

# LEVEL 5 DIPLOMA FOR MEDICAL LABORATORY TECHNICIAN

## Program Description

The Level 5 Diploma in Medical Laboratory Technician program is a two-year comprehensive educational pathway that equips students with expertise in various medical laboratory procedures, including pre-analytical handling, sample processing, and equipment maintenance across diverse laboratory disciplines. Through rigorous training, students learn to set up and calibrate laboratory equipment, conduct routine tests while ensuring patient confidentiality, and adhere to safety standards and regulatory compliance. Emphasizing hands-on experience and effective communication, graduates will emerge with a robust skill set, poised to excel in professional roles such as Medical Laboratory Technician and Phlebotomist. With a focus on continuous quality improvement and patient/person-centered care, the program prepares students for a successful professional journey in the dynamic field of medical laboratory technology.

## Program Learning Outcomes

Upon graduation, a HCT graduate in Diploma for Medical Laboratory Technician should be able to:

1. Apply knowledge and skills in the field of Medical Laboratory Technology.
2. Perform pre-analytical medical laboratory procedures for routine testing following established procedures and legislation.
3. Conduct basic laboratory tests on various specimens with accuracy and precision.
4. Prepare and select necessary reagents, controls, and instruments used in routine procedures.
5. Set up, operate and calibrate medical laboratory equipment following standard procedures.
6. Evaluate laboratory data to interpret and accurately enter results into record-keeping systems and report pre-analytical and point-of-care laboratory findings.
7. Practice the principles of safety and quality management to meet established guidelines, policies, and procedures as per latest technology and procedures.
8. Develop effective communication and collaboration skills to interact with patients and other professionals as a valuable member of the healthcare team.
9. Demonstrate professionalism, ethical conduct and interpersonal communication skills with patients, laboratory personnel, health care professionals, and the public.
10. Examine the use and impact of digital technologies in healthcare.

## Occupation and Industry Sector

## Requirements

### Completion Requirements

Students seeking the Level 5 Diploma in Medical Laboratory Technician qualification must successfully complete all mandatory courses worth 90 credits.

Code	Title	Credit Hours
<b>Medical Laboratory Core Courses</b>		
Required Credits: 90		
GED 100	Develop English language skills	3
MLT 100	Apply concepts of anatomy and physiology in healthcare	4
MLT 101	Describe the professional role and ethical conduct in the healthcare setting	4
MLT 102	Develop basic computer skills	2
MLT 103	Demonstrate the fundamentals of clinical hematology in the medical laboratory	4
MLT 104	Demonstrate the fundamentals of clinical chemistry in the medical laboratory	4
MLT 105	Demonstrate the fundamentals of microbiology in the medical laboratory	4
MLT 106	Examine the immune system and its relevance to laboratory medicine	4
MLT 107	Explore safety practices in a healthcare environment	4
MLT 108	Perform mathematical calculations relating to the clinical laboratory techniques	3
MDL 100	Use medical terminology for healthcare	2
MDL 110	Use effective communication in a healthcare environment	4
MLT 200	Conduct hematology tests in the medical laboratory	4
MLT 201	Perform clinical chemistry tests in the medical laboratory	4
MLT 202	Analyze laboratory data to identify and classify clinical microorganisms	4
MLT 203	Apply fundamental histological techniques in the medical laboratory	4
MLT 204	Apply transfusion medicine science in the medical laboratory	4
MLT 205	Conduct a capstone project in medical laboratory technology	4
MLT 230	Implement professional traits for medical laboratory technicians in clinical settings I	4
MLT 231	Implement professional traits for medical laboratory technicians in clinical settings II	4
MLT 232	Apply technical skills in clinical settings for medical laboratory technicians I	4
MLT 233	Apply technical skills in clinical settings for medical laboratory technicians II	4
MLT 234	Perform clinical analytical skills for medical laboratory technicians I	4
MLT 235	Perform clinical analytical skills for medical laboratory technicians II	4

Description	Data
Total Required Credits	90
Program Code	DPMLT
Major Code	MLT

# Ideal Study Plan

## Recommended Sequence of Study

### Level 5 Diploma in Medical Laboratory Technician

#### Year 1

Semester 1		Credit Hours
GED 100	Develop English language skills	3
MLT 100	Apply concepts of anatomy and physiology in healthcare	4
MLT 101	Describe the professional role and ethical conduct in the healthcare setting	4
MDL 100	Use medical terminology for healthcare	2
MDL 110	Use effective communication in a healthcare environment	4
MLT 102	Develop basic computer skills	2
<b>Credit Hours</b>		<b>19</b>

#### Semester 2

MLT 103	Demonstrate the fundamentals of clinical hematology in the medical laboratory	4
MLT 104	Demonstrate the fundamentals of clinical chemistry in the medical laboratory	4
MLT 105	Demonstrate the fundamentals of microbiology in the medical laboratory	4
MLT 106	Examine the immune system and its relevance to laboratory medicine	4
MLT 107	Explore safety practices in a healthcare environment	4
MLT 108	Perform mathematical calculations relating to the clinical laboratory techniques	3
<b>Credit Hours</b>		<b>23</b>

#### Year 2

#### Semester 3

MLT 200	Conduct hematology tests in the medical laboratory	4
MLT 201	Perform clinical chemistry tests in the medical laboratory	4
MLT 202	Analyze laboratory data to identify and classify clinical microorganisms	4
MLT 203	Apply fundamental histological techniques in the medical laboratory	4
MLT 204	Apply transfusion medicine science in the medical laboratory	4
MLT 205	Conduct a capstone project in medical laboratory technology	4
<b>Credit Hours</b>		<b>24</b>

#### Semester 4

MLT 230	Implement professional traits for medical laboratory technicians in clinical settings I	4
MLT 231	Implement professional traits for medical laboratory technicians in clinical settings II	4
MLT 232	Apply technical skills in clinical settings for medical laboratory technicians I	4
MLT 233	Apply technical skills in clinical settings for medical laboratory technicians II	4
MLT 234	Perform clinical analytical skills for medical laboratory technicians I	4
MLT 235	Perform clinical analytical skills for medical laboratory technicians II	4
<b>Credit Hours</b>		<b>24</b>
<b>Total Credit Hours</b>		<b>90</b>