

Course Syllabus

1	Course title	Advanced Immunology
2	Course number	0304733
3	Credit hours (theory, practical)	3
	Contact hours (theory, practical)	3 hrs weekly
4	Prerequisites/corequisites	0344443 or equivalent
5	Program title	Master of biological sciences
6	Program code	0304
7	Awarding institution	The University of Jordan
8	School	Science
9	Department	Biological sciences
10	Level of course	Masters
11	Year of study and semester (s)	Fall 2013-2014
12	Final Qualification	
13	Other department (s) involved in teaching the course	None
14	Language of Instruction	English
15	Date of production/revision	12/2020

16. Course Coordinator:

Mona R. Hassuneh.
 Office number: Biological Sciences Building, Room # 113
 Office hours: Sunday and Thursday (2-3), or by appointment
 Tel.: 5355000 ext.: 22229
 E-mail: m.hassuneh@ju.edu.jo
 mona.hassuneh@gmail.com

17. Other instructors:

None

18. Course Description:

This course addresses cutting edge concepts of basic Immunology. Concept include reviews of basic component of the immune system, mechanisms of immune response both humoral and cell mediated, lymphocyte specific receptor development, ontogeny of lymphocytes. Also, the course will deal special topics in immunology such as immunotoxicology: tumor immunology; immune-deficiency, both congenital and acquired; different types of hypersensitivity as well as transplantation immunology. Recent review articles as well as key research articles in the fields listed above.

19. Course aims and outcomes:

<p>A- Aims: This course aims to present advanced and cutting-edge concepts of immunology. Also, it aims to acquaint students with immunological implications in medicine, research and pharmaceutical industry. By requiring the students to write a research proposal in immunology and to present a research article. the course aims to train student to communicated knowledge acquired in the field of immunology.</p> <p>B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to</p>
1. Describe the Immune system.
2. Distinguish between various Immune cells functionally and structurally.
3. Define T cell tolerance and autoimmunity.
4. Acquire in depth knowledge of impact of immune system on diseases
5. Acquire a knowledge of the vaccines, various immunological techniques, and monoclonal antibodies production.
6. Development of writing skills and communications of issues related to Immunology.

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Referenc
Overview of the immune system	1	Mona R. Hassuneh	1	Midterm and Final Exam	
Cells and Tissues of the Immune System, Leukocyte Migration into Tissues	2	Mona R. Hassuneh	2	Midterm and Final Exam	
Antibodies and Antigens (Research Article Present. # 1)	3	Mona R. Hassuneh	2, 5, 6	Exams, Presentation	
The Major Histocompatibility Complex and Antigen Processing and Presentation to T Lymphocytes. (Research Article Present. # 2)	4	Mona R. Hassuneh	2, 5, 6	Exams, Presentation	
Lymphocyte Development and Antigen Receptor Gene Rearrangement. (Research Article Present. # 3)	(Week 5- Eid Break) 6	Mona R. Hassuneh	1, 2, 6	Exams, Presentation	
Activation of T Lymphocytes. (Research Article Present. # 4)	7	Mona R. Hassuneh	1, 2, 6	Exams, Presentation	
Effector Mechanisms of Cell-Mediated Immunity. (Research Article Present. # 5)	8	Mona R. Hassuneh	1, 2, 5, 6	Exams, Presentation	
B Cell Activation and Antibody Production. (Research Article Present. # 6)	(Week 9- midterm) 10	Mona R. Hassuneh	1, 2, 5, 6	Exams, Presentation	

Effector Mechanisms of Humoral Immunity. (Research Article Present. # 7)	11	Mona R. Hassuneh	1, 2, 5, 6	Exams, Presentation, Research proposal		
Immunologic Tolerance and Autoimmunity. (Research Article Present. # 8)	12	Mona R. Hassuneh	2, 4, 6	Exams, Presentation, Research proposal		
Immunity to Tumors. (Research Article Present. # 9)	13	Mona R. Hassuneh	2, 4, 6	Exams, Presentation, Research proposal		
Hypersensitivity Disorders; IgE-Dependent Immune Responses and Allergic Disease. (Research Article Present. # 10)	14	Mona R. Hassuneh	2, 4, 6	Exams, Presentation, Research proposal		
Congenital and Acquired Immunodeficiencies.	15	Mona R. Hassuneh	2, 4	Exams, Research proposal		

21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

- I. Classical lectures
- II. Exams
- III. Presentations and Research proposal
- IV. Audio-visual materials (Audio and Video)

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

1. Exams
2. Presentations.
3. Research proposal

23. Course Policies:

A- Attendance policies: Regular class attendance is expected.

B- Absences from exams and handing in assignments on time: Reporting a valid reason of absence is accepted.

C- Health and safety procedures: All students should comply with the university Health and safety procedures

D- Honesty policy regarding cheating, plagiarism, misbehaviour: All students should comply with the university Honesty policy regarding cheating, plagiarism, misbehaviour

E- Grading policy: First hour exam 15 %, Second hour exam: 15 %, midterm exam, final exam 40%, presentation, term paper 15% and 15%, respectively.

F- Available university services that support achievement in the course: Data Show Projector, internet access

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24. Required equipment: (Facilities, Tools, Labs, Training....)

Data Show Projector, internet access

25. References:

Required book (s), assigned reading and audio-visuals:

Text Book:

- Abbas, A. K., Lichtman, A. H., & Pillai, S. (2014). Cellular and molecular immunology E-book. Elsevier Health Sciences.
- Article to be presented will be handed to perspective student 2 weeks in advance.
- Shared material in Google drive or Moodle.org

Recommended books, materials, and media:

- Internet search, PubMed and other search engines

26. Additional information:

Name of Course Coordinator: -----Signature: ----- Date: -----

Head of curriculum committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of curriculum committee/Faculty: ----- Signature: -----

Dean: -----Signature: -----