

In the name of God




Isfahan University
of Medical Sciences

Isfahan Medical School

One semester lesson plan

The second semester of the academic year 1402-1403

 Semester : 1	Academic Year :1402-1403
Level: Basic Sciences in medical school	Major: Medical
Course Title: Medical Immunology (Theoretical)	Department: Immunology
Course Code: 1324019	University Professor or Faculty Member: Dr.Eskandari Dr.A. Rezaei , Dr.Esmaeil Dr. Andalib
Class No. :Soleimani class-room 1	Credit Hours: 2 hrs. per week
Prerequisite:	Credit Units: Theoretical (1.5Theo and .25 Prac)
Availability of Professor: +989135697936	Tel: +983137929031
Office Address: Immunology Department, Isfahan Medical School	E-mail: neskanadri16@gmail.com
Name of Student Representative and Cell phone Number:	Number of Students :
The General Purpose of the Lesson: Achievement of knowledge about the basic principles of the human immune system, including immune cells and molecules, the interactions and mechanisms involved in immune system.	
Learning Outcomes (Objectives):	
Assessment Methods: multiple choice questions in mid and final exam,	

(The Assessment Methods that will be Used to Test Students Learning outcomes & the Skills & Competencies Stated in learning Outcomes)

Assessment	Score From 20
Mid Exam (Theory)	40
Final Exam	40
Practical Exam	20
Assignments:	-
Total Marks	100

Main References (Text Books): Cellular and Molecular Immunology

Authors: Abul Abbas Andrew Lichtman Shiv Pillai

Imprint: Elsevier, 9th or 10th Edition, Language: English

References for More Reading:

Medical Immunology Arad Publications Shiraz School of Medical Sciences (in Persian)

Student's Responsibilities: Follow the class subjects regularly, answer the written questions and homework

Attendance Rules: based on University regulation

Department's Attitudes :

Mid Exam Date: 1403/ It Will be notified later

Final Exam Date: 1403/it Will be notified

NO of Session	Main Topic	Teacher's Name	Place & Time	Date	Method of Presentation
1	History of Immunology and Overview of Immune responses: Definition of Immunology1	Dr.Eskandari	10-11am Solimani class-room	1402/11/15	Lecture and using PowerPoint
2	a brief immunological history, The adaptive immune response(Humoral immunity and Cell-mediated immunity) part 2	Dr.Eskandari	11-12 am Solimani class-room	1402/11/15	Lecture and using PowerPoint
3	The Cells of the Immune System: Mast Cells, Basophils, Eosinophils, Lymphocytes, Natural Killer Cells, Innate Lymphoid Cells part 1	Dr. Eskandari	10-11 am Solimani class-room	1402/11/29	Lecture and using PowerPoint
4	The Cells of the Immune System: Mast Cells, Basophils, Eosinophils, Lymphocytes, Natural Killer Cells, Innate Lymphoid Cells part 2	Dr. Eskandari	11-12 am Solimani class-room	1402/11/29	Lecture and using PowerPoint

5	Antigens, Immunogenes, Definition of different Types of Antigens, T Dependent and T Independent Antigens	Dr. A.Rezaei	10-11 am Solimani class-room	1402/12/13	Lecture and using PowerPoint
6	Antibodies: General Features of Antibody Structure, Function, and Synthesis , assembly, and expression of Antibody	Dr. A.Rezaei	11-12 am Solimani class-room	1402/12/13	Lecture and using PowerPoint
7	Different Types, and Biological Function of Antibodies (IgM, IgG, IgE, IgA, IgD)	Dr. A.Rezaei	10-11 am Solimani class-room	1402/12/20	Lecture and using PowerPoint
8	Tissues of the Immune System (Primary and Secondary)	Dr. A.Rezaei	11-12 am Solimani class-room	1402/12/20	Lecture and using PowerPoint
9	Innate Immunity. Components and Functions	Dr.Eskandari	10-11 am Solimani class-room	1403/1/19	Lecture and using PowerPoint
10	Phagocytosis and Intracellular Killing Process	Dr.Eskandari	11-12 am Solimani class-room	1403/1/19	Lecture and using PowerPoint
11	Complement System : Structure, and Function	Dr. A.Rezaei	10-11 am Solimani class-room	1403/1/26	Lecture and using PowerPoint
12	Activation and Regulation of Complement System and Their Pathways	Dr. A.Rezaei	11-12 am Solimani class-room	1403/1/26	Lecture and using PowerPoint

13	Cytokines (part I) Their classification - Their immunological properties include inflammatory and anti-inflammatory cytokines	Dr. Esmaeil	10-11 am Solimani class-room	1403/02/2	Lecture and using PowerPoint
14	Cytokines (part II) Their classification - Their immunological properties include inflammatory and anti-inflammatory	Dr. Esmaeil	11-12 am Solimani class-room	1403/02/2	Lecture and using PowerPoint
15	Structure and function of B and T lymphocytes B cells development and differentiation to plasma cells part	Dr. Esmaeil	10-11 am Solimani class-room	1403/02/9	Lecture and using PowerPoint
16	Humoral Immune Response: Effector Mechanisms of Humoral Immunity part1	Dr. Esmaeil	11-12 am Solimani class-room	1403/02/9	Lecture and using PowerPoint
17	Cell- Mediated Immune Response: Effector Mechanisms of Cell Immunity	Dr. Esmaeil	10-11 am Solimani class-room	1403/02/16	Lecture and using PowerPoint
18	Major Histocompatibility Complex (MHC). Genetic organization and Molecular structure	Dr. Andalib	11-12 am Solimani class-room	1403/02/16	Lecture and using PowerPoint
19	Antigen Presentation to T Lymphocytes and Exocytose and endocytic pathways	Dr. Andalib	10-11 am Solimani class-room	1403/02/23	Lecture and using PowerPoint
22	Mechanism of Immunologic Tolerance	Dr. Andalib	11-12 am	1403/02/23	

			Solimani class-room		Lecture and using PowerPoint
21	Autoimmunity Disease and Their Mechanisms	Dr. Andalib	10-12 am Solimani class-room	1403/02/30	Lecture and using PowerPoint
22	Question and answer session	Lecturer	10-11 am Solimani class-room	1403/03/6	Lecture and using PowerPoint
24	Final exam	1403/ it Will be notified		1403/ it Will be notified	Lecture and using PowerPoint
	Preparation of the Students before the Beginning of the Class	University Professor	Course Topics	Practical Classes	
1	Ag-antibody interactions, basic and principles of serology laboratory tests	Dr.Eskandari	Ab-Ag reaction	The First Week	
2	Performing C-reactive Protein (CRP) test and knowing its uses and interpretation - Introduction to Erythrocyte sedimentation rate (ESR) test	Dr. Esmaeil	CRP, ESR	The Second Week	
3	Performing direct and indirect ABO grouping tests. Rh-du test and knowledge of its application in blood transfusion	Dr.Eskandari	ABO, Rh	The Third Week	
4	Perform direct and indirect Coombs tests and their use, including the diagnosis	Dr. Esmaeil	crossmatch tests	The Forth Week	

	of drug allergies and crossmatch tests			
5	Performing ASO and interpretation and application	Dr. Andalib	ASO	The Fifth Week
6	Ag-Ab demonstration device including Flow-cytometry system and Elisa performance for Ag and ab assay	Dr.Andalib	Flow-cytometry, Elisa	The sixth Week