

**Anna College of Arts & Science**  
Quality Education for Today & Tomorrow  
Kovilachenri, Kumbakonam 612 603 Ph. 0436 2453007  
Approved by Board, UGC & Recognized by UGC under Section 2(F) & 12(B)  
Affiliated to Anna University, Chennai. [anna.acad@annauniv.edu](mailto:anna.acad@annauniv.edu)

## DEPARTMENT OF MICROBIOLOGY

Attainment of Programme outcome,  
Programme Specific outcome with  
Course outcome

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HOD

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Affiliated to Bharathidasan University, Trichy  
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## Mapping of Programme outcome, Programme Specific outcome with Course outcome

### UG Programme outcome:

- PO1:** Demonstrate theory and practical skills in microscopy and their handling techniques and staining procedures.
- PO2:** Formulate, articulate, retain and apply specialized language and knowledge relevant to the core concepts in microbiology.
- PO3:** Apply the Microbiology discipline through involvement in research or internship activities
- PO4:** Understand the basic microbial structure, functions and study the comparative characteristics of prokaryotes and eukaryotes and also understand the structural similarities and differences among various physiological groups of bacteria/*archaea*.
- PO5:** Evaluate examples of the vital role of microorganisms in biotechnology, fermentation, medicine, and other industries important to human wellbeing.
- PO6:** Know General bacteriology and microbial techniques for isolation of pure cultures of bacteria, fungi and algae.
- PO7:** Comprehend the various methods for identification of unknown microorganisms.
- PO8:** Understand the microbial transport systems, the modes and mechanisms of energy conservation in microbial metabolism – Autotrophy and heterotrophy.
- PO9:** Know the various Physical and Chemical growth requirements of bacteria and get equipped with various methods of bacterial growth measurement.
- PO10:** Know how viruses are classified, understand the architecture of viruses and know the methods used in studying viruses.



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### UG Programme Specific outcome:

- PSO1:** A general course emphasizing distribution, morphology and physiology of microorganisms in addition to skills in aseptic procedures, isolation and identification.
- PSO2:** This course also includes sophomore level material covering immunology, virology, and epidemiology and DNA technology.
- PSO3:** Understand fundamental principles involved in Microbiology.
- PSO4:** Acquire detail knowledge of microorganisms, their types and significance.
- PSO5:** Understand metabolic and structural significance of bio-molecules.
- PSO6:** Acquaint with concepts of Immunity, Antigen, Antibody and Immune system.
- PSO7:** Understand importance and applications of various enzymes in replication transcription and translations.
- PSO8:** Acquire detail knowledge of industrial production of enzymes, antibiotics and vitamins.













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## DEPARTMENT OF MICROBIOLOGY

### BIOCHEMISTRY II / ISACBC2:

Course outcome	Programme outcome										Programme Specific outcome								
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	
CO1: Describe classification and properties of enzymes				✓															
CO2: Understand industrial applications of enzymes.															✓				
CO3: List out biochemical characteristics of Carbohydrates.						✓													
CO4: Narrate biochemical characteristics of Lipids.		✓																	
CO5: To enumerate the organization of signaling pathways.																			
CO6: The structures of amino acids, their chemical properties and their organization into Polypeptides and proteins. Methods for isolating and characterizing proteins the basic elements of protein structure key.				✓												✓			









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## DEPARTMENT OF MICROBIOLOGY

**BIOSTATISTIC AND INFORMATISTIC/ 16SACBS1:**

Course outcome	Programme outcome										Programme Specific outcome								
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	
CO1: Understand basic terms and applications of biostatistics.										✓									
CO2: Represent the DATA diagrammatically.																		✓	
CO3: Understand limitations of graphic representation.			✓																
CO4: Measure central tendencies like mean, mode and median and their relationship.												✓							















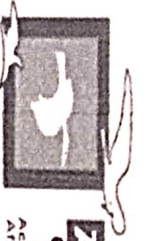












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## DEPARTMENT OF MICROBIOLOGY

### MICROBIAL BIOTECHNOLOGY AND BIOETHICS / 16SMEMB3:

Course outcome	Programme outcome										Programme Specific outcome								
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PS	
CO1: Define microbial taxonomy with phenotype.					✓														
CO2: How do you classify the nutrients?														✓					
CO3: How do you calculate the CFU														✓					
CO4: Discuss about beneficiary microbes in everyday life.																			
CO5: Discuss the possibility to use the microorganism to solve environmental problems.					✓														
CO6: Discuss the survival mechanism of pathogenic microorganism in environment.								✓											
CO7: Culture of different culture nutrient media.															✓				
CO8: Equipped with aseptic techniques.															✓				