 2023	Feb. 23, 2024	Jan. 22, 2024

\*In some instances, domestic applications will be accepted after the application deadline. In that case, the program's intake status will remain open.

## Program requirements

Completion of the following courses or equivalents:

- at least 60% in English Language Arts 30-1, OR 60% in English Language Arts 30-2, AND,
- at least 60% in Math 30-1, AND,
- at least 50% in Chemistry 20, OR at least 50% in Physics 20, OR at least 50% in Biology 20.

Applicants holding relevant science (mathematics, physics, chemistry, geology, or geophysics) or engineering degrees or courses from a post-secondary school would also be accepted with approval from the program's academic chair. A combination of education and experience will be considered.

All applicants must demonstrate [English language proficiency](#) prior to admission, including students educated in Canada.

SAIT accepts [high school course equivalents](#) for admission. If you don't meet the requirements, consider [Academic Upgrading](#).

SAIT evaluates international documents for admissions. After you've applied, consider our [international document assessment](#) service if your education is from outside of Canada. SAIT may also accept courses completed at certain [international post-secondary institutions](#).

## Direct entry: four-step process

**Step 1:** Read the program information to see the qualities needed for student success.

**Step 2:** Ensure that you meet all of the admission requirements listed above.

**Step 3:** [Apply to the program](#) and [submit your transcripts](#).

Admission will be extended on a first-qualified, first-offered basis until the program is full.

**Step 4:** Continue to monitor your [application status](#) through [mySAIT.ca](#).

You must [submit final transcripts/grades](#) to show you have completed the courses and met the minimum admission requirements by the transcript deadline or your seat will be rescinded.

This program meets the eligibility criteria for the [Post-Graduation Work Permit program](#) for international students as long as the

student is enrolled in the on-campus delivery mode or completes more than 50% of the courses on campus (for the blended option). International students attending all classes online will NOT be eligible for a Post-Graduate Work Permit. International students are responsible for maintaining their eligibility throughout their studies.

## Communication during admission

Email is the primary source of communication during the selection process. Ensure your personal email account is managed appropriately to receive our emails, files and communications. We recommend you add the [macphail.students@sait.ca](mailto:macphail.students@sait.ca) domain to your safe senders' list or you risk missing critical email messages.

## When do classes start?

Classes for this program adhere to the following year start and end dates based on the semester the student begins their program.

Classes begin	Year start date	Year-end date
Fall 2022	Sept. 6, 2022	April 28, 2023
Fall 2023	Sept. 5, 2023	April 26, 2024

## Costs 2022/23

### Domestic tuition and fees

Cost per credit: \$317

Year	Number of semesters	Tuition fees	SAIT fees	Saitsa fees*	Total
1	2	\$9,510	\$916	\$553	\$10,979
2	3	\$9,510	\$916	\$553	\$10,979

### International tuition and fees

Cost per credit: \$887.90

Year	Number of semesters	Tuition fees	SAIT fees	Saitsa fees*	Total
1	2	\$26,637	\$916	\$291	\$28,106
2	3	\$26,637	\$916	\$291	\$28,106

\*Maximum fee. Actual fees may be less and are based on the number of credits a student takes per semester and whether they opt-out of health and dental benefits.

### SAIT fees

- Campus athletic and recreation fee: \$196
- Universal transit pass (Upass): \$320
- Student support fee: \$200
- Student technology fee: \$200

### Saitsa fees

#### Student Association fee

- Maximum: \$291

This is the maximum amount the student will pay. Actual fees may be less and are based on the number of credits the students take per semester.

### Health and dental fees

- Health plan: \$127

- Dental plan: \$135

Students with existing health and/or dental plans can opt-out. Please refer to [Saitsa's website](#) for information.

For more information on health and dental benefits for international students, please contact the [International Centre](#).

## Books and supplies\*

This program primarily uses open-source books and most required supplies are provided. Thus, books and supplies are approximately \$200 per year.

For an estimate of the costs associated with purchasing a computer that meets the program's hardware and software requirements, see our [computers and laptops page](#).

Learn more about [tuition and financial aid](#).

\*Tuition, fees, books and supply costs are subject to change.