

University of Management & Technology, Lahore

Office of the Registrar, Johar Town C-II Lahore, Ph. #: 042-35212820



Roadmap

Program Name: MS Biotechnology

Program Scheme of Studies

Structure of the Scheme	
Courses Credit Hours	32
Major Courses: (Credit Hours)	4 (12)
Technical Electives: (Credit Hours)	4 (12)
General Education: (Credit Hours)	2 (2)
Thesis (Credit Hours)	1 (6)
Total Credit Hours:	32

Program Road Map

Applicable to Batch No. 22nd Session: Spring 2026

Total Credit Hours: 32

1 st Year							
1 st Semester				2 nd Semester			
Code	Course Title	Cr. Hrs.	Prerequisite	Code	Course Title	Cr. Hrs	Prerequisite
BT 701	Advanced Molecular Biology	3	---	BT 762	Trends in Biotechnology	3	---
BT 761	Advanced Research Methods in Biotechnology	3	---	BT 751	Advances in Bioinformatics	3	---
BT xxx	Elective I	3	---	BT xxx	Elective III	3	---
BT xxx	Elective II	3	---	BT xxx	Elective IV	3	---
ITC711	Understanding of Quran-I	1	----	ITC722	Understanding of Quran-II	1	ITC711
Semester Credit Hours		13		Semester Credit Hours		13	
2 nd Year							
3 rd Semester				4 th Semester			
Code	Course Title	Cr. Hrs.	Prerequisite	Code	Course Title	Cr. Hrs.	Prerequisite
BT 799	Thesis	6	---	BT 799	Thesis	----	---
	Semester Credit Hours	6		Semester Credit Hours		0	

List of Core and Electives

S. No.	Course Code	Title of the Course*	Credit Hours
1.	BT760	Advanced Trends in Recombinant DNA Technology	3
2.	BT701	Advanced Molecular Biology	3
3.	BT761	Advanced Research Methods in Biotechnology	3
4.	BT762	Trends in Biotechnology	3
5.	BC764	Advanced Biochemical Techniques	3
6.	BC765	Research Methodologies in Biochemistry	3
7.	BT767	Advances in Environmental Law and Regulation	3
8.	BT766	Advances in Vaccine Research	3
9.	BT709	Advances in Microbiology	3
10.	BT707	Advanced Environmental Biotechnology	3
11.	BT710	Bioremediation and Biodegradation	3
12.	BT713	Protein Structure and Function Engineering	3
13.	BC717	Advances in Cell and Molecular Biology	3
14.	BT720	Advances in Immunology	3
15.	BT725	Advances in Health Biotechnology	3
16.	BT726	Advances in Agricultural Biotechnology	3
17.	BT743	Advances in Molecular Genetics	3
18.	BT745	Advances in Fermentation Technology	3
19.	BC746	Advances in Enzymology	3
20.	BT751	Advances in Bioinformatics	3
21.	BC754	Genomics, Proteomics and Metabolomics	3
22.	BT755	Bioethics, Biosecurity, & Biosafety	3
23.	BC774	Signal Transduction	3
24.	BC781	Advances in Clinical Biochemistry	3

25.	BS801	Contemporary Trends in Biochemistry	3
26.	BS802	Contemporary Trends in Biotechnology	3
27.	BS803	Contemporary Trends in Microbiology and Immunology	3
28.	BS804	Applied Biostatistics	3
29.	BS805	Contemporary Trends in Virology	3
30.	BS806	Entrepreneurship in Biological Sciences	3
31.	BT799	Thesis	6

Compliance Certificate for MS Biotechnology Program

It is hereby certified that MS Biotechnology roadmap is revised while keeping in view the recommendations of National Curriculum Revision Committee (NCRC).

In the revised roadmap, the total credit hours are **32** with the details mentioned below,

1. Core Courses: 4 (12 Cr Hrs)
2. Elective Courses: 4 (12 Cr Hrs)
3. Thesis: 1 (6 Cr Hrs)
4. General Education: 2 (2 Cr Hrs)

The proposed roadmap will be implemented from S2026, following approval from the ACM.

Chairperson
Department of Life Sciences

Dean
School of Science

Dean Graduate Studies

Registrar