MEDICAL LAB SPECIALIST

One-Year Embedded Technical Diploma

31-513-2

The Medical Lab Specialist prepares students to meet the growing demand for certified laboratory professionals by building a strong foundation in clinical laboratory theory and practice. Students will apply knowledge and core concepts in biology, chemistry, and medical terminology, enabling them to recognize the role of laboratory diagnostics in patient care. Through structured coursework, students will explore the principles of hematology, microbiology, clinical chemistry, and immunology.

As students progress, they will demonstrate skills learned in real-world lab environments. Emphasis is placed on analyzing laboratory data, identifying sources of error, and interpreting results in alignment with clinical standards. Students will also evaluate laboratory practices through the lens of quality assurance, safety protocols, and regulatory compliance. They will learn to assess the reliability of test results and make informed decisions that support accurate diagnostics and patient safety.

Graduates of the Technical Diploma in Medical Laboratory Science program will be equipped with the theoretical knowledge, technical skills, and critical thinking abilities essential for success in clinical laboratory settings. The program provides the academic foundation required to sit for nationally recognized certification exams through the American Society for Clinical Pathologists (ASCP) or the American Medical Technologists (AMT).

Students who complete the diploma and gain five years of bench experience qualify to sit for the Medical Laboratory Scientist (MLS) certification exam through either accrediting agency. Alternatively, students may become eligible for the MLS exam by completing the diploma and fulfilling additional coursework or transferring credits to meet the Medical Laboratory Technician (MLT) certification requirements.

Graduates of the Medical Lab Specialist program will be able to:

1. Analyze test data and communicate findings clearly to support clinical decision-making and patient care.
2. Integrate foundational knowledge of human biology, pathology, and laboratory science into daily lab operations.
3. Follow protocols for quality control, infection prevention, and regulatory compliance to maintain safe and effective lab practices.
4. Uphold ethical standards, confidentiality, and collaborative practices in clinical settings.
5. Meet the academic and practical requirements necessary to sit for recognized certification exams (e.g., ASCP, AMT).

While continuing to work in the field, graduates of this program can upskill their knowledge and position themselves for career advancement into roles such as:

- Laboratory Supervisor
- Laboratory Manager
- Laboratory Director
- Quality Assurance/Quality Control Specialist
- Clinical Research Coordinator or Associate
- Sales or Technical Support Specialist

Semester 1		**Credits**
513-115	Basic Immunology Concepts	2
513-114	Urinalysis	2
513-116	Clinical Chemistry	4
	Credits	**8**
Semester 2		
513-109	Blood Bank	4
513-120	Basic Hematology	3
	Credits	**7**

Semester 3		
513-130	Advanced Hematology	2
513-170	Introduction to Molecular Diagnostics	2
513-133	Clinical Microbiology	4
	Credits	**8**
Semester 4		
513-121	Coagulation	1
513-140	Advanced Microbiology	2
	Credits	**3**
	Total Credits	**26**