

SANJIVANI ARTS, COMMERCE AND SCIENCE COLLEGE





Department of Microbiology (M.sc)

Program Outcomes (POs)	
	Students will demonstrate a deep understanding of core concepts across various
PO1	microbiological domains, including microbial systematics, molecular biology, immunology,
	clinical microbiology, and microbial technology.
	Students will develop the ability to apply statistical, bioinformatics, and molecular tools for
PO2	research, experiment design, and data analysis. They will gain hands-on experience in
	laboratory techniques, instrumentation, and microbial diagnostics.
	Students will acquire practical skills in advanced microbiological techniques such as PCR,
PO3	enzyme kinetics, microbial isolation, DNA sequencing, and bio-nanotechnology, preparing
	them for roles in research and industry.
	Students will be equipped to solve complex biological problems by applying scientific
PO4	reasoning, molecular tools, and a thorough understanding of microbial systems. This
	includes designing experiments, analyzing results, and drawing meaningful conclusions.
	Students will gain practical knowledge of microbial applications in industries such as
PO5	pharmaceuticals, fermentation, and bioremediation, with specific expertise in quality
	assurance, validation, and drug discovery processes.
	Students will understand the role of microbes in environmental sustainability through
PO6	bioremediation, biomass utilization, and wastewater treatment, contributing to eco-friendly
	solutions for industrial challenges.
	Students will learn the importance of ethical practices, Good Laboratory Practices (GLP),
PO7	Good Manufacturing Practices (GMP), biosafety, and adherence to international standards
	such as ISO and WHO in microbiological research and industry.
	Students will be able to effectively communicate scientific findings, participate in
PO8	collaborative research, and continually update their knowledge through self-directed
	learning, professional development, and adaptation to new technologies.



