

Course Description Form

1. Course Name:

Immunology

2. Course Code:

VEM3115

3. Semester / Year:

First Semester / Third Year

4. Description Preparation Date:

1 / 9 / 2025

5. Available Attendance Forms:

- Theoretical lectures.
- Practical work in laboratory.

6. Number of Credit Hours (Total) / Number of Units (Total)

	Credit Hours	Units
Theoretical	2	2
Practical	2	1
Total	4	3

7. Course administrator's name (mention all, if more than one name)

Name: Prof.Dr. Fanar Ablahad Isihak

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8. Course Objectives

Course Objectives

- provide students with a foundation in immunological processes
- provide students with knowledge on how the immune system works building on their previous knowledge from biochemistry, genetics, cell biology and microbiology
- able to clearly state the role of the immune system

9. Teaching and Learning Strategies

Strategy

- Explanation of scientific subjects through theoretical lectures.
- Training of students for practical applications in laboratories.
- Student prepare a scientific related reports.

10. Course Structure					
- Theoretical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Outline the development and maturation process of immune competent cells. - Understand the basic mechanisms for how the immune system becomes activated and responds to stimuli e.g. infections or tissue damage. Have knowledge about the basic principles for defenses and fight against infections.	Principle of immunity and immune response (specific and nonspecific)	Theoretical lectures	Written Exam
2-3	4		Immunoglobulin: Structure, variation, Function and synthesis		
4-5	4		Immunology of T and B cells		
6	2		Complement: Nature, Function and pathways		
7	2		Cell mediated immunity, antigen recognition by T cells		
8	2		Immunological tolerance		
9-10	4		Hypersensitivity, Mechanisms		
11	2		Auto-immunity		
12	2		Transplantation		
13	2		Principle of immune genetics		
14	2		Immunoanaphylaxis reaction		
15	2		Immunity of infection		
- Practical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Outline the development and maturation process of immune competent cells. - Understand the basic mechanisms for how the immune system becomes activated and responds to stimuli e.g. infections or tissue damage. Have knowledge about the basic principles for defenses and fight against infections	Introduction to immunology labs	Practical work in laboratory	Practical Exam
2	2		Lab animals		
3-4	4		Preservation of antigens and antibodies		
5	2		Separation of immunoglobulin		
6	2		Complement test		
7	2		Precipitation test		
8	2		Agglutination test		
9	2		Neutralization test		
10-11	4		Separation of lymphocytes from blood and lymph nodes		
12-13	4		Preparation of antigens		
14	2		Leukocytes		
15	2		Phagocytosis		

11.Course Evaluation			
	Course Exam	Final Exam	Sum
Theoretical	27	40	67
Practical	13	20	33
Total	40	60	100

12.Learning and Teaching Resources	
Required textbooks (curricular books if any)	veterinary Immunology 10th Edition by Ian R. Tizard BVMS PhD ACVM (Hons) DSc (Hons)

Main referen (sources)	Basic immunology
Recommended books and references (scientific journals, reports...)	veterinary Immunology 10th Edition by Ian R. Tizard BVMS PhD ACVM (Hons) DSc (Hons)
Electronic References, Websites	https://www.routledge.com/Days-Veterinary-Immunology-Principles-and-Practice/Catchpole-Hogenesch/p/book/9781032317168?srsId=AfmBOorRdSYiYuNlamZkoiVK82IWe_tIX0KYUt7tH_qJ4bTu5S93r