

Semester	8		
Course code	ZOOL 42662		
Course Name:	Immunology		
Credit Value:	2		
Core/Optional	Optional		
Pre requisites	ZOOL 21512		
Co-requisites	None		
Hourly Breakdown	Theory	Practical	Independent Learning
	22	16	62
Course Aim/Intended Learning Outcomes:			
After the completion of this course unit the student will be able to;			
<ul style="list-style-type: none"> ➤ describe the development and elements of the immune system in different groups of animals, ➤ discuss roles of different components of the immune system with special reference to human, ➤ discuss mechanisms for innate and adaptive immune responses and role of immune system in health and diseases, and ➤ demonstrate competencies in recognizing histological structure of immunological tissues, applications of selected haematological and serological techniques for assessing immunity, present and interpret the results in a scientific manner. 			
Course Content:			
Development of immune system in the animal kingdom; Elements and basic concepts of the immune system; Organs and tissues of the immune system; Innate immunity and nonspecific resistance; constitutive defenses, role of complement, defensins, interferon, phagocytic cells, mast cells, natural killer cells; inflammation; Adaptive immunity and specific resistance; role of antigens, antibodies, T cell receptors, Major Histocompatibility Complex; Antigen processing and presentations, T cells and B cells development; T-cell mediated immunity; B cells and antibody mediated immunity; immunologic memory; Immune system in health and diseases: infections and vaccines, hypersensitivity, immunodeficiency, transplantations; stress and immunity. Practical sessions on histology of immune-competent organs of selected vertebrates, selected haematological and serological assays for evaluating immune responses.			
Teaching /Learning Methods: A combination of lectures, laboratory studies and preparation of laboratory reports, assignments, self-studies, computer based learning and small group discussions.			
Assessment Strategy: Continuous assessment and end of course examination.			
Continuous Assessment 15%	Final Assessment 85%		
Details: Lab reports 10% Presentations 5%	Theory (%) 85%	Practical (%) NA	Other (%) (specify) NA
Recommended reading:			
<ol style="list-style-type: none"> 1. Owen, J., J. Punt & S. Stanford (2013). Kuby Immunology, 7th edition W.H. Freeman publishers. 2. Paul, W.E. (2008). Fundamental Immunology. Lippincott Williams and Wilkins. 3. Parham, P. (2009). The immune system. 3rd edition, Taylor and Francis, New York. 			