



**Delhi Skill and
Entrepreneurship University**

**BSc
(Medical Laboratory
Technology)**



Effective from Academic Year 2022-23

Introduction

Medical Laboratory Science is an allied health profession concerned with the diagnosis, monitoring, and prevention of diseases using clinical laboratory investigations and their interpretations. An efficient and balanced training program in laboratory medicine allows students to learn, perform, and interpret clinical laboratory investigations to help doctors diagnose diseases. The study also includes acquiring the know-how of collecting relevant information and gaining the ability to perform sampling, testing, reporting, and documentation of the investigations.

A student of Medical Laboratory Technology (MLT), is a healthcare professional who performs diagnostic tests and procedures in diverse fields of Clinical Laboratory - Biochemistry, Pathology (Haematology, Cytology & Histopathology), Microbiology (Bacteriology, Immunology, Mycology, Parasitology & Virology), and Molecular Biology. The technologist also performs equipment calibrations, quality control assessments, and statistical presentation of observed data.

Program Objectives

Delhi Skill and Entrepreneurship University's undergraduate B.Sc. (Medical Laboratory Technology) program provides the students with an in-depth understanding of key theoretical concepts and intensive practical training to enable them to emerge as world-class allied healthcare professionals in the field of Medical Lab Sciences. During the 3-year program, the students experience supervised hands-on learning in each laboratory discipline and also perform diagnostic testing in a functioning laboratory. The supervision may be provided by the faculty and/or when they are posted to a hospital or an established diagnostic laboratory to hone their skills. At DSEU, equipped with a unique undergraduate education and additional training, the MLT students are promoted to become specialists and perform complex functions. This program envisages a skill-intensive training regimen for students where students get rigorous practical training along with theoretical knowledge.

The program offers flexible entry and exit opportunities to students who can choose to exit after the first year of the program with a Diploma, after the second year with an Advanced Diploma, or complete the full three years and exit with a Degree.

Common Courses

There are three courses that will cut across all the degree programmes.

- a. Face the World (FTW) courses aimed at imparting twenty-first century skills among the learners that will cover Digital Literacy, Financial Literacy, Socio-emotional skills, Professional Workplace Behaviour and Entrepreneurial mindset to name a few.
- b. English Communication I and English Communication II as prescribed by UGC under Ability Enhancement courses.
- c. Environmental Sciences (EVS) and Disaster Management as prescribed by UGC under Ability Enhancement courses.

Pedagogy and Teaching Methodology

Developed by experts from leading Diagnostic Chains and Subject Matter experts from several renowned academic institutions, this program's effective pedagogy, will aid in skilling the upcoming set of allied health professionals. Focus on real-world examples, activity-based learning, in-campus laboratory training, and hands-on internships with corporate hospitals/ laboratories will lead to holistic development of students pursuing this course. This will give them a much needed practical exposure that is currently lacking across most institutions operating in this field.

The Program Objectives of B.Sc. (Medical Laboratory Technology) program is to produce graduates who can -

1. Establish themselves as Medical Lab and Lab Technologists in hospitals, minor emergency centres, private laboratories, blood banks and transfusion services, and doctors' clinics.
2. Adapt to changing trends in various Diagnostic Fields.
3. Occupy supervisory or management positions in pathology labs and hospitals as laboratory managers, consultants, or supervisors in health care administration in due course of time.

Placement and Internship

Since inception, this program has benefitted from a strong industry partnership including receiving inputs during the design and development of the curriculum. Focusing mostly on Skill and Entrepreneurship development, the students have a very high chance to get much required and sought after industry internship experience enabling them to build a strong and sustainable career in the field of Medical Laboratory Sciences.

Students will also get the job opportunity to intern with and get potential placements at leading Diagnostic chains like Metropolis, Thyrocare, SRL Diagnostics, Government hospital labs and private hospitals.

Credit scheme

Semester I			
SI No.	Subject Code	Course Titles	Total Credits
1	MLT-DC101	Human Anatomy & Physiology	4
2	MLT-DC102	Biological Specimen Collection & Biomedical Waste Management	4
3	MLT-DC103	Medical Law & Ethics	3
4	MLT-DC104	Essentials of Medical Terminology & Orientation to Medical Lab Sciences	3
5	MLT-DC105	Medical Laboratory Instruments - I	4
6	MLT-AE101	English Communication - I	2
7	MLT-FW101	Face the World Skills (FTW) - I	3
Total			23

Semester II			
SI No.	Subject Code	Course Titles	Total Credits
1	MLT-DC201	Preventive & Social Medicine	3
2	MLT-DC202	Point of Care Testing in Medical Labs	4
3	MLT-DC203	Quality Assurance and Medical Laboratory Management	3
4	MLT-DC204	Medical Biostatistics	2
5	MLT-DC205	Medical Laboratory Instruments-II	4
6	MLT-AE201	English Communication - II	2
7	MLT-AE202	Environmental Studies (EVS) - I	2
8	MLT-FW201	Face the World Skills - II	3
Total			23

Internship I			
SI No.	Subject Code	Course Titles	Total Credits
1	MLT-SI101	Internship - 6 weeks	2

Semester III			
SI No.	Subject Code	Course Titles	Total Credits
1	MLT-DC301	Basics of Biochemistry	5
2	MLT-DC302	Medical Microbiology - I (Bacteriology & Immunology)	5
3	MLT-DC303	Clinical Haematology	5
4	MLT-DC304	Cyto-Histo-Pathology-I	5
6	MLT-FW301	Face the World Skills (FTW) - III	3
7	MLT-AE301	Environmental Studies (EVS) - II	2
Total			25

Semester IV			
SI No.	Subject Code	Course Titles	Total Credits
1	MLT-DC401	Applied Clinical Biochemistry - I	5
2	MLT-DC402	Medical Microbiology -II (Parasitology, Virology, Mycology)	5
3	MLT-DC403	Applied Haematology and Clinical Pathology	5
4	MLT-DC404	Applied Cyto-Histo-pathology - II	5
5	MLT-FW401	Face The World Skills (FTW) - IV	3
Total			23

Internship II			
SI No.	Subject Code	Course Titles	Total Credits
1	MLT-SI201	Internship - 6 weeks	2

Semester V			
SI No.	Subject Code	Course Titles	Total Credits
1	MLT-DC501	Applied Clinical Biochemistry - II	5
2	MLT-DC502	Quality Management Systems and Operational efficiencies	3
3	MLT-DC503	Applied Haematology - II (Transfusion Medicine)	5
4	MLT-DC504	Advanced Diagnostic Technology (Molecular Biology)	5
5	MLT-FW501	Face The World Skills (FTW) - V (Excellence in Sales)	3
Total			21

Semester VI (Internship III)			
SI No.	Subject Code	Course Titles	Total Credits
1	MLT-SI301	Internship - 6 months	20

Note: The detailed syllabi for courses that are common across programs, for example, English, Face the World, etc., are presented separately.