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 Medical Laboratory Technologist. You will 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 will learn to perform complex analyses necessary for diagnosis and treatment in a fast-paced laboratory environment. As part of the program, you'll also gain phlebotomy skills so you can successfully collect blood specimens for laboratory testing or other health care needs.

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

- Clinical hematology – analysis of cellular and non-cellular components of blood and hemostasis
- Transfusion science – preparation of blood for transfusion and storage of blood and blood products
- Clinical chemistry – analysis of components in blood, urine, and other body fluids
- Clinical microbiology – prepare, culture, incubate, and stain clinical microbiology specimens to identify cause of infection
- Clinical histotechnology – fix, process, embed, cut, and stain histological specimens to demonstrate cellular and non-cellular elements
- Phlebotomy in is a mandatory component in both the didactic and clinical portions of the program

When certified, you will 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 certification examination administered by the Canadian Association of Medical Laboratory Professionals Regulators (CAMLPR) (https://camlpr.org/)
- Accredited by Accreditation Canada (https://accreditation.ca/)
- Free tuition and funding supplies for eligible Ontario residents through the Learn and Stay Grant
- Many clinical placement sites are with northern Ontario partners but could be at any affiliated lab (you will be responsible for all costs associated with your clinical placement including, moving expenses, travel, and accommodations)

Program of study for 2027-28 Academic Year

Semester 1		Credits
BIO 1320	Anatomy and Terminology	2
ENG 1121	Research & Writing/Health Sciences	3
MLT 1300	Quality	3
MLT 1301	Lab Equipment and Safety	4
MLT 1306	Specimen Collection and Handling	3
MTH 1325	Lab Mathematics	2
One General Education courses [1]		3
	Credits	**20**
Semester 2		
MLT 1303	Lab Techniques - Microbiology	4
MLT 1308	Introduction to Transfusion	3
MLT 1316	Molecular Techniques	2
MLT 1317	Lab Techniques - Hematology	4
MLT 1318	Lab Techniques - Chemistry	4
MLT 1319	Specimen Collection and Handling Lab	2
One General Education courses [1]		3
	Credits	**22**
Semester 3		
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	Clinic 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 1531	Comprehensive Review I	1
MLT 1550	MLT Clinical Skills Simulation	12
One General Education Course. [1]		3
	Credits	**16**
Semester 6		
MLT 1032	Comprehensive Review II	1
MLT 1600	Clinical Placement	12
	Credits	**13**
	Total Credits	**121**

[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 65% is required in grade 12 mathematics.

For limited programs, the minimum prerequisite grades required for successful admission will be determined by the quality and quantity of the applicant pool. Additional post-secondary education will also be considered as part of students' applications to limited enrolment programs.

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.

FOR ENTRY INTO FIRST AND SECOND YEAR LABS:

Deadline for incoming fall students: September 30

Medical requirements:

- Tetanus/Diphtheria (Proof of primary series (3 doses) most recent dose must be within last 10 years)
- Pertussis (Adult dose after the age of 18)
- Polio (Proof of primary series containing a minimum of 3 doses)
- Measles, Mumps, Rubella (MMR) (Documented proof of two vaccinations or bloodwork showing immunity)
- Varicella (Documented proof of two vaccinations or bloodwork showing immunity)
- Influenza (Optional, but highly useful and recommended)
- COVID-19 Vaccination Receipts (Required primary series 2-3 doses)
- Hepatitis B Vaccinations (Proof of primary series of vaccinations is required)
- Hepatitis B Antibody Bloodwork (Mandatory – bloodwork must show proof of immunity)

Non-medical requirements:

- WHMIS

FOR ENTRY TO FINAL YEAR CLINICAL:

Deadline to complete varies depending on placement start date

Medical requirements:

- Influenza (Optional, but highly useful and recommended)
- Tuberculosis (Mantoux) – 2 Step TB Skin Test

Non-medical requirements:

- Mask Fit (N95-3M models, Valid for 2 years)
- Vulnerable Sector Criminal Record Search (Valid for 1 year)
- WHMIS (Valid for 3 years)
- Workplace Health and Safety 4 Step (Does not expire)
- AODA – Accessibility for Ontarians with Disabilities Act (Does not expire)
- Student Declaration of Understanding (Required – Valid for 1 year)

Program delivery

2027-2028
Fall term start

Semester 1: Fall 2027
Semester 2: Winter 2028
Semester 3: Fall 2028
Semester 4: Winter 2029
Semester 5: Spring 2029
Semester 6: Fall 2029

Accreditation

The Medical Laboratory Technology program is an accredited program with Accreditation Canada. (https://accreditation.ca/)

Registration to practice / additional testing

Graduates are eligible to write the Canadian Association of Medical Laboratory Professionals Regulators (CAMLPR) certification exam.Certification qualifies you for registration with the College of Medical Laboratory Technologists of Ontario (CMLTO) or a similar provincial regulatory body. 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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