

ACADEMIC PLAN FOR THE DEPARTMENT OF MICROBIOLOGY
SESSION:2019-20 (ODD SEMESTER)

SEMESTER	PAPER	UNIT	TEACHER		No. of class hours allotted per week (as per class routine)		Total no. of class hours required in the session (Approx.)		Duration (in month)	Remark (if any)
			Theory	Practical/Tutorial	Theory	Practical/Tutorial	Theory	Practical/Tutorial		
Ist Semester (UG) (CBCS)	CC-1: INTRODUCTION TO MICROBIOLOGY AND MICROBIAL DIVERSITY	Unit 1: History of Development of Microbiology	Dr. Sampa Debnath	Dr. Saswati Gayen	1	4	50	60	4	
		Unit 3: An overview of Scope of Microbiology								
		Unit 2: Diversity of Microbial World	Dr. Saswati Gayen		2					
		Unit 2A: Systems of classification								
		Unit 2B: General characteristics of different groups								
		Unit 2B: Fungi								
		Unit 2B: Algae	Dr. Surajit Bag		1					
		Unit 2B: Protozoa								
	CC-2: BACTERIOLOGY	Unit 1: Cell organization	Dr. Prasenjit Das	Miss Sahana Ghosh	2	4	50	60	4	
		Unit 6: Bacterial Systematics								
		Unit 7: Important archaeal and eubacterial groups	Mr. Pinaki Hazra		1					
		Unit 2: Bacteriological techniques								
		Unit 3: Microscopy	Miss Sahana Ghosh		1					
		Unit 4: Growth and nutrition								
Unit 5: Reproduction in Bacteria										

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IIIrd Semester (UG) (CBCS)	CC-5: VIROLOGY	Unit 1: Nature and Properties of Viruses	Dr. Shilajit Barua	Dr. Shilajit Barua	1	4	50	60	4	
		Unit 6: Applications of Virology								
		Unit 2: Bacteriophages	Dr. Sudip Samadder		2					
		Unit 4: Viruses and Cancer								
		Unit 5: Prevention & control of viral diseases	Dr. Arun Roy		1					
	Unit 3: Viral Transmission, Salient features of viral nucleic acids and Replication									
	CC-6: MICROBIAL PHYSIOLOGY AND METABOLISM	Unit 1: Microbial Growth and Effect of Environment on Microbial Growth	Dr. Prasenjit Das	Miss Sahana Ghosh	2	4	50	60	4	
		Unit 2: Nutrient uptake and Transport								
		Unit 6: Nitrogen Metabolism								
		Unit 3: Chemoheterotrophic Metabolism - Aerobic Respiration	Dr. Sampa Debnath		2					
		Unit 4: Chemoheterotrophic Metabolism- Anaerobic respiration and fermentation								
	Unit 5: Chemolithotrophic and Phototrophic Metabolism									
	CC-7: MOLECULAR BIOLOGY	Unit 1: Structures of DNA and RNA / Genetic Material	Dr. Gargi Saha Kesh	Dr. Gargi Saha Kesh	2	4	50	60	4	
		Unit 3: Transcription in Prokaryotes and Eukaryotes								
		Unit 4: Post-Transcriptional Processing								
		Unit 5: Translation (Prokaryotes and Eukaryotes)	Mr. Pinaki Hazra		1					
		Unit 2: Replication of DNA (Prokaryotes and Eukaryotes)								
	Unit 6: Regulation of gene Expression in Prokaryotes and Eukaryotes	Dr. Arun Roy	1							
	SEC-A1: MICROBIAL QUALITY CONTROL IN FOOD AND PHARMACEUTICAL INDUSTRIES	Unit 1: Microbiological Laboratory and Safe Practices	Dr. Saswati Gayen	-----	2	-----	30	-----	4	
Unit 3: Pathogenic Microorganisms of Importance in Food & Water										
Unit 4: HACCP for Food Safety and Microbial Standards										
Unit 2: Determining Microbes in Food / Pharmaceutical Samples		Dr. Surajit Bag	1							