

Title of the Course: MEDICAL MICROBIOLOGY AND EPIDEMIOLOGY [P]**Course Code: MIC-628****Number of Credits: 1, Practical****Contact hours: 30****Effective from Academic Year: 2022-23**

Prerequisites	Ability to handle microorganisms in the laboratory.	
Objective:	• Student will learn in handling, characterization and identification of pathogens. • Student will able to do analysis of epidemiological data.	
Content:		(30)
1.	Demonstration of malaria parasite in blood film.	
2.	Determination of sensitivity of bacteria to antibiotics (Disc method).	
3.	Enrichment, isolation and identification of Enteric pathogen.	
4.	Analysis of disease incidence using CDC/epidemiological data.	
Pedagogy:	Experiments in the laboratory, web resources	
References/ Readings	Centers for Disease Control and Prevention, Department of Health & Human Services, USA https://www.cdc.gov/ Chakraborty, P. and Pal, N.K., Manual of Practical Microbiology and Parasitology. New Central Book Agency, India. (2018) Chakraborty, P. Textbook of Medical Parasitology. New Central Book Agency, India (2016) Davis, B.D. et al., Microbiology. Harper and Row. (1972) Gillespie, S.H. and Hawkey, P.M., Principles and Practice of Clinical Bacteriology. Wiley. (2006) National Centre for Disease Control, Ministry of Health & Family welfare, GOI https://ncdc.gov.in/ Online Tuberculosis Information System (OTIS) Data, Centers for Disease Control and Prevention, Department of Health & Human Services, USA https://wonder.cdc.gov/tb.html Parija, SC, Textbook of Microbiology & Immunology. Elsevier Health Sciences. (2016) Rafi, MD, Textbook of biochemistry for Medical Students, Universities Press, India (2020) Riedel, S., Hobden, J.A. , Miller, S., Morse, S.A., Mietzner, T.A. et al. Jawetz, Melnick, & Adelberg's Medical Microbiology, McGraw-Hill Education. (2019). Struthers, J.K. and Westran, R.P., Clinical Bacteriology. CRC Press. (2003) Topley, W.W.C., Wilson, G.S., Parker, M.T., & Collier, L.H. , Topley and Wilson's Principles of Bacteriology, Virology and Immunity: v. 1-4, Hodder Arnold (1990) World Health organization, South-East Asia https://www.who.int/southeastasia	
Course Outcomes	• To identify and distinguish between various human pathogens. • To apply the microbiology tools and techniques in specific need for clinical cases.	

	• To estimate the resistance of bacteria against commercially available antibiotics. • To apply the principles of statistics in processing of epidemiological data.	
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