

School of Biotechnology
M.Sc. Microbiology
Course structure
(Batch 2025-2027)
Semester 1

S.No	Code	Course	Credits
1	BTMSc 501	Biochemistry	3
2	BTMSc 503	Cell and Molecular Biology	3
3	BTMSc 507	Microbiology	2
4	BTMSc 531	Bioinformatics	3
5	BTMSc 533	Nanobiotechnology	3
6	BTMSc 535	Microbial Genetics	2
7	BTMA445	Basics of Mathematics and Biostatistics	3
Laboratory			
1	BTMSc 513	Biochemistry and Analytical Techniques	3
2	BTMSc 515	Microbiology lab	3
3	BTMSc 537	Bioinformatics	2
Total Credits			27

Semester 2

S.No	Code	Course	Credits
1	BTMSc 502	Genetic Engineering	3
2	BTMSc 504	Immunology	3
3	BTMSc 552	Bioprocess Engineering and Technology	3
4	BTMSc 554	Downstream Processing in Biotechnology	3
5	BTMSc 556	Virology	3
6	BTMSc 542	Microbial Diversity and Metagenomics	2
7	DSE1	1. BTMSc 526 Protein Engineering 2. BTMSc 516 Computational Biology 3. BTMSc 558 Microbial Physiology	2
Laboratory			
1	BTMSc 562	Immunology and Genetic Engineering Lab	3
2	BTMSc 560	Bioprocess lab	3
Total credits			25

Semester 3

S.No	Code	Course	Credits
1	BTMSc 607	Bioentrepreneur ship	2
2	BTMSc 609	Intellectual Property Rights, Biosafety and Bioethics	2
3	BTMSc 643	Microbial Pathogenesis and Diagnosis	3
4	BTMSc 645	Vaccine Research and Development	3
5	BTMSc 647	Research Methodology	2
6	BTMSc 613	Seminar	1
7	DSE 2	1. BTMSc 649 System and Synthetics Biology 2. BTMSc 653 Microbiology Quality Control in Pharma and Food Industry 3. BTMSc 657 Fundamentals of Antimicrobial Resistance	2
Laboratory			
1	BTMSc 655	Advanced Microbial Techniques	3
2	BTMSc 619	Dissertation I	4
Total Credits			22

Semester 4

S.No	Code	Course	Credits
1	BTMSc 602	Dissertation II	22

Total Credits : 27+25+22+22=96