



Course Specification

(Bachelor)

Course Title: Immunology

Course Code: MICR 386

Program: Pharmaceutical Sciences

Department: Pharmaceutics

College: Pharmacy

Institution: Najran University

Version: 1

Last Revision Date: 18/08/2024

Table of Contents

A. General information about the course:	3-4
B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods	4
C. Course Content	5
D. Students Assessment Activities	6
E. Learning Resources and Facilities	6
F. Assessment of Course Quality	7
G. Specification Approval	7



A. General information about the course:

1. Course Identification

1. Credit hours: 2 hours (1+1)

2. Course type

- A. ☐ University ☐ College ☐ Department ☐ Track ☒ Program
- B. ☒ Required ☐ Elective

3. Level/year at which this course is offered: (Level 5th / 3rd year)

4. Course general Description:

The course is designed to familiarize the students with the general prosperities and components of the immune system. It provides knowledge and understanding to antigens, its types and related immune response including concept of tolerance & loss of self-tolerance and the mechanisms of developing autoimmunity. It also provides knowledge and understanding related to hypersensitivity reactions, different types and its mechanisms.

5. Pre-requirements for this course (if any):

None

6. Co-requisites for this course (if any):

None

7. Course Main Objective(s):

- I. To study the overview of immune systems, immune cells, types of immunity and immunomodulation.
- II. To understand the basic principles of immunity against infectious diseases, immunopathology (such as hypersensitivity reactions / allergies), immunodeficiency and immunotherapy.

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	45	100
2	E-learning		
3	Hybrid <ul style="list-style-type: none"> Traditional classroom E-learning 		
4	Distance learning		





3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	15
2.	Laboratory/Studio	30
3.	Field	
4.	Tutorial	
5.	Others (specify)	
Total		45

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Demonstrate the concepts and knowledge related to immune system and body immunity	K1	Lecture, Laboratory work	Written exams (short-answer question, MCQ); Practical exam; Assignments
1.2	Demonstrate the understanding related to immunity development and antigen-antibody reactions.	K3	Lecture, Laboratory work	Written exams; Practical exam; Assignments
...				
2.0	Skills			
2.1	Demonstrate ability to solve problems related to immune response regulation and antigen-antibody interaction	S3	Lecture, Group discussion, Laboratory work	Written exams; Practical exam; Assignments
2.2				
3.0	Values, autonomy, and responsibility			
3.1	Demonstrate ability to confidence and independent thinking	V4	Group discussion, Problem-based learning	Observation card, Assignment
3.2				
...				





C. Course Content

No	List of Topics (Theory)	Contact Hours
i.	Introduction to clinical immunology	1
ii	Structure and components of immune system	2
iii	Antigens, its types and receptor	2
iv	Innate immunity	1
v	Humoral immunity	1
vi	Cell-mediated immunity	1
vii	Complement cascade	2
viii	Immunoglobulin, Cytokines,	2
ix.	Hypersensitivity	1
x.	Immunotherapy	2
Total		15

No	List of Topics (Practical)	Contact Hours
I.	Introduction to different immune cells	4
II.	Direct agglutination test	2
III.	Passive agglutination test	2
iv	Coombs test	2
v	Radial immunodiffusion, Double immunodiffusion	4
vi	Complement fixation test	2
vii	Enzyme linked immunosorbant assay (ELISA)	2
viii	Immunoelectrophoresis	2
ix	Chemiluminescence	2
x	Flowcytometry	4
xi.	Immunophenotyping	2
xii.	RT-PCR	2
Total		30

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quiz exam -I	5	05%
2.	Midterm exam	7-9	20%
3.	Quiz exam -II	12	05%
4.	Assignments	15	05%



No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
5.	Laboratory note book and practical quiz	15	10%
6.	Observation card in lab	1-15	05%
7.	Final Practical exam	16	10%
8.	Final Theory exam	17	40%
	Total		100%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	1. Basic Immunology. Abbas AK, Lichtman AH, Pillai S. Elsevier. Latest edition. 2. Power point slides/word file
Supportive References	1. Fundamental immunology. Paul WE. Lippincott Williams & Wilkins;
Electronic Materials	https://sdl.edu.sa/SDLPortal/en/Publishers.aspx http://dlaf.nu.edu.sa/en/e-libraries
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	1. Suitable lecture room equipped with data show and internet and sufficient number of seats. 2. Suitable laboratories equipped with health and safety tools, internet and sufficient number of seats.
Technology equipment (projector, smart board, software)	Computers, data show, sound systems and internet
Other equipment (depending on the nature of the specialty)	Autoclave, Hot air oven, Incubator, Microscope, Refrigerator, Centrifuge, pH meter.

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Indirect
Effectiveness of Students assessment	Examination committee	Direct
Quality of learning resources	Course coordinator and students	Indirect



Assessment Areas/Issues	Assessor	Assessment Methods
The extent to which CLOs have been achieved	Course coordinator	Direct
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	Pharmaceutics Department Council
REFERENCE NO.	14460216-1060-00001
DATE	21/08/2024

