

DEPARTMENT MICROBIOLOGY 2023-24

Minor: Semester: II

M-MB24201: COURSE 3: - INTRODUCTION TO MICROBIOLOGY
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Course Outcomes:

1. Understand the historical significance of microbiology and the contributions of key scientists.
2. Recognize the classification of microorganisms and their place in the living world.
3. Comprehend the scope and applications of microbiology, including the origin of microbial life and the distinction between eukaryotic and prokaryotic cells.
4. Describe the characteristics of bacteria, archaea, fungi, algae, and protozoa.
5. Describe viruses, including their nature, composition, and diversity in structure.
6. Develop practical skills in aseptic techniques, growth media preparation, isolation methods, and the identification of bacteria and fungi

MICROBIOLOGY: B. Sc CBMB (Semester: III)

MB203307: Molecular Biology And Microbial Genetics

Course Outcomes:

1. Understand the nature of genetic material, process of DNA replication and the role of DNA and RNA.
2. Understand gene structure, genetic code and the process of transcription, translation and regulation of gene expression in bacteria.
3. Define and classify mutations, understand their molecular basis.
4. Familiarize with genetic recombination in bacteria, and Genetic engineering technology

MICROBIOLOGY: B. Sc CBMB (Semester: IV)
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Paper 4: MB204313: Immunology And Medical Microbiology

Course Outcomes:

1. Explain Non-specific body defense and the immune response
2. Develop knowledge on disease transmission and control
3. Demonstrate on collection and handling of laboratory specimens
4. Develop information making personal health decision in regard to infectious diseases.
5. Student can safeguard himself & society and can work diagnostics and hospitals.

MICROBIOLOGY: B. Sc CBMB (Semester: IV)
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Paper 5: MB204314: Microbial Ecology And Industrial Microbiology

Course Outcomes:

1. Understand fundamental concept in soil microbial diversity, basic concept of biogeochemical cycles and plant growth promotion and plant diseases
2. Understands the role of microorganisms in treatment of solid and liquid waste.
3. Acquire knowledge on application of microorganisms in agro – environmental fields.
4. Get basic information design of fermenter, fermentation processes and Single cell proteins.
5. Self-reliance in the industrial application of Microbiology in life and industry.
6. Entrepreneurship can be established with the gained knowledge.

Semester: V B. Sc CBMB (Skill Enhancement Course- Elective)
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Paper6A: MB225313-6A: Food, Agriculture And Environmental Microbiology

Course Outcomes:

1. Demonstrate with the wide diversity of microbes and their spoilage food, food intoxication and food born infections
2. Able to understand principles of food preservation, fermented foods and microbes as food.
3. The student will acquire knowledge on application of microorganisms in agro – environmental fields
4. Get fundamental concepts in principles of plant disease control an industrial application of Microbiology
5. The student will have fundamental concepts in soil microbiology and soil water and aero microbial diversity and microbial interactions Basic concepts in treatment of drinking water.

Semester: V: B. Sc CBMB (Skill Enhancement Course- Elective)

Paper7A: MB225314-7A: Management Of Human Microbial Diseases And Diagnosis

Course Outcomes:

1. Develop knowledge and skills on microbiological laboratory skills for identification of pathogens
2. Students will demonstrate the collection of clinical samples
3. Students will get knowledge on staining techniques
4. Students able to perform diagnostic techniques
5. To understand drug resistance