

**Study Scheme & Syllabus of
Bachelor of Science in Medical Laboratory Science
(B.Sc. MLS)**

Batch 2018 onwards



By

Board of Study MLT / MLS

**Department of Academics
IK Gujral Punjab Technical University**

IK Gujral Punjab Technical University
B.Sc. MLS Batch 2018 onwards

Bachelors of Science in Medical Laboratory Science (B.Sc. MLS):

It is a Under Graduate (UG) Programme of 3 years duration (6 semesters)

Eligibility for Admission: Those candidates who have passed the 10+2 with Physics & Chemistry as compulsory subjects and either Mathematics or Biology conducted by a recognized Board / University / Council.

OR

Those candidates who have passed their Matriculation examination AND have also passed three-year Diploma in any Trade from Punjab State Board of Technical Education & Industrial Training, Chandigarh or such Examination from any other recognized State Board of Technical Education, or SantLongowal Institute of Engineering & Technology, Longowal / or / Two years' diploma in pharmacy or medical lab technology after 10+2 recognized by any state board.

IK Gujral Punjab Technical University
B.Sc. MLS Batch 2018 onwards

Courses & Examination Scheme:

First Semester

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L*	T*	P	Internal	External		
BMLS101-18	Core Theory	Essential Biology	3	1	0	40	60	100	4
BMLS102-18	Core Theory	General Microbiology	3	1	0	40	60	100	4
BMLS103-18	Core Theory	Basics of Biochemistry	3	1	0	40	60	100	4
BMLS104-18	Core Practical/Laboratory	Essential Biology-Practical	0	0	4	60	40	100	2
BMLS105-18	Core Practical/Laboratory	General Microbiology-Practical	0	0	4	60	40	100	2
BMLS106-18	Core Practical/Laboratory	Basics of Biochemistry - Practical	0	0	4	60	40	100	2
BTHU103-18	Ability Enhancement Compulsory Course (AECC)-I	English	1	0	0	40	60	100	1
BTHU104-18	Ability Enhancement Compulsory Course (AECC)	English Practical/Laboratory	0	0	2	30	20	50	1
HVPE101-18	Ability Enhancement Compulsory Course (AECC)	Human Values, De-addiction and Traffic Rules	3	0	0	40	60	100	3
HVPE102-18	Ability Enhancement Compulsory Course (AECC)	Human Values, De-addiction and Traffic Rules (Lab/ Seminar)	0	0	1	25	--**	25	1
BMPD102-18		Mentoring and Professional Development	0	0	1	25	--**	25	1
	TOTAL		13	03	16	460	440	900	25

*A course can either have four Hrs Lecture or Three Hrs Lecture + One Hrs Tutorial as per requirement

**The Human Values, De-addiction and Traffic Rules (Lab/ Seminar) and Mentoring and Professional Development course will have internal evaluation only.

IK Gujral Punjab Technical University
B.Sc. MLS Batch 2018 onwards

Second Semester

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L*	T*	P	Internal	External		
BMLS201-18	Core Theory	Systemic Bacteriology	3	1	0	40	60	100	4
BMLS202-18	Core Theory	Biochemical metabolism	3	1	0	40	60	100	4
BMLS203-18	Core Theory	Human Anatomy and Physiology-I	3	1	0	40	60	100	4
BMLS204-18	Core Practical/Laboratory	Systemic Bacteriology-Practical	0	0	4	60	40	100	2
BMLS205-18	Core Practical/Laboratory	Biochemical metabolism-Practical	0	0	4	60	40	100	2
BMLS206-18	Core Practical/Laboratory	Human Anatomy and Physiology-I - Practical	0	0	4	60	40	100	2
EVS102-18	Ability Enhancement Compulsory Course (AECC) -III	Environmental Science	2	0	0	40	60	100	2
BMPD202-18		Mentoring and Professional Development	0	0	1	25	--	25	1
	TOTAL		11	03	13	365	360	725	21

*A course can either have four Hrs Lecture or Three Hrs Lecture + One Hrs Tutorial as per requirement

IK Gujral Punjab Technical University
B.Sc. MLS Batch 2018 onwards

Third Semester

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L*	T*	P	Internal	External		
BMLS301-18	Core Theory	Basic Hematology-& Hematological Techniques-I	3	1	0	40	60	100	4
BMLS302-18	Core Theory	Analytical Biochemistry	3	1	0	40	60	100	4
BMLS303-18	Core Theory	Human Anatomy and Physiology-II	3	1	0	40	60	100	4
BMLS304-18	Core Practical/Laboratory	Basic Hematology-& Hematological Techniques-I	0	0	4	60	40	100	2
BMLS305-18	Core Practical/Laboratory	Analytical Biochemistry -	0	0	4	60	40	100	2
BMLS306-18	Core Practical/Laboratory	Human Anatomy and Physiology-I I-Practical	0	0	4	60	40	100	2
BMLS307-18	Skill Enhancement Course-I	Applied Bacteriology	1	0	0	40	60	100	1
BMLS308-18	Skill Enhancement Course-Laboratory	Applied Bacteriology-Practical	0	0	2	30	20	50	1
BMPD302-18		Mentoring and Professional Development	0	0	1	25	--	25	1
	TOTAL		10	03	15	395	380	775	21

*A course can either have four Hrs Lecture or Three Hrs Lecture + One Hrs Tutorial as per requirement

IK Gujral Punjab Technical University
B.Sc. MLS Batch 2018 onwards

Fourth Semester

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L*	T*	P	Internal	External		
BMLS401-18	Core Theory	Basic Cell Pathology	3	1	0	40	60	100	4
BMLS402-18	Core Theory	Basic Hematology-II	3	1	0	40	60	100	4
BMLS403-18	Core Theory	Clinical Biochemistry-I	3	1	0	40	60	100	4
BMLS404-18	Core Practical/Laboratory	Basic Cell Pathology - Practical	0	0	4	60	40	100	2
BMLS405-18	Core Practical/Laboratory	Basic Hematology-II - Practical	0	0	4	60	40	100	2
BMLS406-18	Core Practical/Laboratory	Clinical Biochemistry-I - Practical	0	0	4	60	40	100	2
BMLS407-18	Skill Enhancement Course-II	Immunology and Mycology	1	0	0	40	60	100	1
BMLS408-18	Skill Enhancement Course- Laboratory	Immunology and Mycology- Practical	0	0	2	30	20	50	1
BMPD402-18		Mentoring and Professional Development	0	0	1	25	--	25	1
TOTAL			10	03	15	395	380	775	21

*A course can either have four Hrs Lecture or Three Hrs Lecture + One Hrs Tutorial as per requirement

IK Gujral Punjab Technical University
B.Sc. MLS Batch 2018 onwards

Fifth Semester

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L*	T*	P	Internal	External		
BMLS501-18	Skill Enhancement Course-III	Applied Hematology-I	1	0	0	40	60	100	1
BMLS502-18	Skill Enhancement Course-Laboratory	Applied Hematology-I - Practical	0	0	2	30	20	50	1
BMLS503-18	Open Elective-I	Medical Lab Management	3	1	0	40	60	100	4
BMLS504-18	Elective-I	Histotechnology-I	3	1	0	40	60	100	4
BMLS505-18	Elective-II	Clinical Biochemistry-II	3	1	0	40	60	100	4
BMLS506-18	Elective-I Laboratory	Histotechnology-I - Practical	0	0	4	60	40	100	2
BMLS507-18	Elective-II Laboratory	Clinical Biochemistry-II - Practical	0	0	4	60	40	100	2
BMLS508-18	Project	Minor Project	0	0	2	Satisfactory / Un Satisfactory			2
BMPD502-18		Mentoring and Professional Development	0	0	1	25	--	25	1
TOTAL			10	03	13	335	340	675	21

*A course can either have four Hrs Lecture or Three Hrs Lecture + One Hrs Tutorial as per requirement

IK Gujral Punjab Technical University
B.Sc. MLS Batch 2018 onwards

Sixth Semester

Course Code	Course Type	Course Title	Load Allocations			Marks Distribution		Total Marks	Credits
			L*	T*	P	Internal	External		
BMLS601-18	Skill Enhancement Course-IV	Applied Hematology-II	1	0	0	40	60	100	1
BMLS602-18	Skill Enhancement Course-Laboratory	Applied Hematology-II-Practical	0	0	2	30	20	50	1
BMLS603-18	Open Elective-II	Blood Banking	3	1	0	40	60	100	4
BMLS604-18	Elective-III	Parasitology and virology	3	1	0	40	60	100	4
BMLS605-18	Elective-IV	Histotechnology-II & Cytology	3	1	0	40	60	100	4
BMLS606-18	Elective-III Laboratory	Parasitology and virology - Practical	0	0	4	60	40	100	2
BMLS607-18	Elective-IV Laboratory	Histotechnology-II & Cytology - Practical	0	0	4	60	40	100	2
BMLS608-18	Project	Major Project	0	0	6	Satisfactory / Un Satisfactory			6
BMPD602-18		Mentoring and Professional Development	0	0	1	25	--	25	1
	TOTAL		10	03	17	335	340	675	25

*A course can either have four Hrs Lecture or Three Hrs Lecture + One Hrs Tutorial as per requirement

Total Marks of B.Sc. Program : 4525

Total Credit of B.Sc. Program : 134

NOTE :

ONLY FOR BOS

The course types and their number are fixed as mentioned in the scheme however respective BOS can shuffle the courses as required.