

Devchand College, Arjunnagar
Department of Microbiology

Program Specific Outcome (PSOs)

1. They could get knowledge about the different groups of microorganisms
2. They could understand the cellular and reproductive growth in microorganisms
3. Students could be trained in different methods used to study the microorganisms
4. They can understand correlation between microorganisms and environment
5. Collect knowledge about applications of microorganisms in daily use
6. They can understand metabolism in prokaryotes
7. They could learn different technology and their applications in microbiology

Course Outcome (COs)

B.Sc. I, SEM. I

Paper I –DSC-25A- Introduction to Microbiology

1. Understand contributions of Scientists in Microbiology
2. They could not taxonomic rank
3. Skill development in the methods of staining
4. Understanding Scope in Microbiology

Paper II –DSC-26A- Microbial Diversity

1. Understand different groups of organisms
2. They will understand method to control of microorganisms
3. Student will be well versed with cellular structure & organization of Bacteria & Viruses
4. Understand nutritional requirement of microorganisms

B.Sc. I, SEM. II

Paper III –DSC-25B- Bacteriology

1. Understand structure & functions of cytoplasmic components
2. They can acquire the techniques to isolation of microorganisms
3. They get the knowledge of systematic study of cultures
4. They understand function of cell organizations
5. They get the knowledge of interaction between living and nonliving things

Paper IV –DSC-26B – Microbial Biochemistry

1. Learn about biomolecules
2. They can acquire the knowledge about Culture media
3. Understand the concept of anabolism & catabolism with examples
4. Students will be well studied Nucleic acids

B.Sc. II , SEM. III

Paper V –DSC- 25C- Microbial Physiology & Metabolism

1. Understand the growth phases in microorganisms
2. Learn pathway of catabolism
3. Study the bacterial electron transport chain
4. They could learn process of fermentation

Paper VI –DSC-26C- Applied Microbiology

1. Trained in routine bacteriological analysis on water techniques
2. Learn source of microorganism in air
3. Gathered knowledge about microbial examination
4. They get knowledge about screening of organisms

B.Sc. II , SEM. IV

Paper VII , DSC-D25- Microbial Genetics & Molecular Biology

1. Understand concept of mutation & study the various types of mutation
2. Understand mutagens
3. Study basic concept of gene, genotype, phenotype etc.
4. Learn techniques of gene transfer in bacteria

Paper VIII –DSC-D26- Basics in Medical Microbiology & Immunology

1. Gathered knowledge of different types of diseases
2. Learn mode of transmission of diseases
3. They could study concept immunology
4. Understand general principal of prevention and control of microbial diseases

B.Sc. III SEM -V

Paper IX, Virology

1. Learn Isolation, cultivation and purification of viruses
2. They could study Enumeration of viruses
3. Understand reproduction of animal and plant viruses
4. Study oncogenesis and type of cancer

Paper X, Immunology and Serology

1. Gathered knowledge of Membrane receptors for antigen and their role in antigen recognition
2. Learn molecular mechanism of antibody production
3. Understand concept of Immunological tolerance

4.They could study about Hypersensitivity and its type

Paper XI, Food and Industrial Microbiology

- 1.Skill development in the methods of strain improvement
- 2.Learn about food poisoning
- 3.Study concept of probiotics
- 4.Skill development in Preservation of industrially important microorganisms

PaperXII, Agricultural Microbiology

1. Soil texture study
2. Learned role of microorganisms in soil and their beneficial uses
3. Methods in Biodegradations of cellulose, pesticides
4. Study Various plant diseases and their preventions.

B. Sc . III Semester VI

Paper-XIII Microbial Genetics

1. Skills in Molecular biology techniques
2. Study of Genetic Engineering
3. Study of Mutation
4. Learned the basics of bacterial genome.

Paper XIV Microbial Biochemistry

- 1 Study of various enzymes and its application
- 2 Skills in methods of Enzyme purification
- 3 Learned the biochemical pathways
- 4 Study of the biosynthesis of Macromolecules

Paper XV Environmental Microbiology

1. Learned the waste management techniques
- 2 Skills in Bioremediation
- 3 Study of various wastes
- 4 study of Environmental impact assessment.

Paper XVI Clinical Microbiology

1. Study of various diseases
2. Learned the chemotherapy
3. Skills in Immunoprophylaxis
4. Study of concept of Gene therapy.