

MEDICAL LABORATORY TECHNOLOGY (MDLY)

Prepare for a high-demand, rewarding, and critical health care career

Train to be a vital member of the health care team by becoming a laboratory technologist. You'll build your analytical, interpretation, and critical thinking skills to report patient results to provide clinicians with the vital information they need to provide the best courses of treatment for the patient. Through classroom learning, laboratory exercises, and clinical placements, you'll learn to perform complex analyses necessary for diagnosis and treatment in a fast-paced laboratory environment.

Prepare for entry-level medical laboratory technology practice in each of these five disciplines:

- Clinical hematology – blood and blood disorders
- Transfusion science – preparation and transfusion of blood
- Clinical chemistry – determination of chemical substances in body fluids
- Clinical microbiology – detection of bacteria
- Clinical histotechnology – dissection and preparation of body fluids and tissues for microscopy

When certified, you'll discover a wide range of career opportunities, from hospitals to private and public labs.

Program highlights

- Limited enrolment
- Practical fieldwork in an accredited hospital or private lab in Canada
- Grads are eligible to write the national certification examination administered by the Canadian Society for Medical Laboratory Science (CSMLS)
- Accredited by Accreditation Canada
- Free tuition and funding supplies for eligible Ontario residents through the Learn and Stay Grant

Program of study for 2025-26 Academic Year

Semester 1		Credits
ENG 1121	Research & Writing/Health Sciences	3
MLT 1300	Quality	3
BIO 1311	Anatomy and Terminology	3
MLT 1301	Lab Equipment and Safety	4
MTH 1310	Lab Mathematics	3
MLT 1306	Specimen Collection and Handling	3
One General Education courses. ¹		3
Credits		22
Semester 2		Credits
MLT 1302	Molecular Techniques	3
MLT 1303	Lab Techniques - Microbiology	4
MLT 1304	Lab Techniques - Hematology	3
MLT 1305	Lab Techniques - Chemistry	3
MLT 1307	Specimen Collection and Handling Lab	3
MLT 1308	Introduction to Transfusion	3

GEN ED		Credits
Semester 3		19
BIO 1301	Clinical Microbiology II	2
BIO 1302	Clinical Microbiology II Laboratory	3
CHM 1320	Clinical Chemistry II	2
CHM 1321	Clinical Chemistry II Lab	3
MLT 1310	Clinical Histotechnology II	2
MLT 1311	Clinical Histotechnology II Lab	3
MLT 1312	Transfusion Science II	2
MLT 1313	Transfusion Science II Lab	3
MLT 1314	Clinical Hematology II	2
MLT 1315	Clinical Hematology II Laboratory	3
Credits		25
Semester 4		
BIO 1303	Clinical Microbiology III	2
BIO 1304	Clinical Microbiology III Laboratory	3
CHM 1440	Clinical Chemistry III	2
CHM 1441	Clinical Chemistry III Lab	3
MLT 1400	Clinical Histotechnology III	2
MLT 1401	Clinical Histotechnology III Lab	3
MLT 1402	Clinical Hematology III	2
MLT 1403	Clinical Hematology III Laboratory	3
MLT 1404	Transfusion Science III	2
MLT 1405	Transfusion Science III Lab	3
Credits		25
Semester 5		
MLT 1031	Comprehensive Review I	1
MLT 1500	Clinical Placement I	12
One General Education Course. ¹		3
Credits		16
Semester 6		
MLT 1032	Comprehensive Review II	1
MLT 1600	Clinical Placement II	12
Credits		13
Total Credits		120

¹ For more information regarding General Education courses, click here (<https://cambriancollege.ca/general-electives/>).

Admission requirements

For graduates of the new curriculum Ontario Secondary School Diploma (30 credits) curriculum or equivalent or mature student status, including:

- Any grade 12 English (C) or (U)
- Any grade 12 mathematics (C) or (U)
- Any grade 12 chemistry (C) or (U)
- Any grade 11 (U) or (C) or grade 12 biology (U)

Please note: A minimum of 70% is required in each prerequisite course.

Additional admission requirements

Students will be required to provide proof of certain immunizations and non-medical requirements to work with samples in medical laboratories both at the college and on placement.

Full medical requirements:

- Tetanus – diphtheria – pertussis (adult dose on or after 18th birthday)
- Measles, mumps, rubella (two doses of vaccine or proof of immunity)
- Varicella (vaccine or documentation of immunity status)
- Polio (vaccine or documentation of immunity status)
- Hepatitis B (documentation regarding immunity status)
- Tuberculosis screening (documentation of two-step mantoux skin test, subsequent one-step – required annually)
- Influenza vaccine (obtained annually when vaccination becomes available)
- COVID-19 Immunizations (two to three doses)

Full non-medical requirements:

- Respiratory Mask Fitting N95-3M models (required every two years)
- Criminal record check with vulnerable sector screening (required annually)
- WHMIS training (required annually)
- Accessibility for Ontarians with Disabilities Certificate (AODA)
- Worker Health and Safety Awareness in Four Steps (Bill 18)

Please note: On-campus labs (years one and two), students must provide proof of:

- WHMIS certificate
- Tetanus
- Diphtheria
- Hepatitis B

Program delivery

2025-2026

Fall term start

SEMESTER 1: Fall 2025
 SEMESTER 2: Winter 2026
 SEMESTER 3: Fall 2026
 SEMESTER 4: Winter 2027
 SEMESTER 5: Fall 2027
 SEMESTER 6: Winter 2028

Accreditation

The Medical Laboratory Technology program is an accredited program with Accreditation Canada (<https://accreditation.ca/health-education-accreditation/>).

Registration to practice / additional testing

Graduates are eligible to write the national certification examination conducted by the Canadian Society for Medical Laboratory Science (CSMLS). Certification qualifies you for registration with the College of Medical Laboratory Technologists of Ontario (CMLTO). All costs associated with registration exams and the registration process are the graduate's responsibility.

Specific program pathways

College or university degree opportunities

If you are a graduate of this program, you may continue your studies at a college or university and you may receive credit(s) for your prior college education. Refer to Cambrian's college and university agreement (<https://cambriancollege.ca/supports-services/articulation-agreements/universities-in-canada/>) details for further information.

Employment opportunities

While most medical laboratory technologists (MLTs) work in public hospital laboratories, MLTs also find challenging employment in other areas. From industrial research and public health laboratories to forensic and pharmaceutical laboratories, the MLT's analytical, scientific, and technical skills are a valuable asset. Other career options may include:

- Consulting
- Sales and marketing
- Research and product systems
- Laboratory information systems
- Supervision / administration / management
- Education
- Public health / infection control
- Technical support
- Quality assurance / total quality improvement
- Forensic biological sciences

Contacts

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INTERNATIONAL ADMISSIONS

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