



Edison College Canada
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Medical Laboratory

Assistant Diploma

36 Weeks Program





Program Duration:
Theory: 30 Weeks / 750 Hours
Practicum: 6 Weeks / 120 Hours



Delivery Methods:
Combined In-Class & Online



Campus Location:
Victoria, British Columbia

Program Description

The Medical Laboratory Assistant Diploma program provides both a theoretical foundation and a practical skill set. This in-demand and career-focused program includes courses on medical terminology, clinical chemistry, microbiology, urinalysis, ECG, and phlebotomy training for the application of current medical laboratory procedures.

This Medical Laboratory Assistant program prepares graduates to work as Medical Laboratory Assistants at a medical laboratory within a variety of institutions, both in public (hospitals) or private settings (such as LifeLabs, etc.). The duration of this diploma program is 36 weeks, including a 6-week practicum at a Lifelabs Clinic.

Workplace Settings

- Hospital Laboratories
- Industry Laboratories
- Private Clinics
- Other Health Care Settings
- Phlebotomy Clinic

Estimated Salary

Medical Laboratory
Assistant
\$53,204

AVERAGE ESTIMATED
EXPERIENCED WAGE PER YEAR

*This estimate is based on available employment data at the time. Actual salary will be based on numerous factors.
Source: workbc.ca



Admission Requirements

- **High School Graduate or equivalent OR Mature student status (19 years or older prior to starting the program)**
- **Meet one of the following English Language Proficiency requirements:**
 - Minimum Grade 12 English (Domestic Students)
 - Overall IELTS 6.0, CLB Level 7, Duolingo score of 95-100, or ECC test score of 67/100
- **Keyboarding skills of 40 wpm**
- **Criminal Record Check**
- **Documented proof of Vaccinations**





Courses

Healthcare Communication Basics

Effective and efficient communication is fundamental to the success of any office, organisation, or business. This course will introduce students to the practices of business and professional communication in a healthcare setting and across all media platforms.

Laboratory Safety and Asepsis

This course will provide students with an orientation to laboratory safety, including the use, care, and maintenance of labware and instrumentation, preparation of reagent solutions, and occupational health and safety standards and practices in the workplace. Students will be introduced to standards for the recognition, control, handling, storage, labelling, and disposal of controlled hazardous materials. An overview of the need for quality assurance and quality control policies, procedures, and practices will be included. This course also introduces the students to the principles of infection and transmission, infection control, asepsis and aseptic technique (barrier protection techniques, surface asepsis, pre-cleaning and disinfecting, sterilisation) in a healthcare environment, and the role and responsibility of the medical lab assistant for infection prevention. The students will learn to provide first aid procedures (standard first aid level C), perform CPR, and use an automated external defibrillator (AED).

Professionalism and Ethics

This course is designed to provide students with an opportunity to consider issues around professionalism, such as ethical decision-making, standards of practice, accountability, and the legal and regulatory frameworks within which medical laboratory assistants (MLAs) must practise. The emphasis will be on employment within the province of B.C.

Fundamentals of Medical Terminology

In this course, students will explore the foundations of medical terminology by examining its history, word usage, correct application of medical terms, and the principles of medical word building.

Anatomy, Physiology, and Medical Terminology

This course provides an introductory study of the structure, anatomy, organisation, physiology, and function of eleven human body systems plus the eyes (sight) and the ears (hearing). The medical terminology associated with each system is explored in detail, using a textbook that is designed to help the student establish a solid and logical medical vocabulary.

Laboratory Mathematics and Measurements

This course is designed to provide students with the mathematical skills required in medical laboratories. This will be accomplished by improving critical reasoning skills and requiring students to engage in problem-solving exercises designed to increase basic mathematical proficiency, fluency, and confidence. Applications will include measurement, solution dilutions, temperatures, percentages, SI units, and the metric system, 24-hour time. Maths used for quality assurance programs will also be introduced in this course.

Phlebotomy in the Medical Laboratory

This course introduces students to the skills and practices required of an MLA working in a clinical laboratory setting. This course will reinforce and develop the practical phlebotomy skills used to perform a variety of blood collection methods, using proper techniques and standard precautions. Blood collection procedures performed will include the use of vacuum collection devices, syringes, capillary skin punctures, butterfly needles, and blood culture vials. Emphasis will be placed on asepsis infection prevention, safety, patient identification, specimen labelling, quality assurance, specimen handling, processing, and accessioning.

Hematology Basics

This course introduces students to the theoretical underpinnings and principles of hematology as found in the hematology and immunohematology sections within a medical/clinical laboratory setting. Topics include blood cell creation, components of whole blood, coagulation and hemostasis, serology, transfusion medicine, and immunology. Students will review the practice of quality assurance in relation to these hematology laboratory sections.

Clinical Microbiology Basics

This course introduces students to basic microbiology fundamentals, including quality control, safety, collection, setup, culture media, inoculation, incubation, staining procedures, and using microscopes. Standard precautions will be reviewed with an increased focus on the principles of microbiology. Students will be given insight into systems and methods for the identification of microorganisms and the subsequent decisions on patient treatments that will then arise.

Clinical Chemistry Basics

The principles and theory of chemical analysis, as it relates to clinical specimens (blood and other fluids), will be introduced. Students will cover specimen processing, analysis, test interpretation, and quality control procedures used in both manual and automated clinical chemistry testing. Students will review the most common and routine tests, the biochemical substances or chemical elements being measured, and the physiological implications of abnormal results (i.e., too low or too high). Ethics regarding lab results will be reviewed.

Urinalysis and Bodily Fluids

This course introduces students to the theoretical underpinnings and principles of urinalysis in the medical laboratory setting. The anatomy and physiology of the renal system, urine formation, and the microscopic examination of urinary sediment will be introduced. Fecal and other body fluid collections and analysis procedures will also be examined. This course focuses on skill development in the performance of collection and testing methods using proper techniques and standard precautions.

An Introduction to Histology and Cytology

This course introduces students to basic theoretical knowledge of histology and cytology as medical science disciplines. Students will develop an understanding of the microscopic structure, organization, and functions of human cells and tissues in health and disease, and develop expertise and practical skills in those techniques used in the collection and preparation of specimens, for diagnostic purposes.

The Cardiovascular System and ECGs

This course provides an in-depth study of the anatomy and electrical conduction system of the heart. Students will learn how to perform electrocardiograms, blood pressure monitoring, the use and maintenance of equipment, and the analysis of electrocardiogram tracings, including how to identify tracings that may require immediate medical attention.

Career and Employment Strategies

This course focuses on providing students with the tools and skills to develop, enhance, and maintain a goal-oriented portfolio of professional career information using available technologies. Students will learn to create cover letters and resumes, how to manage their social media presence, and how to promote their skills to create and find employment opportunities.

Work Experience (Practicum)

This mandatory course provides students with the opportunity to apply both theory and practice in a real-world, practicum-based, clinical work setting. To participate, the student will have met or exceeded requirements for successful venipunctures and the successful completion of ECGs.



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