

Planning and Quality Assurance Affairs

Form (A)

Course Specifications

General Information

Course name	Immunology & Serology
Course number	AMSL3317
Faculty	
Department	
Course type	Major Needs
Course level	3
Credit hours (theoretical)	2
Credit hours (practical)	1
Course Prerequisites	

Course Objectives

- 1 - This course will introduce the student to the underlying principles of immunology. Its primary emphasis will be on the cellular and non-cellular components of the human immune system and the ways in which these components interact to provide immunity. Upon completion of this course students will be expected to
- 2 - 1. Describe the major divisions of the immune system
- 3 - 2. Describe humoral immunity and cell-mediated immunity
- 4 - 3. Compare and contrast innate and acquired immunity
- 5 - 4. Discuss the role of immune cells
- 6 - 5. Discuss the immune response to specific pathogens

Course Contents

- 1 - This course covers the immune system and serology , the immune system includes cellular basis of immune response, type of antigen, MHC, Immunoglobulin structure and function , cell mediated immunity, complement , hypersensitivity, autoimmune disease,transplantation,immune deficiency and tumor immunology
- 2 - week 1 Overview of the Immune System
- 3 - Week 2 Elements of Innate and Acquired immunity.
- 4 - Week 3 Immunogens and Antigens. Antibody structure and Functions.
- 5 - Week 4 Biology and activation of B Lymphocytes.
- 6 - Week 5 Biology and activation of T Lymphocytes.
- 7 - Week 6 Midterm exam
- 8 - Week 7 The Complement System
- 9 - Week 8 The Major Histocompatibility Complex and Antigen Presentation
- 10 - Week 9 Cytokines and chemokines
- 11 - Week 10 Autoimmunity.
- 12 - Week 11 Allergies, Hypersensitivities, and Chronic Inflammation
- 13 - Week 12 Hypersensitivity: Type I. Hypersensitivity: Type II and III. Hypersensitivity: Type IV.
- 14 - Week 13 Immunodeficiency and Neoplasm of the Lymphoid system.
- 15 - Week 14 Transplantation. Tumor Immunology.

Teaching and Learning Methods

- 1 - Powerpoint presentations
- 2 - Group Discussion
- 3 - Assignments

Students Assessment

<u>Assessment Method</u>	<u>TIME</u>	<u>MARKS</u>
Midterm Exam	As scheduled	30
Practical Part	through the semester	20
Final Exam	As scheduled	50

Books and References

Course note	1. Immunology, A short course (2009), Richard Coico and Geoffrey Sunshine, Wiley-Blackwell Publication
	2. Immunology (2006), David Male, Jonathan Brostoff, David Roth and Ivan Roitt. Mosby, Elsevier Publication.
Essential books	Clinical immunology and serology, F.A.Davis company philadelphia, clinical laboratory science programs, western carolina university