

Course Description Form

1. Course Name:	
Immunology	
2. Course Code:	
VEP3115	
3. Semester / Year:	
1 st semester / Year 3	
4. Description Preparation Date:	
13/02/2024	
5. Available Attendance Forms:	
Physically in Lecture Hall and Laboratory + Google classroom	
6. Number of Credit Hours (Total) / Number of Units (Total)	
(semester=15 weeks) * (theory 2 hours/week + practical 2 hours /week) = total 60 hours/semester (number of units = theory 2 units + practical 1 unit = total 3 units)	
7. Course administrator's name (mention all, if more than one name)	
Name: Assist. Lecturer Luay Jumaah Jihad Email: Luay.Jumaah@uokirkuk.edu.iq	
8. Course Objectives	
Course Objectives	<ul style="list-style-type: none"> • Knowing how natural immunity and acquired immunity work. • Study of the lymphatic system, lymphoid organs, and immune cells. • Study of antigens, antibodies and immune receptors. • Understanding how immunity develops within the body of animals against microorganisms. • Understanding the occurrence of diseases resulting from a failure or overuse of the immune system, such as: allergies and autoimmunity. • Study of organ transplantation, cancer, vaccines and serums. • Linking concepts and information to real and their applications.

9. Teaching and Learning Strategies

Strategy	<ul style="list-style-type: none"> • Explanation, clarification and organization • Selective attention on specific areas of the topic, monitoring understanding, controlling comprehension, evaluating what has been learned, or self-evaluation • Cooperating with others to solve a problem, and discussing and dialogue with oneself.
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10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
One	4	Understand the topic, apply experiments correctly, and write down the results	Principle of immunity and immune response (specific and nonspecific)	Observation, meticulousness, explanation and experimentation	Direct observation and written tests/exercises
Two	4	Understand the topic, apply experiments correctly, and write down the results	Immunoglobulin Structure, variation Function and synthesis	Observation, meticulousness, explanation and experimentation	Direct observation and written tests/exercises
Three	4	Understand the topic, apply experiments correctly, and write down the results	Immunoglobulin Structure, variation Function and synthesis	Observation, meticulousness, explanation and experimentation	Direct observation and written tests/exercises
Four	4	Understand the topic, apply experiments correctly, and write	Immunology of T and B cells	Observation, meticulousness, explanation and experimentation	Direct observation and written tests/exercises

		down the results			
Five	4	Understand the topic, apply experiments correctly, and write down the results	Immunology of T and B cells	Observation meticulously, explanations, and experimental	Direct observations and written tests/exercises
Six	4	Understand the topic, apply experiments correctly, and write down the results	Complement: Nature, Function and pathways	Observation meticulously, explanations, and experimental	Direct observations and written tests/exercises
Seven	4	Understand the topic, apply experiments correctly, and write down the results	Cell mediated immunity, antigen recognition by T cells	Observation meticulously, explanations, and experimental	Direct observations and written tests/exercises
Eight	4	Understand the topic, apply experiments correctly, and write down the results	Immunological tolerance	Observation meticulously, explanations, and experimental	Direct observations and written tests/exercises
Nine	4	Understand the topic, apply experiments correctly, and write down the results	Types of Hypersensitivity Mechanisms	Observation meticulously, explanations, and experimental	Direct observations and written tests/exercises
Ten	4	Understand the topic, apply experiments correctly, and write down the results	Types of Hypersensitivity Mechanisms	Observation meticulously, explanations, and experimental	Direct observations and written tests/exercises

Eleven	4	Understand the topic, apply experiments correctly, and write down the results	Auto-immunity	Observation meticulous, explanations, and experimental	Direct observations and written tests/exercises
Twelve	4	Understand the topic, apply experiments correctly, and write down the results	Transplantation	Observation meticulous, explanations, and experimental	Direct observations and written tests/exercises
Thirteen	4	Understand the topic, apply experiments correctly, and write down the results	Principle of immune genetics	Observation meticulous, explanations, and experimental	Direct observations and written tests/exercises
Fourteen	4	Understand the topic, apply experiments correctly, and write down the results	Immunoanaphylaxis reaction	Observation meticulous, explanations, and experimental	Direct observations and written tests/exercises
Fifteen	4	Understand the topic, apply experiments correctly, and write down the results	Immunity of infection	Observation meticulous, explanations, and experimental	Direct observations and written tests/exercises

11.Course Evaluation								
Annual quest 40%						Final exam 60%		
Theory 27%				Practical 13%			Theory exam 40%	Practical exam 20%
Quiz 5%	Reports 5%	Discussions 2%	Monthly exam 15%	Quiz 2%	Reports 1%	Monthly exam 15%		
12.Learning and Teaching Resources								

Required textbooks (curricular books, if any)	Not specified
Main references (sources)	Veterinary Immunology and Introduction; 10th edition; Ian R. Tizard (2018)
Recommended books and references (scientific journals, reports...)	Kuby Immunology; 8th edition; Jenni Punt, Sharon A. Stranford, Patricia P. Jones, Judith A. Owen. (2019)
Electronic References, Websites	World Organisation for Animal Health, ResearchGate, google search