

Title of the Course: MEDICAL VIROLOGY [P]**Course Code: MIC-610****Number of Credits: 1, Practical****Contact hours: 30****Effective from Academic Year: 2022-2023**

Prerequisites	Students should have basic knowledge of viruses and microbiological techniques.	
Objective:	Develop skills in handling, detecting and identifying viruses of medical importance	
Content:		(30)
1.	Electron micrographs representative of all the Baltimore classes of viruses	
2.	Real-time PCR detection of RNA viruses	
3.	Rapid antigen / antibody detection test for: i) HIV (retrovirus) ii) SARS-CoV-2 (coronavirus) iii) Dengue (picornavirus) iv) Hepatitis B (hepadnavirus)	
4.	ELISA test for detection of any one virus	
Pedagogy:	Experiments in the laboratory	
References/ Readings	Cohen, A., <i>Medical Virology</i> , John Wiley & Sons, Incorporated (1975).	
	Davis, B.D., Dulbecco, R., Eisen, H.N. and Ginsberg, H.S., <i>Microbiology</i> , Harper and Row Publishers (1982).	
	De La Maza, L.M., Peterson, E.M., <i>Medical Virology</i> , Springer Science & Business Media (2013).	
	Dimmock, N.J., Easton, A.L. Leppard, K.N., <i>Introduction to Modern Virology</i> , Blackwell Publishing Ltd (2023).	
	Evans, B., <i>Perspectives in Medical Virology</i> , Volume 1, Elsevier (2007).	
	Flint, S. J., Racaniello, V. R., Rall, G. F., Hatzioannou, T., & Skalka, A. M., <i>Principles of Virology</i> , John Wiley & Sons (2020).	
	Harper, D.R., <i>Viruses: Biology, Applications, Control</i> , Garland Science (2011).	
	Payne, S., <i>Viruses: From Understanding to Investigation</i> , Elsevier (2022).	
	Ryu, W., <i>Molecular Virology of Human Pathogenic Viruses</i> , Elsevier (2016).	
	White, D.O., Fenner, F., <i>Medical Virology</i> , Gulf Professional Publishing (2016).	
	https://www.cdc.gov/ncird/dvd.html	
	https://www.who.int/southeastasia	
	https://viralzone.expasy.org	
Course Outcomes	<ul style="list-style-type: none">● Identify viruses of medical importance based on their structural characteristics.● Distinguish between the morphologies and tropism of various pathogenic viruses.● Acquire skills in laboratory handling of viral material● Apply modern techniques for the detection of viruses	