

Subject Code: 1SC2060103	Subject Title: CLINICAL MICROBIOLOGY
COURSE TYPE: CORE COURSE	-----

Course Objective: The students will be able to understand clinical aspect of Microbiology and Bacteriology.

Teaching scheme (hours) per week		Credit			Theory Marks		Practical Marks		Total
Theory	Practical	Theory	Practical	Total	Uni. Assessment	Cont. Assessment	Uni. Assessment	Cont. Assessment	
4	--	4	--	4	60	40	--	--	100

Unit	Content	Lectures	Weightage
1	<ul style="list-style-type: none"> • Introduction: Clinical Microbiology and Clinical Bacteriology • Methods of sterilization and disinfection. • Normal flora of human body • Staining methods and aseptic techniques: Gram staining, Albert's staining, Acid-fast staining, capsule, cell wall, metachromatic granule, spore, spirochete staining and aseptic techniques • Culturing of Microorganisms: composition, types, preparation and inoculation of culture media, culturing of anaerobes. Preparation and quality control of various culture media. 	20	30%
2	<ul style="list-style-type: none"> • Identification of Bacteria: methods, culture characteristics, biochemical properties and biochemical tests. • Study of Gram positive bacteria • Study of Gram Negative Bacteria 	15	25%
3	<ul style="list-style-type: none"> • Clinical Mycology & Virology: Introduction, Classification, Properties and laboratory test • Collection, transportation and examination of specimens 	15	25%
4	<ul style="list-style-type: none"> • Introduction to Antibiotics • Multidrug resistance(MDR) • Biosafety in Microbiology Laboratory • Disposal of Clinical specimens 	10	20%

Learning Outcome: Become aware about clinical terms, clinical bacteriology practice, and general bacteriology, diagnosis of clinical samples by using various procedures and Advances of Clinical microbiology.

Reference Books:

1. Medical Laboratory Technology by Kanai L. Mukherjee, Tata McGraw-Hill Education.
2. Textbook of Medical Laboratory Technology by Praful B. Godkar, Darshan P. Godkar, Bhalani Publishing House.
3. Instant Notes in Biochemistry by David Hames, Nigel Hooper Garland Science.
4. Microbiology by Michael J. Pelczar, E.C.S. Chan, Noel R. Krieg, Tata McGraw-Hill Education.
5. Prescott's Microbiology by Joanne M. Willey, Linda Sherwood, Christopher J. Woolverton McGraw-Hill.
6. A Textbook of Microbiology by D K Maheshwari, R C Dubey, S Chand Publishing, ISBN-10: 9788121926201
7. District Laboratory Practice in Tropical Countries by Monica Cheesbrough Second Edition Cambridge University Press.
8. Instant Notes in Microbiology by Jane Nicklin, Bios Scientific Publishers.