



"Education for Knowledge, Science and Culture"  
-Shikshanmaharshi Dr. Bapuji Salunkhe  
Shri Swami Vivekanand Shikshan Sanstha's

**Vivekanand College, Kolhapur**  
**(Autonomous)**



**Department of Microbiology (UG)**

Academic Year 2022-23

Course Outcomes (COs): Microbiology

B.Sc. Part II Microbiology	
Semester III	
DSC-1010C: Paper V: Microbial Physiology, Metabolism	
<b>CO No.</b>	<b>On completion of the course, student will be able to:</b>
CO1	Explain various phases of growth in bacteria & various environmental factors affecting it.
CO2	Explain the microbial physiology, patterns of growth and various methods of bacterial growth measurement.
CO3	Understand metabolic pathways & mode of energy generation.
CO4	Understand nutrient uptake and transport across the cell membrane.
DSC-1010C: Paper VI : Industrial and Applied Microbiology	
<b>CO No.</b>	<b>On completion of the course, student will be able to:</b>
CO1	Learn & control bioreactor for maximising the production.
CO2	Understand basic fermentation process, design of fermentor and their types.
CO3	Understand principle and working of various instruments used in laboratory.
CO4	Understand and design sampling methods for microbial examination of air.
SEC-SC: SEC I: Microbiological Analysis of air & water	
<b>CO No.</b>	<b>On completion of the course, student will be able to:</b>
CO1	Use techniques for microbiological examination of water
CO2	Apply knowledge to control air & water borne pathogens
CO3	To learn about control measures of air & water contamination
CO4	To learn about sample collection

Semester IV	
DSC-1010D1: PAPER VII: Microbial Genetics and Molecular Biology	
<b>CO No.</b>	<b>On completion of the course, student will be able to:</b>
CO1	Understand basic concepts of gene, mutation and DNA repair & recombination.
CO2	Describe the importance of genetic code & discuss molecular mechanism underlying mutation.
CO3	Understand & explain the various gene transfer mechanisms in bacteria.
CO4	Understand natural and artificial plasmids.
DSC-1010D1: PAPER VIII: Basics in Medical Microbiology & Immunology	
<b>CO No.</b>	<b>On completion of the course, student will be able to:</b>
CO1	Understand basic principles of medical microbiology & infectious diseases.
CO2	Explain various ways of prevention & control of microbial diseases.
CO3	Understand the salient features of Ag-Ab reaction & its uses.
CO4	Describe the types of organs involved in immune system.
SEC-SD: SEC II: Microbial Diagnosis in Health Clinics	
<b>CO No.</b>	<b>On completion of the course, student will be able to:</b>
CO1	Apply knowledge of laboratory diagnosis of pathogen
CO2	Understand different clinical sample collection techniques and its preservation
CO3	Understand the importance of diagnosis of diseases
CO4	Understand methods of transport of clinical sample to laboratory and storage



  
**HEAD**  
**DEPARTMENT OF MICROBIOLOGY**  
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