

Shri Sharda Bhavan Education Society's
Yeshwant Mahavidyalaya, Nanded
VIP Road, Nanded-431602 (M.S) India

M. Sc - I-Year MICROBIOLOGY

Course outcome (COs) and Programme Objectives (POs):

SMICC-401 Microbial Genetics

Course Objectives (COs)

- To learn the basics of microbial genome organization, mutation, DNA repair, recombination and regulation. To acquire knowledge on applicability of genetics
- To acquire basic and advanced knowledge of genome organization in microorganisms,
- To learn the recombination and gene transfer mechanism

Programme Outcomes (POs) on successful completion of this course students will be able;

- Describe fundamental principles of microbial genetics.
- Understand mechanism of DNA damage, mutation and repair.
- Describe mechanism of gene transfer between and within the bacterial cells.

SMICC-402 Microbial Physiology

Course Objectives (COs)

- To develop a sufficient background to students about the growth of Microbes.
- To acquire knowledge on basic aspects of bacterial respiration and photosynthesis.
- To acquire knowledge on microbial stress response.

Programme Outcomes (POs) on successful completion of this course students will be able;

- Knowledge on growth of Microbes
- General Information about microbial respiration and photosynthesis
- Clear idea on physiological adaptations under stress conditions.

SMICC-403

Immunology Course

Objectives (COs)

- To facilitate conceptual understanding of Components and functions of Immune system,

- To acquire knowledge on basic aspects Development of Immune response interdependence of HI and CMI.
- To acquire knowledge on basic aspects Disorders of Immune system

Programme Outcomes (POs) on successful completion of this course students will be able;

- At the completion of course student will able to illustrate Anatomy and function of cells and organs of immune system,
- student will have clear idea on Antigen, Antibody and their interactions. student will able to explain auto-immunity, hypersensitivity

SMICE-401 Bio-statistics and Biomolecular Techniques

Course Objectives (COs)

- To learn how to effectively collect data, describe and use data to make inferences
- Demonstrate understanding of hypothesis testing and choose and apply appropriate statistical methods for analyzing variables.
- To learn the principle, working and applications of basic bio-molecular techniques advanced instrumentation techniques.

Programme Outcomes (POs) on successful completion of this course students will be able;

- General Information about basic bio-molecular techniques
- Knowledge on advanced instrumentation techniques.
- General Information about collection and analysis of data use of statistical method in analysis and interpretation of biological data.

SMICC-451 EXTREMOPHILES AND BIODIVERSITY

Course Objectives (COs)

- To facilitate conceptual understanding of extremophiles and their types,
- To study Adaptive strategies in typical extremophiles,
- To Know systematic and occurrence of Archaea, methods of identification, Application of mycorrhiza

Programme Outcomes (POs) on successful completion of this course students will be able;

- At the completion of course student will able to illustrate
- Student will acquire knowledge on Extreme habitats,

- Student will acquire knowledge on applications of extremophiles, culture dependent and independent

SMICC-453 Virology

Course Objectives (COs)

- To facilitate conceptual understanding of Classification of viruses
- To acquire knowledge on basic aspects cultivation of viruses
- To acquire knowledge on basic aspects important viral diseases.

Programme Outcomes (POs) on successful completion of this course students will be able;

- student will able to illustrate morphology and replication strategy of viruses.
- student will acquire information on viral cultivation
- student will acquire information on diseases

SMICC-452 Microbial Metabolism

Course Objectives (COs)

- To learn the characteristics of enzymes
- To acquire knowledge on metabolism of bio - molecules.
- To acquire knowledge on methane fermentation, Sulfide fermentation

Programme Outcomes (POs) on successful completion of this course students will be able;

- Student will know about General Information about enzymes
- Student will have Knowledge on metabolism of bio – molecules
- Student will have Knowledge on regulation of enzyme

SMICE-451 Applied Enzymology and Molecular

Biology Course Objectives (COs)

- To learn the enzyme modification and recent developments in enzymes
- To acquire knowledge on applicability of enzymes.
- To acquire basic and advanced molecular biology

Programme Outcomes (POs) on successful completion of this course students will be able;

- Student will have knowledge about enzyme modifications.
- Knowledge on applications of enzymes
- Student will have knowledge about basic and advanced molecular biology

M. Sc - II-Year MICROBIOLOGY

Course outcome (COs) and Programme Objectives (POs):

SMICC-502 Medical Microbiology

Course Objectives (COs)

The aim of this course is to introduce basic principle & application relevance of clinical disease for students acquire working knowledge in basic medical science & research.

Programme Outcomes (POs)on successful completion of this course students will be able;

- Upon successful completion of this course the student will be able to Understand basic principles of medical microbiology & infectious diseases.
- Learn mechanisms of transmission of infectious diseases & role of normal flora of human body. Understand importance of pathogens in Explain the methods of prevention & control of microbial diseases.

SMICC-503 DIAGNOSTIC MICROBIOLOGY AND BIOINFORMATICS

Course Objectives (COs)

This course has been developed to develop basic principle and application of bioinformatics and new diagnostic techniques

Programme Outcomes (POs)on successful completion of this course students will be able;

- Student will be able to understand the diagnostic techniques used in the diagnosis of various diseases and disorders use bioinformatics based analytical tools

SMICC-552 Pharmaceutical Microbiology

Course Objectives (COs)

Aim of course is to provide knowledge of Antibiotics and Pharmaceutical product policies in pharmaceutical industries and validation of product.

Programme Outcomes (POs)on successful completion of this course students will be able;

- After completing the course student will have idea of pharmaceutical products their mode of action spoilage and validation policies of pharmaceutical industries