

Course Description (Physiology Practical)

Performance review of higher education institution (assessment of the academic program)

This course description summarizes the key characteristics and anticipated learning objectives for students, assessing their utilization of available learning resources, and must be aligned with the program description.

1. Educational Institution	Al-Zahrawi University
2. University Department / Center	Pharmacy
3. Course Name / Code	Physiology (Practical)
4. Programs in which it is included	Bachelor of Pharmacy
5. Available Forms of Attendance	Daily Attendance
6. Semester / Year	Second Semester, Second Stage (2025-2026)
7. Total Number of Study Hours	2 hours per week for each group
8. Date of preparing this description	2025-2026
9. Course Objectives:	
1-Recognizing different methods for counting white blood cells and understanding their functions in the immune system.	
2-Learning how to count red blood cells and understanding their role in oxygen transport.	
3-Knowing how to count platelets and understanding their role in blood clotting.	
4-Learning how to measure erythrocyte sedimentation rate (ESR) and using it as a marker for diagnosing inflammatory conditions.	
5-Studying how blood sugar levels are regulated by insulin and the importance of this in overall health.	
6-Understanding the functions of the kidney in blood purification and fluid and electrolyte balance.	
7-Conducting visual experiments to illustrate visual physiology and understanding how the eye and vision work	

1. Learning Outcomes, Teaching and Learning Methods, and Evaluation

A. Knowledge and Understanding

A.1: Counting and interpreting the number of white and red blood cells.

A.2: Identifying platelets and understanding their role in clotting.

A.3: Measuring erythrocyte sedimentation rate (ESR) and using it to diagnose inflammations.

A.4: Explaining how blood sugar is regulated by insulin.

A.5: Analyzing kidney functions and understanding their role in blood purification.

A.6: Conducting and interpreting visual experiments to analyze eye functions and vision

B. Subject-Specific Skills

B.1: Teaching skills in the subject of Physiology.

B.2: The student should have the ability to describe models.

B.3: The student should have the ability to link causes with natural effects.

Teaching and Learning Methods

1. Discussion and dialogue method.
2. Troubleshooting and treatment.
3. Seminars.

C. Evaluation Methods

1. Submit weekly reports and work in the laboratory.
2. Oral assessment and practical performance evaluation.
3. Written tests
4. Group practical project

D. Thinking Skills

- D1. Encourage students to find problems related to the subject of study
- D2. Encourage students to find solutions to those problems
- D3. Conduct experiments individually and collectively.
- D4. Compare results and troubleshoot

E. General and Transferable Skills

- D1. The student should be able to think logically to solve problems
- D 2. The student should acquire manual work skills.
- D 3. The student should be able to develop and innovate skills

11. Course Structure

Weeks	Hours	Required Learning Outcomes	Unit Name / Course or Topic	Learning Methods	Evaluation Method
1-2	4	Knowledge	Total White blood cells Counting	Blackboard and Screen Presentations	Daily exam and oral questions
3-4	4	Knowledge	Differential White blood cell Counting	Blackboard and Screen Presentations	Daily exam and oral questions
5-6	4	Knowledge	Red blood cell counting	Blackboard and Screen Presentations	Daily exam and oral questions
7-8	4	Knowledge	Platelet Counting	Blackboard and Screen Presentations	Daily exam and oral questions
9-10	4	Knowledge	Erythrocyte Sedimentation Rate	Blackboard and Screen Presentations	Daily exam and oral questions
11	2	Knowledge	Blood glucose monitoring	Blackboard and Screen Presentations	Daily exam and oral questions
12-13	4	Knowledge	Renal Physiology	Blackboard and Screen Presentations	Daily exam and oral questions
14-15	4	Knowledge	Some Experiments on Vision	Blackboard and Screen Presentations	Daily exam and oral questions

12. Infrastructure	
Required Readings:	References: 1.Haematology, Practical Human Anatomy and Physiology, S.R. Kale et al., Nirali Prakashan, Eight Edition, 2002, pp. 28. 2. Marieb, Elaine Nicopon, Zao, Peter Z, Stabler, Timothy, Peterson, Greta. (2005). Human anatomy and physiology laboratory manual: cat version (8th). Toronto: Benjamin Cummings.
Special Requirements (Workshops, Journals, Software, Websites):	Electronic Websites:
Social Services (Guest Lectures, Professional Training, Field Studies, Others)	Organizing workshops and courses for graduates:

13. Admission:	
Prerequisites	Admission according to the central plan
Minimum Number of Students	/
Maximum Number of Students	Admission exceeds the capacity plan

Name of the Instructor: Aqeel Qays Abd-Uljaleel