

Medical Laboratory Technology

What differentiates us?

- The Oulton College Medical Laboratory Technologist Diploma Program prepares you for a rewarding career as a Medical Laboratory Technologist in a two-year condensed course to get you out into the work force faster.
- Our Medical Laboratory Technologist program provides you with the experience and knowledge to be successful as a Laboratory Professional in the rapidly growing field of Laboratory Science.
- You will apply the classroom theory to hands-on experiences in our own state of the art laboratory – beginning with practice and simulation, preparing you for clinical rotations throughout the course and 11 weeks of hospital placement: two weeks during your first year, and nine weeks in your second year.
- Your education will be challenging and dynamic, providing education in theory and in a practical laboratory setting.
- Our program provides wonderful opportunities for networking and exposure to Guest speakers from all areas of the profession.
- Highest quality of education has created relationships and reputation of excellence.

Why should you come here?

- You will receive individual attention from qualified instructors: Medical Laboratory Technologists. The best in the industry.
- Challenging and rewarding education. You will be ready for success as a Laboratory Professional!
- You will get lots of hands-on experience to build your confidence and expertise.
- You can earn your diploma in two years with the expertise and knowledge to be a confident Medical Laboratory Technologist and healthcare professional.
- **We maintain a minimum employment rate of 95%!**

Program Outline

You will graduate from this two-year (2 year) program with the opportunity to find employment in hospitals or private laboratories. The Medical Laboratory Technologist's primary role is to perform laboratory analyses and interpret clinical results, address quality management, and interact with patients.

Further to practicing your skills in our lab, this program includes two practicums totaling 11-weeks in our off-site partnered health care facilities.

Oulton College is currently registered and accredited through the Medical Laboratory Technology Program from the Health Standards Organization (HSO) and its affiliate accreditation (Accreditation Canada) through their new EQUAL Canada program.

If the health care industry interests you and you enjoy analytical inquiry, our Medical Laboratory Technology Program may be the program for you.

Admissions Requirements

- Grade 12 Diploma, Adult Diploma or GED
- Grade 11 or 12 Biology* with a minimum average of 65%
- Grade 11 or 12 Chemistry* with a minimum average of 65%
- Grade 11 or 12 Academic Math* with a minimum average of 65%
- Grade 11 or 12 English* with a minimum average of 65%
- Credits from university are considered assets
- Meeting with an Admissions Advisor
- Completion of the pre-admissions Aptitude Test
- Completion of a Faculty Interview
- Acceptance by the Admissions Committee
- Completion of the Post-Admissions Package
- Geographical quotas may apply.

**Level II or University Preparatory courses are required based on the New Brunswick Anglophone High School Curriculum. For other provincial or international requirements please contact us directly.*

Unless they have completed a minimum of three years of study at a school where English is the language of instruction, international students whose first language is not English must submit proof of English language proficiency:

- IELTS – 6.0, with no individual score lower than 5.5
- TOEFL (IBT) – 80, with no individual score lower than 18
- Duolingo – minimum score of 90 with no subject test score less than 90
- Cambridge English – minimum score of 169
- CAEL – minimum score of 60
- Pearson Test of English – minimum score of 55
- MELAB – minimum score of 80

Career Choices

- Hospital
- Private clinics/labs
- Community Health Centers
- Canadian Blood Services
- Industrial laboratory/quality assurance
- Pharmaceutical and biological sector
- Research Laboratories
- Laboratory equipment sales representative/technical support
- Educational institutions

You Will Learn

- Anatomy and Physiology
- Safety & Infection Control
- Basic Laboratory Procedures
- Specimen Processing and Procurement
- Laboratory Mathematics
- Analytical Principles
- Communications & Professionalism
- Quality System Essentials
- Clinical Chemistry
- Hematology
- Transfusion Medicine
- Microbiology
- Histotechnology
- Technical Writing and Research

Course Descriptions

Anatomy & Physiology

The student will learn the different body systems, structure and function of the major organs, pathophysiology of common diseases and conditions within each system. This course will provide the foundation for subsequent courses in microanatomy, histology, transfusion science, hematology and clinical chemistry. The student will become familiar with clinical procedures, laboratory tests and abbreviations related to each system and other specialized areas of medicine.

Safety & Infection Control

The student will review and develop a working knowledge of safety and infection control protocols in the laboratory environment:

- Routine Practices
- Personal Protective Equipment
- Utilization of safety devices
- WHMIS
- Spill containment and clean up procedures
- Incident reporting
- Occupational health and safety guidelines
- Infection Control
- Appropriate methods for disinfection and sterilization

Basic Laboratory Procedures

This course will provide the student with knowledge of labware, microscopy, basic laboratory instrumentation, reagent preparation, and basic laboratory procedures. Proper use, safety and maintenance will be emphasized.

Specimen Processing and Procurement

Students will learn how to safely collect blood samples from patients for routine and specialized collection methods. They will also learn procedures in handling, transporting, processing, and storing laboratory specimens. Laboratory information systems are covered, as well as an introduction to various laboratory departments.

Laboratory Mathematics

Students will learn the mathematics used in a medical laboratory environment including:

- Mathematical essentials
- Measurement systems and conversion procedures
- Dilutions, solutions, and concentrations
- Charts, tables, and graphs
- Introductory statistics

Analytical Principles

Students will learn about analytical principles used in the analysis of laboratory specimens in clinical laboratories. Students will learn about various analytical techniques including spectrophotometry, electrochemistry, chromatography, electrophoresis, and immunoassays.

Communications & Professionalism

This course will discuss skills in effective communication and key aspects of professionalism that impact client care. The student will learn strategies in dealing with conflict, change management and critical thinking. Ethical and legal requirements, scope of practice and professional development will be discussed as important factors in the professional practice of the medical laboratory technologist.

Quality System Essentials

Students will learn about all aspects of quality management in laboratory practices. There will be an emphasis on quality control techniques, quality policies, planning and quality assurance. Students will also learn the importance of quality management processes in ensuring patient safety and accuracy of test results.

Hematology

Students will study blood cell lines in bone marrow, peripheral blood and other body fluids. Students will learn to differentiate normal and abnormal blood cells and study the concepts of coagulation and hemostasis. Students will learn to recognize abnormalities and link them to diseases such as: leukemia, anemia and thrombocytosis.

Transfusion Medicine

Students will learn about immunity, the major blood group systems and explain the significance of these in transfusion medicine. Pre-transfusion testing such as ABO/Rh typing, antibody screening, blood products and compatibility testing will be studied.

Microbiology

Students will learn how to identify clinically significant microorganisms in specimens taken from the human body including bacteria, viruses, parasites, and fungus. Emphasis will be placed on isolating and identifying disease-causing microorganisms. Students will also learn how to screen and confirm microorganism resistance and susceptibility to antibiotics.

Histotechnology

Students will learn the principles and practices of preserving and preparing clinical specimens for histological and microscopic examination. Students will learn special staining techniques for identification of microanatomy of body tissues and their components.

Research and Technical Writing

This course will introduce students to basic research and technical writing as it applies to Medical Laboratory Science. Students will consider the progression of ethical standards in medical research. Students will use various medical journals to track the development and progression of clinical methodology. Students will be responsible for completing their own research proposal.

Board Exam Prep

At the end of their second year, students will complete an intensive exam preparation course to help identify and address strengths and weaknesses ahead of the board certification exam.

Practicum

The student who meets all the work term criteria will be placed in a health care facility for a 2-week and a 9-week practicum session. Specific objectives in all aspects of program and national competencies must be met before progressing to this module. Successful completion is mandatory for graduation from the program.

Cost Breakdown

Please refer to your contract for the detailed cost/ tuition breakdown. Costs vary by year, so please ensure you are referring to the correct dates.