

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

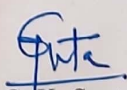
**Department of Microbiology PG  
Academic Year 2022-23**

**M. Sc-I Course Outcome**

| M. Sc. I               |  |
|------------------------|--|
| Semester I             |  |
| Paper I<br>CC - 2400   | TAXANOMY AND MICROBIAL DIVERSITY   |
|                        | On completion of the course, the students will be able to:<br>CO 1 Explain the diversity of microorganisms<br>CO 2 Describe the concept of classification of microorganisms<br>CO 3 Describe various characteristics of different types of microorganisms<br>CO 4 Classify newly discovered organism   |
| Paper II<br>CC - 2401  | VIROLOGY   |
|                        | On completion of the course, the students will be able to:<br>CO 1 Illustrate life cycles of plant, animal and bacterial viruses<br>CO 2 Describe plant virus transmission, effects of viruses on plant growth<br>different plant diseases<br>CO 3 Explain therapy and prophylaxis of viral diseases.<br>CO 4 Describe the methods of destruction of viruses         |
| Paper III<br>CC - 2402 | GENETICS AND MOLECULAR BIOLOGY   |
|                        | On completion of the course, the students will be able to:<br>CO 1 Know the mechanism of DNA replication in prokaryotes and<br>eukaryotes<br>CO 2 Understand the concept of unique and repetitive DNA sequences<br>CO 3 Explain the modes of cell division with respect to mitosis and meiosis<br>CO 4 Know basic and advanced techniques used in molecular genetics |
| Paper IV<br>CC - 2403  | IMMUNOLOGY   |
|                        | On completion of the course, the students will be able to:<br>CO 1 Explain functioning of immune system<br>CO 2 Describe regulatory mechanisms of immune system<br>CO 3 Describe Cancer immunology and treatment and prevention of cancer<br>CO 4 Narrate various serodiagnostic techniques of diseases.   |

| Semester II             |   |
|-------------------------|---|
| Paper V<br>CC - 2406    | TECHNIQUES IN MICROBIOLOGY  |
|                         | On completion of the course, the students will be able to:<br>CO 1 Understand various traditional and advanced techniques used in life science laboratory<br>CO 2 Understand the working and mechanism of the techniques used in the life science research<br>CO 3 Know regarding the ethics that have to follow in research studies<br>CO 4 Understand different applications of the techniques in the research work |
| Paper VI<br>CC - 2407   | MICROBIAL PHYSIOLOGY, BIOCHEMISTRY AND METABOLISM   |
|                         | On completion of the course, the students will be able to:<br>CO 1 Understand various chemical reactions occurring during growth of organisms<br>CO 2 Know biosynthesis of macromolecules<br>CO 3 Understand mechanisms of macromolecules degradation<br>CO 4 Understand basic concepts and some recent developments in Biochemistry  |
| Paper VII<br>CC - 2408  | MEDICAL MICROBIOLOGY  |
|                         | On completion of the course, the students will be able to:<br>CO 1 Understand various bacterial, fungal, and viral diseases in humans<br>CO 2 Understand mechanisms of disease development<br>CO 3 Understand medical applications of microbial metabolites<br>CO 4 Know immunological disorders.   |
| Paper VIII<br>CC - 2409 | MICROBIAL ECOLOGY   |
|                         | On completion of the course, the students will be able to:<br>CO 1 Understand concept of microbial ecosystem<br>CO 2 Understand the effect of environmental factors on the microbial life<br>CO 3 Know interactions of microbes with other microbes and other living systems like plants and animals.<br>CO 4 Know control of pest with biological way.   |



  
 Dr. G.K. Sontakke  
 HEAD  
 DEPARTMENT OF MICROBIOLOGY  
 VIVEKANAND COLLEGE, KOLHAPUR  
 (AUTONOMOUS)