

Course title: Immunology
Course code: 1504203
Credit hours: 2 hours
Calendar description: 16 weeks of teaching during the first semester
Course coordinator: Dr Eman Al-bataineh,
Course description

Course title: Basic Immunology
Code:
Credit hours: 2 hours
Calendar description: 16 weeks of teaching during the first semester
Teaching approach: 3 hours weekly for 16 weeks
Teaching staff: Dr. Eman Al- bataineh, Dr. Mohammad abu lubbad

Course Description:

The course assumes basic knowledge of the immune system. This course is a taught, lecture and lab- based course which gives basic knowledge about cellular and molecular aspects of the immune system. The course will begin with a general overview, move to the nature of immunity; the cellular and molecular basis of the immune system; self versus non-self recognition; antigen recognition and the clonal selection theory of the immune response; the humoral immune response; antibodies - structure, diversity, function and mechanisms of action; the cell mediated immune response; recognition of antigen by T cells; antigen presentation; the major histocompatibility proteins; the role of cytokines and the regulation of immune responses; the immune system in health and disease - response to infection, development of vaccines; the development of allergies, auto-immune diseases and immunodeficiency; transplantation immunology; manipulation of the immune system; the techniques of immunology and their application.

Objectives

- To know the components of the immune system, their biological structure, function and inter- reaction in the immune system.
- To understand the process of antigen recognition, presentation and fighting.
- To know the immune- related diseases.
- To have an idea about the some applications of the immune system in real life using some lab. Experiments.

Recommended text books

- **Basic immunology.** Function and disorder of immune response. Abul K Abbas & Andrew H .
- **High-Yield Immunology.** Arthur G. Jonhson and Benjamini L. Clarke
- **Immunology.** David Male, Jonathan Brostoff, David B. Roth, Ivan Riott.
- **Immunology note book,** Ian Todd
- **Immunology.** Lippincott's illustrated reviews

Recommended websites:

- 1- Medline search: www.ncbi.nlm.nih.gov/PubMed/medline.html .
- 2- Microbiology and Immunology On-line: pathmicro.med.sc.edu/book/welcome.htm

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Faculty of Medicine
Department of Microbiology
Basic Immunology

For Second Year / Medical Students -

2018-2019

Methods of instruction:

Lectures & practical

Methods of evaluation

First assessment written & practical exam	25%
Second assessment written & practical exam	25%
Practical exam	10%
Final assessment written exam	40%
Total marks	100%

Important: attendance will be taken regularly for all the lectures and labs and any one who can not attend should take permission first, otherwise his evaluation mark will be negatively affected.

Theoretical & laboratory courses

Week	Day	Topic	Lecture or practical
1	Wed	Introduction to immunity and Innate immunity.	Lecture
	Thu	Lymphoid organs and cells circulation	Lecture
2	Wed	Lymphocyte Development and Antigen Receptor Gene Rearrangement	Lecture
	Thu	B cells	Lecture
3	Wed	Antibody structure and functions I	Lecture
	Thu	Antibody structure and functions II	Lecture
4	Wed	Humoral Immunity and Complement system	Lecture
	Thu		Lecture
5	Wed		Lecture

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	Thu		
6		First exam	
7	Wed	Biology of T cells, TCR, MHC & Antigen presentation T-Cell mediated immune response	
	Thu		
8	Wed	Cytokines & Hypersensitivity reactions 1	Lecture
	Thu	Hypersensitivity reactions 2	
9	Wed	Vaccination	Lecture
	Thu	Tumor immunology	Lab
10	Wed	Autoimmune diseases	Lab
	Thu	Transplantation	Lecture
11	Wed		Lecture
	Thu		Lecture
12	Wed	Second Exam	
	Thu		
11	Wed	Immunodeficiency diseases Mechanisms of protective immunity Immunoprophylaxis Immunology Lab Techniques	Lecture
	Thu		
12	Wed	Immunology Lab Techniques	Lecture
	Thu	Immunoheamatology	
13	Wed		
	Thu		

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14	Wed		
	Thu		
15	Wed	Final practical exam	
	Thu	Final exam	