TTWRDC (GIRLS), JANAGAON- 2023-2024

COURSE OUTCOMES

S.No	SEMESTER	COURSE OUTCOMES
1.	I SEMESTER	**1. INTRODUCTORY MICROBIOLOGY** 1. To gain a preliminary understanding about the history and developments in Microbiology 2. To familiarize with Microbiological techniques 3. Understand the principle of work,energy and power 4. To develop interest in control measures of pathogens and other microbes
2.	II SEMESTER	**2.MICROBIAL PHYSIOLOGY AND BIOCHEMISTRY** CO 1: Understand the nutritional diversity among microorganisms, the different macro and micronutrients required for microbial growth and understand the physical factors affecting microbial growth. CO 2: Describe the pattern of growth, reproduction, death and growth kinetics of microbes and measure population growth by different methods. CO 3: Understand the phototrophic nutrition in microorganisms, different mechanisms seen in different microbial groups and their ecological importance. CO 4: Understand the unique nutritional type among microorganisms- the chemolithotrophs-, their types, use of different inorganic sources for energy production, ecological importance and role in biogeochemical cycles. CO 5: Understand how carbohydrates, proteins and fats are metabolized in the microbial cells and the diverse metabolic pathways leading to energy production.
3.	III SEMESTER	**3. MEDICAL MICROBIOLOGY** CO 1: Describe about infection, its types, transmission of infection & virulence factors CO 2: Understand the details of causative agent of major human bacterial infection CO 3: Understand the diagnostic & treatment methods of various Air borne, water, insect and blood bornefood borne infections CO 4: Understand prophylactic measures of different bacterial diseases CO 5: Understand epidemiological aspects of bacterial diseases

4.	IV SEMESTER	**4.MICROBIAL GENETICS $ MOLECULAR BIOLOGY** CO 1:Understand genomic organization of prokaryotes including bacterial chromosome, plasmids and transposable genetic material CO 2:Understand gene transfer mechanism in prokaryotes, its applications and genetic make-up of bacteriophage and yeast briefly CO 3:Explain molecular mechanism underlying mutations and useful phenotypes of bacterial mutants. CO 4:Explain the basics and molecular techniques involved in recombinant DNA technology and the role of microbes in rDNA technology CO 5:Describe the applications of transgenic plants and animals.
5.	V SEMESTER	**5.INDUSTRIAL MICROBIOLOGY** CO 1: Describe about fermenter and fermentation technology. CO 2: Understand microbial products by fermentation process. CO 3: Understand enzyme technology and its application
6.	VI SEMESTER	**6. ENVIRONMENTAL MICROBIOLOGY** CO 1:Understand the basic concept of Ecology and factors influencing the growth of microorganisms in the environment CO 2:Understand biogeochemical cycling in the environment and microbial interactions in the soil CO 3:Explain the role of microorganisms causing diseases transmitted through water and the importance of indicator organisms in determining the microbiological quality of drinking water CO 4:Understand steps involved in waste water treatment CO 5:Explain the methods to resolve important global environmental problems