

MSC APPLIED MICROBIOLOGY PROGRAMME
SCHEME OF LEARNING AND EVALUATION
(For the students admitted in the academic year 2025 – 2026 & onwards)
Outcome Based Curriculum Framework with CBCS

Course Code	Course Title	Course Category	Course Type	Part Type	Lecture Hours	Tutorial Hours	Practical Hours	Course Credits	Max CA Marks	Max CE Marks	Total Marks
Semester - I											
25MBP101	Introductory Microbiology, Systematics and Traditional Knowledge Systems	Core	Theory	3	4	1	0	3	25	75	100
25MBP102	Microbial Biochemistry & Physiology	Core	Theory	3	4	1	0	4	25	75	100
25MBP103	Cell Biology & Molecular Dynamics	Core	Theory	3	4	1	0	3	25	75	100
25MBP104	Bioresearch Instrumentation and AI	Core	Theory	3	4	1	0	4	25	75	100
25MBP105	Food and Dairy Microbiology	Core	Theory	3	4	1	0	4	25	75	100
25MBP106	Microbiology Practicals I – (Basic Microbial Techniques, Physiology, Instrumentation, Food Microbiology) [Skill based]	Core	Practical	3	0	0	5	4	40	60	100
Semester - II											
25MBP207	Fermentation & Bioprocess Technology	Core	Theory	3	4	1	0	4	25	75	100
25MBP208	Environmental and Agricultural Microbiology	Core	Theory	3	3	1	0	4	25	75	100
25MBP209	Genetics & Genetic Engineering	Core	Theory	3	4	1	0	4	25	75	100
25MBP210	Computational Biology	Core	Theory	3	3	1	0	4	100	0	100
25MBP211	Immunotechnology and Forensic Microbiology	Core	Theory	3	4	1	0	4	25	75	100
25MBP212	Microbiology Practicals II – (Bioprocess, Environmental, Agricultural, Genetics and Computational Biology) [Skill based]	Core	Practical	3	0	0	5	4	40	60	100
25SECP201	Skill Enhancement Course: Cyber Security	Core	Theory	3	2	0	0	2	100	0	100

Semester - III											
25MBP313A	Major Elective Course I – Pharmaceutical Microbiology	Elective	Theory	3	4	1	0	5	25	75	100
25MBP313B	Major Elective Course - I Microbial Nanotechnology	Elective	Theory	3	4	1	0	5	25	75	100
25MBP314	Medical Microbiology	Core	Theory	3	4	1	0	5	25	75	100
25MBP315	Biostatistics & Research Methodology	Core	Theory	3	4	1	0	4	25	75	100
25MBP316	Microbiology for Competitive Exams	Core	Theory	3	3	1	0	3	100	0	100
25IDCMBP	Inter Disciplinary Course : Techniques In Microbiology (Theory)	Elective	Theory	3	3	0	0	3	25	75	100
25IDCMBP	Inter Disciplinary Course : Techniques In Microbiology (Practical)	Elective	Practical	3	0	0	2	2	40	60	100
25MBP319	Microbiology Practicals III – (Medical Microbiology, Immunology and Pharmaceutical Microbiology) [Skill based]	Core	Practical	3	0	0	6	4	40	60	100
25MBP320	Internship / Industrial Training	Core	Training	3	0	0	0	3	100	0	100
Semester - IV											
25MBP421A	Major Elective Course II –Entrepreneurship in Microbiology	Elective	Theory	3	6	2	0	5	25	75	100
25MBP421B	Major Elective Course - II Professional Skills in Microbiology	Elective	Theory	3	6	2	0	5	25	75	100
25MBP422	Applied Biotechnology IPR & Biosafety	Core	Theory	3	6	2	0	4	25	75	100
25MBP423	Capstone Project/Startup/Innovation	Core	Project	3	0	0	0	6	80	120	200