

## Diploma in Medical Laboratory Technician

### CURRICULUM/SYLLABUS

#### Course Code: 6644

This program is aimed at training candidates for the job of a **“Working as Lab Technician where he/she will able to collect and store blood sample and able to clean laboratory equipments ”**, in the **“Health Care Sector Skill Council”** Sector/Industry and aims at building the following key competencies amongst the learner

1. Sample Collection and Analyzing Techniques	5. CLINICAL MICRO BIOLOGY & PARASITOLOGY
2. Counselling the patient and preparing medical documents	6. HAEMATOLOGY, BLOOD BANKING & HISTO PATHOLOGY
3. Medical and diagnostic supplies	7. Function of Lab Technician
4. BIO-CHEMISTRY	8. Healthcare System Management

This course encompasses 16 out of 16 National Occupational Standards (NOS) of **“HSS / Q 0301/Medical Laboratory Technician”** Qualification Pack issued by **“Health Care Sector Skill Council”**.

S. No	Topic/Module	Duration (in Hours)	Key Learning Outcomes	Corresponding NOS Code
1	Sample Collection and Analyzing Techniques	60 Hrs	<ul style="list-style-type: none"> <li>• Correctly collect, transport, receive, accept or reject and store blood /urine/stool and tissue samples</li> <li>• Conduct analysis of body fluids/ samples</li> </ul>	HSS/ N 0301 HSS/ N 0302 HSS/ N 0303
2	Counselling the patient and preparing medical documents	60 Hrs	<ul style="list-style-type: none"> <li>• Provide technical information about test results</li> <li>• Prepare and document medical tests and clinical results</li> <li>• Establish and monitor quality assurance programs</li> <li>• Conduct research under guidance</li> <li>• Assist in fine needle aspiration cytology</li> </ul>	HSS/ N 0304 HSS/ N 0305 HSS/ N 0306 HSS/ N 0307 HSS/ N 0409

3	Medical and diagnostic supplies	60 Hrs	<ul style="list-style-type: none"> <li>• Ensure availability of medical and diagnostic supplies</li> <li>• Act within the limits of one's competence and authority</li> <li>• Work effectively with others</li> <li>• Manage work to meet requirements</li> <li>• Maintain a safe, healthy, and secure working environment</li> <li>• Practice Code of conduct while performing duties</li> <li>• Follow biomedical waste disposal protocols</li> <li>• Follow infection control policies and procedures</li> </ul>	HSS/ N 9602 HSS/ N 9603 HSS/ N 9604 HSS/ N 9605 HSS/ N 9606 HSS/ N 9607 HSS/ N 9609 HSS/ N 9610
4	BIO-CHEMISTRY	12 Hrs	<ul style="list-style-type: none"> <li>• To understand the bio molecules and the cell</li> <li>• To understand the Chemical structure, function, Classification of cell in molecular level</li> <li>• To understand the Protein, its type, basic function of Protein</li> <li>• To understand the Enzymes, its type, basic function of Enzymes</li> <li>• To understand the Vitamin &amp; Minerals, its type, basic function of Vitamin &amp; Minerals</li> </ul>	Additional as Required for the Job Role
5	CLINICAL MICRO BIOLOGY & PARASITOLOGY	12 Hrs	<ul style="list-style-type: none"> <li>• To perform the basic test for Clinical Micro biology</li> <li>• To perform the microscopic test and obtain report</li> <li>• To perform the sterilization of different method</li> <li>• To understand the basic structure of micro organisms and classification</li> <li>• To understand the basic structure of Bacteria and classification</li> <li>• To perform Specimen collection and method</li> <li>• To understand the working of Parasitological</li> </ul>	Additional as Required for the Job Role
6	HAEMATOLOGY, BLOOD BANKING & HISTO PATHOLOGY	12 Hrs	<ul style="list-style-type: none"> <li>• To understand the function of blood and its component</li> <li>• To understand the function of RBC, WBC, Blood platelets</li> <li>• To understand the laboratory, ethics and duties of technician safety precautions in the laboratory</li> <li>• To perform the specific function such as taking blood sample and verifying</li> <li>• To Perform haemoglobin estimation using different methods</li> <li>• To generate report for total blood cell count</li> <li>• To understand the role of histopathology</li> </ul>	Additional as Required for the Job Role
7	Function of Lab Technician	12 Hrs	<ul style="list-style-type: none"> <li>• Lab technicians prepare specimens, follow detailed manual tests and oversee automated analysis tests.</li> </ul>	Additional as Required for

			<ul style="list-style-type: none"> <li>• Clinical lab technicians can work with different specimens, like blood and tissue samples.</li> <li>• Clinical lab technicians include cell counters, microscopes, advanced computers and other lab equipment.</li> <li>• Purpose of this position is to help physicians and researchers detect, diagnose and treat diseases, both new and old.</li> <li>• Lab technicians take prescriptions and instructions from a healthcare professional, and then create the necessary artificial limb, brace or other medical appliance.</li> </ul>	the Job Role
8	Type of Lab Technician	12 Hrs	<ul style="list-style-type: none"> <li>• Clinical Lab Technician</li> <li>• Medical Appliance Lab Technician</li> <li>• Dental Lab Technician</li> <li>• Ophthalmic Lab Technician</li> </ul>	Additional as Required for the Job Role
9	Healthcare System Management	12 Hrs	<ul style="list-style-type: none"> <li>• To able to create and manage a system for proper health care of patient.</li> <li>• To administrate the system and to remove the loopholes</li> <li>• To able to do proper planning of staff and assigning them as per the need</li> <li>• To maintain and store the medical records</li> <li>• To provide special attention to the patient for critical cases.</li> <li>• To assign special team of doctors and nurses for emergency cases</li> </ul>	Additional as Required for the Job Role
10	PATIENT CARE MANAGEMENT	12 Hrs	<ul style="list-style-type: none"> <li>• To create and manage a system for patient care</li> <li>• Roles of departments/managers in enhancing care</li> <li>• Able to provide counselling to the patient</li> <li>• Patient safety and patient risk management.</li> <li>• Provide daily checkups to the patient</li> <li>• To manage the ward and availability of beds</li> <li>• To provide quick and better response to the critical cases</li> </ul>	Additional as Required for the Job Role
11	Communicative English and Official Communication ( Written and Oral)	12 Hrs	<ul style="list-style-type: none"> <li>• Candidate should able to Communicate in English.</li> <li>• Candidate should able to read and write so that he/she should able to understand the prescription.</li> </ul>	Additional as Required for the Job Role
12	Computer Fundamentals	12 Hrs	<ul style="list-style-type: none"> <li>• Candidate should able to use computer for maintaining records for statistical database</li> <li>• Candidate should able to generate a report based on the analysis done</li> </ul>	Additional as Required for the Job Role

			<ul style="list-style-type: none"> <li>• Candidate should able to use computer for maintaining records for medical store.</li> </ul>	
13	QUALITY ASSURANCE	12 Hrs	<ul style="list-style-type: none"> <li>• To understand the fundamentals of Quality management &amp; its Objectives.</li> <li>• To understand the quality measurement methods and its standards.</li> <li>• To understand the standard provided by International Organization for Standardization (ISO)</li> <li>• To maintain a system for quality check and assurance.</li> <li>• To understand the international system for quality assurance.</li> <li>• To understand that the product and services should essentially be free from defects.</li> <li>• To able to improve the system and standardised procedure.</li> </ul>	Additional as Required for the Job Role
ON JOB TRAINING(OJT):				150 Hrs

Total Programme Duration: **450 Hours** (This syllabus/ curriculum has been approved by Health Care Sector Skill Council (name of relevant Sector Skill Council or NSDC designated authority).