

Shri. Swami Vivekanand Shikshan Sanstha's
Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Microbiology

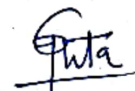
**Course outcome
Academic Year 2023-24**

	M. Sc. II
	Semester III
Paper IX CC - 2412	BIostatistics, Bioinformatics and Scientific Writing
	On completion of the course, the students will be able to: CO 1 Describe the method to collect samples, design the experiments, apply the measures of central tendency CO 2 Explain the concept of hypothesis testing, ANOVA, correlation and regression CO 3 Describe components, objectives, and applications of bioinformatics CO 4 Construct scientific documents, present and publish research papers, acknowledge legal aspects of scientific authorship
Paper X CC - 2413	Enzymology and Enzyme Technology
	On completion of the course, the students will be able to: CO 1 Explain history, properties, classification, structure, and specificity of enzymes CO 2 Describe enzyme kinetics CO 3 Elucidate structural modifications and types of enzymes CO 4 Narrate various applications of enzymes
Paper XI CC - 2414	Fermentation Technology
	On completion of the course, the students will be able to: CO 1 Describe fermentation equipment and its uses CO 2 Explain fermentation economics and patents CO 3 Explain control of different metabolic pathways, contamination and computer applications in fermentation technology CO 4 Produce vitamins, organic acids, beverages, and vaccines
Paper XII CC - 2415	Quality Control Microbiology -I
	On completion of the course, the students will be able to: CO 1 Evaluate biosafety levels of laboratories



	CO 2 Explain good microbiological laboratory techniques CO 3 Describe various techniques of microbial control CO 4 Explain biosafety guidelines
	Semester IV
Paper XIII CC - 2418	FOOD AND DAIRY MICROBIOLOGY
	On completion of the course, the students will be able to: CO 1 Write about food spoilage and various methods of food preservation CO 2 Prepare various Indian and western fermented foods CO 3 Describe different food borne disease, their preservation, and control CO 4 Explain role of enzymes in food processing, various applications of enzymes, and laws regarding food safety
Paper XIV CC - 2419	INDUSTRIAL WASTE MANAGEMENT
	On completion of the course, the students will be able to: CO 1 Explain types and characteristics of industrial wastes CO 2 Write Microbiology and biochemistry of wastewater treatment CO 3 Describe methods of industrial waste treatment CO 4 Explain biological methods of industrial waste
Paper XV CC - 2420	RECOMBINANT DNA TECHNOLOGY
	On completion of the course, the students will be able to: CO 1 Explain basic tools of recombinant DNA technology CO 2 Describe basic cloning strategies CO 3 Describe cloning procedure in eukaryotes CO 4 Explain various applications of DNA technology
Paper XVI CC - 2421	QUALITY CONTROL MICROBIOLOGY-II
	On completion of the course, the students will be able to: CO 1 Describe regulatory affairs concerning pharmaceutical drug CO 2 Explain cleanrooms classification, contamination, testing, and microbiological environmental monitoring CO 3 Determine bioburden of finished products CO 4 Explain quality management systems in pharmaceutical products




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