

M.V.R. DEGREE COLLEGE
(UG And PG Courses)
(Affiliated to Andhra University)
An Institution of Priyadarshini Educational Academy
NAAC ACCREDITED COLLEGE

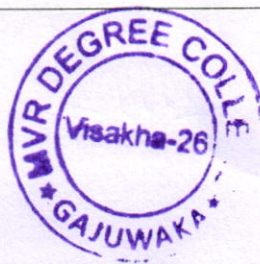
Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

DEPARTMENT OF MICROBIOLOGY

Bachelor of Science (B.Sc. MB BC BT)
APSCHE, Revised Syllabus of Microbiology under CBCS Frame Work
w.e.f 2020 – 21 (Revised in April, 2020)
Course Out Comes (Cos) for Microbiology

CODE	TITLE OF THE PAPER	OUTCOMES
MBT-1 (TH)	INTRODUCTION TO MICROBIOLOGY AND MICROBIAL DIVERSITY	<p><u>CO1:</u> The main objective of the course to know the students about contributions of scientists and to know the general characteristics of microorganisms.</p> <p><u>CO2:</u> This course introduces to know the different methods of sterilization and concepts of microbial culture.</p> <p><u>CO3:</u> The main objective of the course to make the students aware of Principles, Instrumentation and Handling of Microscopy and also the students understand about different staining techniques and culture medias.</p> <p><u>CO4:</u> Students get the knowledge about microbial growth methods and steps in cultivation of microbes.</p> <p><u>CO5:</u> The main objective of this course is to understand the students and get the</p>

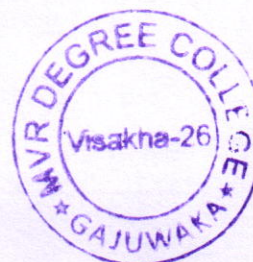


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		knowledge about the structure of cell organelle of different prokaryotic and eukaryotic species.
MBP 1 (PR)	INTRODUCTION TO MICROBIOLOGY AND MICROBIAL DIVERSITY	<p><u>CO1:</u> To learn how to determine types of bacteria by using staining techniques.</p> <p><u>CO2:</u> Able to acquire the techniques and inoculation methods.</p> <p><u>CO3:</u> Preservation of bacterial cultures by various techniques.</p> <p><u>CO4:</u> Microscopic observation of bacteria (Gram positive bacilli and cocci, Gram negative bacilli).</p>
MBT II (TH)	MICROBIAL PHYSIOLOGY AND BIOCHEMISTRY	<p><u>CO1:</u> Describe the chemistry of carbohydrates, lipids, proteins and amino acids.</p> <p><u>CO2:</u> Describe the classification and structural organization of proteins.</p> <p><u>CO3:</u> Describe the primary, secondary, tertiary structure in proteins and identify the types of interactions important in each case.</p>



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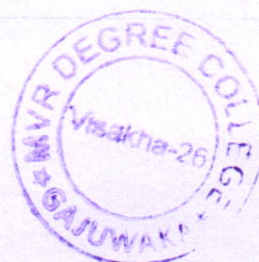
		<p>Describe and recognize the structure of nucleic acids compare and contrast – DNA and RNA.</p> <p>CO4: Describe the metabolic pathways of aerobic and anaerobic respiration pathways.</p> <p>To understand the oxygenic and anoxygenic photosynthesis in bacteria.</p> <p>CO5: The ability in classifying enzymes and also understand the mechanism of catalysis employed by the most well characterized enzymes.</p> <p>Explain how the enzyme activity is regulated and affected by temperature, Ph and concentration.</p>
MBP II (PR)	MICROBIAL PHYSIOLOGY AND BIOCHEMISTRY	<p>CO1: Able to acquire a knowledge about the analysis of carbohydrates and amino acids.</p> <p>CO2: To determine and estimate the DNA and RNA methods.</p> <p>CO3: Determination of immobilization</p>

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		<p>of enzyme activity.</p> <p>CO4: Effect of temperature / Ph on enzyme activity.</p>
<p>MBT III (TH)</p>	<p>MEDICAL MICROBIOLOGY AND IMMUNOLOGY</p>	<p>CO1: Identify normal micro-flora of humans. General methods of laboratory diagnosis – cultural, biochemical, serological and molecular methods.</p> <p>CO2: Identify epidemiology of general bacterial diseases, fungal and protozoal diseases.</p> <p>Describe the life cycle, pathogenesis, laboratory diagnosis of viral diseases.</p> <p>CO3: Identify the pathology of diseases caused by Aspergillus, Penicillium and also Hemoflagellates.</p> <p>Students get the knowledge about antibacterial, antifungal and antiviral drugs.</p> <p>CO4: The main objective of this course study of the immune system cells and organs.</p>



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		CO5: Discuss diagnostic application of immunology: Practical aspects of antigen-antibody interaction: Precipitation and agglutination.
MBP III (PR)	MEDICAL MICROBIOLOGY AND IMMUNOLOGY	<p>CO1: Identification of human blood groups and separate serum from the blood sample.</p> <p>CO2: To estimate the blood hemoglobin, and also differential the leucocyte count.</p> <p>CO3: Identify bacteria- <i>E. coli</i>, <i>Pseudomonas</i>, <i>Staphylococcus</i>, <i>Bacillus</i>, using laboratory strains on the basis of cultural, morphological and biochemical characteristics: IMVIC, Urease production and catalase tests.</p> <p>CO4: Study symptoms of the diseases with the help of photographs: Anthrax, Polio, Herpes, Chicken pox, HPV warts, Dermatormycoses (ring worms).</p>
MBT IV (TH)	INDUSTRIAL MICROBIOLOGY	CO1: The main objective of this course to understand students how the

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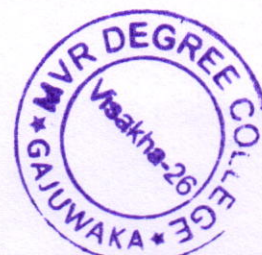
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		<p>microorganisms have the importance in industry.</p> <p>CO2: Have developed an understanding of different types of reactors or fermenters.</p> <p>CO3: Students get the knowledge about the role of microorganisms in pharma and therapeutic enzymes.</p> <p>CO4: Have acquired a detailed knowledge of number of products which are produced by industrial fermentation process.</p> <p>CO5: Students get the knowledge about bioreactors and it concepts.</p>
MTP IV (PR)	INDUSTRIAL MICROBIOLOGY	<p>CO1: To determine the production and estimation of alcohol.</p> <p>CO2: To isolate the amylase producing microorganisms from soil.</p> <p>CO3: Demonstration of fermenter.</p> <p>CO4: Microbial fermentation for the production and estimation of ethanol</p>



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	from grapes.
	CO5: Growth curve and kinetics of any
	two industrially important
	microorganisms.

Handwritten signature in green ink.

PRINCIPAL
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