

MAHATMA GANDHI VIDYAMANDIR
L.V.H COLLEGE PANCHAVATI, NASHIK 03
DEPARTMENT OF MICROBIOLOGY

**PROGRAMMED OUTCOME FOR BACHELOR OF SCIENCE IN
MICROBIOLOGY**

After completing the graduation in the Bachelor of Science the students are able to:

1. Demonstrate the ability to justify and explain their thinking and/or approach
2. Develop state-of-the-art laboratory and professional communication skills
3. Apply the scientific method to design, execute, and analyze an experiment
4. Explain scientific procedures and their experimental observations
5. Demonstrate an understanding of fundamental biochemical principles, structure and function
6. Work as a laboratory technician, biochemists or medical scientist
7. Explain the processes used by microorganisms for the growth
8. Explain the theoretical basis of tools, technologies and methods of microbiology
9. Applying appropriate tools keeping in mind safety factor for environment & society
10. Create, select, and apply appropriate techniques, resources, and modern tools

PROGRAMMED SPECIFIC OUTCOME FOR MICROBIOLOGY

After completing the graduation in the Bachelor of Science the students are able to:

- 1: Gain and understand microbiological, biochemical and molecular processes
- 2: Communicate scientific information effectively, relating to microbes and their role in ecosystem and health
- 3: Acquire, articulate, retain and demonstrate laboratory safety skills
- 4: Demonstrate applications of biochemical and biological sciences
- 5: Apply appropriate tools and techniques in biotechnological manipulation,
- 6: Understand the responsibilities of microbial and biotechnological practices, genetic engineering
7. Inculcating proficiency in all experimental techniques and methods of analysis

8. Gain and understanding of biochemical and molecular processes that occur in and between cells to expand understanding of biology

COURSE OUTCOME: INTRODUCTION TO MICROBIAL WORLD

After successful completion of the course, students are able to:

- 1 Learn the details of the historical development of Microbiology
- 2 Understand the details of Systems of classification
- 3 Specify in depth Algae, Protozoa & Fungi
- 4 Learn the classification and characteristics of virology
- 5 Specify the characteristics of Microbes
- 6 Recent developments in the field of Microbiology.
- 7 Scope of Microbiology

COURSE OUTCOME: BASIC TECHNIQUES IN MICROBIOLOGY

After successful completion of the course, students are able to:

- 1 Learn the details of Bacterial cell organization
- 2 Understand the details of Microbial techniques
- 3 Learn in depth Microscopy
- 4 Understand in depth Sterilization techniques
- 5 Specify the classification and characteristics of staining techniques

COURSE OUTCOME: BACTERIAL CELL AND BIOCHEMISTRY

After successful completion of the course, students are able to:

- 1 Learn the details of Bacterial cell organization
- 2 Learn the structure, chemical composition and function of the following component in bacterial cell
- 3 Understand the biochemical characterization of microorganism
- 4 Understand the classification of bacteria and viruses

COURSE OUTCOME: MICROBIAL CULTIVATION AND GROWTH

After successful completion of the course, students are able to:

- 1** To understand the artificial cultivation techniques used for growth of microorganisms
- 2** Learn the Isolation of microbial culture by specific microbiological isolation techniques.
- 3** Learn the kinetics of bacterial growth and factor affecting the microbial growth