



PROGRAMME STRUCTURE

M.Sc. Microbiology Semester: IV

Programme Outcome (PO) - For M.Sc. Microbiology Programme	<p>Programme specific outcome for M.Sc. Microbiology</p> <p>Students completing the MSc degree programme in Microbiology which is a two year full time program will be able to understand and explain various areas related to microbiology subjects like molecular biology, recombinant DNA technology and immunology.</p> <p>The student will be well versed with the concepts of aseptic handling techniques, maintenance and preservation of industrially as well as clinically important microbial cultures and correlate the molecular basis microbial physiology and ecology.</p> <p>The student will also be enlightened about application in different fields related to Microbial Technology</p> <p>Students will be able to design and establish a microbiology laboratory, they will be able to design the experiments related to basic microbiology, and perform biological assays using whole cells as well as enzymes and be able to identify microorganisms using biochemical as well as molecular identification techniques.</p> <p>Students will be able to execute a short project involving the knowledge and techniques of basic and advanced microbiology, biochemistry, cell biology and bioprocess engineering.</p> <p>The student will be skilled enough to be employed as microbiologist in fermentation industry, clinical laboratory, research and development organization, food and drugs administration, etc or pursue doctoral studies in any field of Biological sciences</p>
Programme Specific Outcome (PSO) - For MSc Microbiology Semester - IV	<ol style="list-style-type: none">1. On successful completion of this semester student will have sufficient understanding of bioreactors, control of process parameters and various aspects of microbial fermentation, to enable him/her to work as Fermentation plant as microbiologist.2. Student should be able to correlate genes and their functions as well as inheritance in bacteria.3. Student will gain sufficient fundamental knowledge of immunology and should be able to perform various immunoassays independently. <p>...</p>





SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA 3.25))
Syllabus with effect from the Academic Year 2022-2023

To Pass	(1) At least 40% marks in each paper at the University Examination and 40% aggregate marks in Internal and External Assessment. (2) At least 33% Marks in each paper in Internal Assessment.
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Course Type	Course Code	Name Of Course	Theory/ Practical	Credit	Exam Duration in hrs	Component of Marks		
						Internal	External	Total
						Total	Total	Total
Core Course	PS04CMIC51	R DNA Technology	T	4	3	30	70	100
	PS04CMIC52	Environmental Biotechnology	T	4	3	30	70	100
	PS04CMIC53	Practical	P	4	3	30	70	100
	PS04CMIC54	Viva-Voce	=	1	=	=	50	50
Elective Course (Any Two)	PS04EMIC51	IPR and Biosafety	T	4	3	30	70	100
	PS04EMIC52	Research Ethics and Scientific Writing	T	4	3	30	70	100
	PS04EMIC53	Practical	P	4	3	30	70	100
	PS04EMIC54	Biomaterials and Tissue Engineering	T	4	3	30	70	100
	PS04EMIC55	Biodiversity and Conservation	T	4	3	30	70	100
	PS04EMIC56	Food and Dairy Microbiology	T	4	3	30	70	100
	PS04EMIC57	Mycology and Plant Pathology	T	4	3	30	70	100
	PS04EMIC59	Systems Biology	T	4	3	30	70	100
		OR						
Core Course	PS04CMIC51	R DNA Technology	T	4	3	30	70	100
	PS04CMIC52	Environmental Biotechnology	T	4	3	30	70	100
	PS04CMIC53	Practical	P	4	3	30	70	100
	PS04CMIC54	Viva-Voce	=	1	=	=	50	50
Elective Course	PS04EMIC58	Dissertation	=	12	=	90	210	300

