



In the name of God



Isfahan University
of Medical Sciences

Isfahan Medical School
One semester lesson plan

The First semester of the academic year 1403-1404

 <p>Semester : 1</p>	<p>Academic Year :1403-1404</p> 				
<p>Level: Basic Sciences in medical school</p>	<p>Major: Medical</p>				
<p>Course Title: Medical Immunology (Theoretical)</p>	<p>Department: Immunology</p>				
<p>Course Code: 1113243131</p>	<p>University Professor or Faculty member: Dr. Andalib وDr.Eskandari وDr.Rezaie و Dr.Esmaeil,</p>				
<p>Class No. :Tadbir class-room 1</p>	<p>Credit Hours: 2 hrs. per week</p>				
<p>Prerequisite:</p>	<p>Credit Units: Theoretical (.....Theo and Prac)</p>				
<p>Availability of Professor: +989133134128, whatsapp group</p>	<p>Tel: +983137929031</p>				
<p>Office Address: Immunology Department, Isfahan Medical School</p>	<p>E-mail: andalib@med.mui.ac.ir</p>				
<p>Name of Student Representative and Cell phone Number:</p>	<p>Number of Students :</p>				
<p>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.</p>					
<p>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)</p>					
<table border="1"><thead><tr><th>Assessment</th><th>Score From 20</th></tr></thead><tbody><tr><td>Mid Exam (Theory)</td><td>40</td></tr></tbody></table>	Assessment	Score From 20	Mid Exam (Theory)	40	
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:.....

Final Exam Date:

NO of Session	Main Topic	Teacher's Name	Place & Time	Date	Method of Presentation
one	History of Immunology and Overview of Immune responses: Definition of Immunology, a brief immunological history, The adaptive immune response(Humoral	Dr.Eskandari	10-12 am Every sunday Solimani class-room	1403/06/18	Making speech and explain the prepared related slides

	immunityand Cell-mediated immunity)				
two	The Cells of the Immune System: Mast Cells, Basophils, Eosinophils, Lymphocytes, Natural Killer Cells, Innate Lymphoid Cells	Dr.Eskandari	10-12 am Solimani class-room	1403/06/25	Making speech and explain the prepared related slides
three	Primary and Secondary Tissues of the Immune System (Bone marrow, Thymus, lymph node, Spleen,.etc.) and Leukocyte Circulation	Dr. Eskandari	10-12 am Solimani class-room	1403/07/01	Making speech and explain the prepared related slides
4	Innate Immunity. Components and Functions	Dr.Eskandari	10-12 am Solimani class-room	1403/07/8	Making speech and explain the prepared related slides
5	Phagocytosis and Intracellular Killing Process	Dr.Eskandari	10-12 am Solimani class-room	1403/07/15	Making speech and explain the prepared related slides
6	Antibodies: General Features of Antibody Structure, Function, and Synthesis , assembly, and expression of Antibody	Dr. Esmail	10-12 am Solimani class-room	1403/07/22	Making speech and explain the prepared related slides
7	Different Types, and Biological Function of Antibodies (IgM, IgG, IgE, IgA, IgD)	Dr. Esmail	10-12 am Solimani class-room	1403/07/29	Making speech and explain the prepared related slides
8	Antigens, Immunogenes, Definition of different Types of Antigens, T Dependent and T Independent Antigens	Dr. Esmail	10-12 am Solimani class-room	1403/07/29	Making speech and explain the prepared related slides
9	Major Histocompatibility Complex (MHC). Genetic	Dr. Andalib	10-12 am Solimani	1403/08/6	Making speech and

	organization and Molecular structure,		class-room		explain the prepared related slides
10	Antigen Presentation to T Lymphocytes and the Functions of Major Histocompatibility Complex Molecules(Exocytose and endocytic pathways)	Dr. Andalib	10-12 am Solimani class-room	1403/08/6	Making speech and explain the prepared related slides
11	Structure and function of B lymphocytes, B cells development and differentiation to plasma cells	Dr. Esmaeil	10-12 am Solimani class-room	1403/08/13	Making speech and explain the prepared related slides
12	Structure and function of T lymphocytes - developmental stages and the expression of specific receptors including: the differentiation of CD4 + and CD8 + T cells and memory T cells	Dr. Andalib	10-12 am Solimani class-room	1403/08/20	Making speech and explain the prepared related slides
13	Relationship between macrophage, T cell, B cell, cytokines and antigen processing	Dr. Andalib	10-12 am Solimani class-room	1403/08/20	Making speech and explain the prepared related slides
	Midterm exam	12.01 PM	1403/08/31	Midterm exam	
14	Cytokines (part I) Their classification - Their immunological properties include inflammatory and anti-inflammatory cytokines	Dr. Andalib	10-12 am Solimani class-room	1403/08/27	Making speech and explain the prepared related slides
15	Cytokines (part II) hematopoietic cytokines- innate immune cytokines and chemokines	Dr. Andalib	10-12 am Solimani class-room	1403/08/27	Making speech and explain the prepared related slides

16	Complement System : Structure, and Function	Dr. Esmaeil	10-12 am Solimani class-room	1403/09/04	Making speech and explain the prepared related slides
17	Activation and Regulation of Complement System and Their Pathways	Dr.Esmaeil	10-12 am Solimani class-room	1403/09/04	Making speech and explain the prepared related slides
18	Humoral Immune Response: Effector Mechanisms of Humoral Immunity	Dr.Rezaie	10-12 am Tadbir class-room	1403/09/11	Making speech and explain the prepared related slides
19	Cell- Mediated Immune Response: Effector Mechanisms of Cell Immunity	Dr.Rezaie	10-12 am Solimani class-room	1403/09/18	Making speech and explain the prepared related slides
20	Immunologic Tolerance Mechanisms and Their Role In Disease	Dr.Rezaie	10-12 am Solimani class-room	1403/09/25	Making speech and explain the prepared related slides
21	Autoimmunity Disease and Their Mechanisms	Dr.Rezaie	10-12 am Solimani class-room	1403/09/25	Making speech and explain the prepared related slides
22	Basic Immunological responses against Viruses	Dr. Andalib	10-12 am Solimani class-room	1403/10/02	Making speech and explain the prepared related slides
23	Basic Immunological responses against allografts	Dr.Rezaie	10-12 am Solimani class-room	1403/10/9	Making speech and explain the prepared related

					slides
	End of semester and exam	1403/10/22	10-12 am Solimani class-room	1403/10/22	
Tuesday -12-14	Preparation of the Students before the Beginning of the Class	University Professor	Course Topics	Practical Classes Tuesday -12-14	
1	Ag-antibody interactions, basic and principles of serology laboratory tests	Dr.Rezaie	Ab-Ag reaction	The First Week 1403/07/10	
2	Performing C-reactive Protein (CRP) test and knowing its uses and interpretation - Introduction to Erythrocyte sedimentation rate (ESR) test	Dr. Esmail	CRP, ESR	The Second Week 1403/07/17	
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 1403/08/1	
4	Perform direct and indirect Coombs tests and their use, including the diagnosis of drug allergies and crossmatch tests	Dr. Esmail	cross-match tests	The Forth Week 1403/08/8	
5	Performing ASO and interpretation and application	Dr.Andalib	ASO	The Fifth Week 1403/08/15	
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 1403/08/22	