

ACADEMIC PLAN FOR THE DEPARTMENT OF MICROBIOLOGY						SESSION:2019-20 (EVEN 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		
II nd Semester (UG) (CBCS)	CC-3: BIOCHEMISTRY	Unit 1: Bioenergetics	Dr. Sampa Debnath	Dr. Sampa Debnath	3	4	50	60	4	
		Unit 2: Carbohydrates								
		Unit 5: Enzymes								
		Unit 6: Vitamins								
		Unit 3: Lipids								
	Unit 4: Proteins	Dr. Arun Roy	1							
	CC-4: CELL BIOLOGY	Unit 1: Structure and organization of Cell	Dr. Prasenjit Das	Miss Sahana Ghosh	3	4	50	60	4	
		Unit 2: Nucleus								
		Unit 3: Protein Sorting and Transport								
		Unit 4: Cell Signalling								
Unit 5: Cell Cycle, Cell Death and Cell Renewal		Dr. Sudip Samadder	1							

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			Theory	Practical/Tutorial	Theory	Practical/Tutorial	Theory	Practical/Tutorial			
IV th Semester (UG) (CBCS)	CC-8: MICROBIAL GENETICS	Unit 1: Genome Organization and Mutations	Dr. Sudip Samadder		1				4		
		Unit 4: Phage Genetics									
		Unit 2: Plasmids	Dr. Gargi Saha Kesh	Dr. Gargi Saha Kesh	2	4	50	60			
		Unit 3: Mechanisms of Genetic Exchange									
		Unit 5: Transposable elements	Dr. Arun Roy		1						
	CC-9: ENVIRONMENTAL MICROBIOLOGY	Unit 1: Microorganisms and their Habitats	Dr. Saswati Gayen	Dr. Surajit Bag	2	4	50	60	4		
		Unit 3: Biogeochemical Cycling									
		Unit 4: Waste Management									
		Unit 2: Microbial Interactions	Dr. Prasenjit Das		1						
		Unit 5: Microbial Bioremediation									
		Unit 6: Water Potability	Mr. Pinaki Hazra		1						
	CC-10: RECOMBINANT DNA TECHNOLOGY	Unit 1: Introduction to Genetic Engineering	Dr. Gargi Saha Kesh	Dr. Gargi Saha Kesh	2	4	50	60	4		
		Unit 3: Methods in Molecular Cloning									
		Unit 4: DNA Amplification and DNA sequencing									
		Unit 6: Applications of Recombinant DNA Technology									
		Unit 2: Molecular Cloning- Tools and Strategies	Dr. Sudip Samadder								2
		Unit 5: Construction and Screening of Genomic and cDNA libraries									
	SEC-B2: MICROBIOLOGICAL ANALYSIS OF AIR AND WATER	Unit 1: Aeromicrobiology	Dr. Surajit Bag		2	30			4		
		Unit 2: Air Sample Collection and Analysis									
		Unit 3: Control Measures									
Unit 4: Water Microbiology		Mr. Pinaki Hazra	2								
Unit 5: Microbiological Analysis of Water											
Unit 6: Control Measures											