



Jordan University of Science and Technology
Faculty of Pharmacy
Pharmacy Department

PHAR461 Immunology And Vaccines - JNQF Level: 7
First Semester 2024-2025

Course Catalog
2 Credit Hours. Basic principles of immunology and their relation to diseases and therapy. Different types of vaccines, and their mechanisms of action.
Teaching Method: Blended

Text Book	
Title	Basic Immunology. Functions and Disorders of the Immune System
Author(s)	Abul Abbas, Andrew H. Lichtman, Shiv Pillai
Edition	7th Edition
Short Name	Ref no. 1
Other Information	

Instructor	
Name	Dr. Shreen Nusair
Office Location	P2L0 - Office 118
Office Hours	
Email	sdnusair@just.edu.jo

Class Schedule & Room	
Section 1: Lecture Time: Thu : 09:30 - 10:30 Room: P1102	
Section 2: Lecture Time: Wed : 13:00 - 14:00 Room: M1302	
Section 3: Lecture Time: Thu : 10:30 - 11:30 Room: P1103	

Prerequisites		
Line Number	Course Name	Prerequisite Type
303441	PHAR344 Pharmacology 3	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Introduction to the Immune System	Chapter 1 From Ref no. 1
Weeks 2, 3	Innate Immunity	Chapter 2 From Ref no. 1
Week 4	Antigen Capture and Presentation to Lymphocytes	Chapter 3 From Ref no. 1
Week 5	Antigen Recognition in the Adaptive Immune System	Chapter 4 From Ref no. 1
Weeks 6, 7	T Cell-Mediated Immunity	Chapter 5 From Ref no. 1
Week 8	Effector Mechanisms of T Cell-Mediated Immunity	Chapter 6 From Ref no. 1
Week 9	Humoral Immune Responses	Chapter 7 From Ref no. 1
Week 10	Effector Mechanisms of Humoral Immunity	Chapter 8 From Ref no. 1
Week 11	Immunological Tolerance and Autoimmunity	Chapter 9 From Ref no. 1
Week 12	Vaccination	Chapter 10 From Ref no. 1

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
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Compare and contrast Innate immunity and Adaptive immunity [1PLO1.1] [1L7K1]	30%	Med Exam
Explain the mechanism of action of Innate and adaptive immune responses [1PLO1.1] [1L7S1]	40%	Final exam
Recall different Vaccinations strategies [1PLO2.2] [1L7S2]	20%	Projects and activities
Design an illustrative figure of any Immunology topic [1PLO2.3] [1L7C1]	10%	Projects and activities

PLO1.1	PLO2.1	PLO3.2	PLO3.3	PLO2.2	PLO2.3	PLO2.4	PLO3.1	PLO3.4	PLO3.5	PLO3.6	PLO4.1	PLO4.2	PLO4.3	PLO4.4	PLO5.1	PLO-PT1.1	PLO-PT2.1	PLO-PT2.2	PLO-PT3.1
70				20	10														

Relationship to NQF Outcomes (Out of 100%)			
L7K1	L7S1	L7S2	L7C1
30	40	20	10

Evaluation	
Assessment Tool	Weight
Med Exam	30%
Projects and activities	30%
Final exam	40%

Policy	
Exams	<ul style="list-style-type: none"> - All exams are closed books and notes. - The final exam is comprehensive (covers all the material). - The first, second, and midterm incomplete exams need approval from the departments? heads. - The final incomplete exams need approval from the dean.
Cheating	<p>Prohibited; The commitment of the acts of cheating and deceit such as copying during examinations, altering examinations for re-grade, plagiarism of homework assignments, and in any way representing the work of others as your own is dishonest and will not be tolerated. Standard JUST policy will be applied.</p> <p>المادة 7: إذا ضبط الطالب أثناء الامتحان أو الاختبار متلبساً بالغش فتوقع عليه العقوبات التالية مجتمعة: أ- اعتباره راسياً في ذلك الامتحان أو الاختبار. ب- الغاء تسجيله في بقية المساقات المسجل لها في ذلك الفصل. ج- فصله من الجامعة لمدة فصل دراسي واحد، و هو الفصل التالي للفصل الذي ضبط فيه.</p>
Attendance	<p>According to JUST policy requires the faculty member to assign ZERO grades (35) if a student misses 10% of the classes that are not excused.</p> <ul style="list-style-type: none"> - Attendance is mandatory and will be recorded regularly. - Excellent attendance is expected. - If you miss class, it is your responsibility to find out about any announcements or assignments you may have missed.
Active learning and students participation	<ul style="list-style-type: none"> - Students are expected to actively participate in class discussions. Bonus marks may be provided on lectures for answering specific assigned questions or doing specific activity.
Laboratory	NA
Withdraw	- According to dates specified on the university calendar. Usually the last day to drop the course is before the twelve (12th) week of the current semester.
Classroom Etiquette	<ul style="list-style-type: none"> - Respect <ul style="list-style-type: none"> o Respect people, places, and things. o Raise your hand to speak. o Listen respectfully. o Food and drink are not permitted in class. o Do not engage in aside conversations. - Participation or Disruption: <ul style="list-style-type: none"> o Do not hesitate to ask questions at any time, especially if you are unsure of something. o Listen to other students' questions to avoid asking the same question five minutes later. o Allow your classmates to participate in class discussions and refrain from taking advantage of all opportunities for active participation. - Cell Phones and Electronic Devices: <ul style="list-style-type: none"> o Texting is not permitted in class. o The use of cell phones, smartphones, or other mobile communication devices is disruptive and is therefore prohibited during class without permission. o Your phone should be turned off. If you must keep your phone on, you should set it to vibrate or silent mode and leave class if you receive an emergency call. o Except in emergencies, those using such devices must leave the classroom for the remainder of the class period. o Do not use your laptop in class for browsing the Internet or using social media while in class. - Missing a Class <ul style="list-style-type: none"> o Do not miss classes. It is not appropriate to ask the professor if you missed anything important if you miss class. Obviously, something of importance was missed, you missed a whole class! o Whenever you are absent from class, it is your responsibility to make up the work and to get notes, not your professors. o If you need to leave early, notify the instructor. - Be Punctual <ul style="list-style-type: none"> o Make sure you arrive to class on time.

Email Etiquette	<ul style="list-style-type: none"> - Type your email in the body of the email NOT in the subject line. - Provide a clear subject line. Keep it short and to the point, but not vague. Name, class, and what the email is specifically about should be in the subject line. - Body of the email: Your emails should always start with a formal greeting like you would in a letter, be brief (one screen length), check your spelling/grammar/punctuation, use a professional font (not decorative), and include a salutation aligned with your message (Thank you or Sincerely). - Avoid sending an email to your professor asking about grades or complaining about them. Schedule an appointment to meet in person to discuss areas for improvement if you have inquiries. - Consider the impression your tone will make in the email. It is recommended waiting 24 hours before sending an email or responding to an email if you are emotionally charged. - It is not appropriate to write in ALL CAPS. This conveys the impression that you are shouting at the recipient. - Make sure you read and reread your email before sending it. Make sure your emails are grammatically correct, have proper titles, and are properly spelled. - If you have multiple questions or the message runs long, you might consider revising the message or scheduling a face-to-face meeting. - You should double-check your ATTACHMENTS. Refer to your attachments within the body of your email. It is advisable to avoid attaching large files and to consider sending the document as a PDF. - Please allow sufficient time for a response. The sender and receiver should both allow sufficient time. As a rule of thumb, 24 work hours should be given. If sending emails after official work hours or during formal vacations, a delay in response is expected. Following that, if no response is received, you can follow up. - Effective Email Writing: Template for Email: Subject, Salutation, Introduce yourself, Your request, Closing remarks, Your name.
Project Policy	<p>There will be a project to design an Immunology related Figure, the criteria will be given during the introductory lecture of the first week.</p> <p>Immunology Figure</p> <p>You can choose any topic, subject, or idea related to Immunology and Vaccines</p> <p>General criteria of the Figure (you must include all): Form a group of 6 students per Figure.</p> <p>Design an illustrative figure that resembles any figure in the course slides to summarize characters of different immune cells and components, or to illustrate any immune mechanism or to compare and contrast immune contents, etc.</p> <p>Save the figure as a PDF of 2 pages, one for the drawing itself, the second for the figure title, legend (description) in one paragraph at minimum. Remember to define abbreviations at first mention.</p> <p>Should be uploaded once and only by the team leader on a specific link at e-learning by the due date.</p> <p>The brochure will be evaluated on the basis of originality, design quality, correct information, grammar, and spelling.</p> <p>Innovative ideas are appreciated (e.g., model design, present a video or display samples).</p> <p>Teamwork and group organization will be evaluated. It will cost marks if you cannot find a team. Please, contact me if you could not find a team within the first month of this semester.</p> <p>Failure to prepare the project by the due date will cost marks.</p> <p>Please contact me for any issue, concern, or question.</p> <p>Incomplete exams need approval from the Faculty Dean</p>