

Title of the Course: IMMUNOLOGY [P]**Course Code: MIC-524****Number of Credits: 1, Practical****Contact hours: 30****Effective from Academic Year: 2022-23**

Prerequisites	Basic knowledge of pathogens, haematology and principles of immunology.	
Objective:	Hands-on practice for various techniques used in immunology.	
Content:		(30)
1.	Haemagglutination: Blood grouping - ABO and Rh systems	
2.	Immunodiffusion slide technique	
3.	Agglutination tests for <i>Salmonella</i> -antigens	
4.	Complement fixation test	
5.	C-reactive protein determination	
6.	ELISA	
7.	Rapid tests – Malaria antigens Pv/Pf, IgM/IgG antibodies for Dengue, Hepatitis HBsAg	
8.	Rheumatoid Arthritis Factor determination	
Pedagogy:	Hands-on experiments in the laboratory, video, online data	
References/ Readings	Abbas, A. K., Lichtman, A. H., & Pillai, S. Cellular and molecular immunology. Elsevier Health Sciences. (2021) Bona, C. A. and Bonilla, F. A., Textbook of Immunology, Fine Arts Press (1996). Chakraborty, P. and Pal, N. K., Manual of Practical Microbiology and Parasitology, New Central Book Agency (P) Ltd, Delhi, India. (2004). Delves, P., Martin, S., Burton, D. and Roitt, I., Roitt's Essential Immunology. Wiley-Blackwell. (2017). Goldsby, R. A., Kindt, T.J. and Osborne, B.A., Kuby Immunology. W.H. Freeman (2007) Murphy, K., Janeway's Immunobiology, Garland Science. (2007)	
Course Outcomes	● Explain the principal of various immunodiagnostics. ● Demonstrate the techniques used in immuno-diagnosis. ● Perform the various immunological techniques for diagnosis of various diseases. ● Develop novel and rapid immunodiagnostics.	