

Al-Mansour University College
Department of Pharmacy
Physiology I Course Description

1. Course Name	
Physiology I Subject area: Pharmacology and Toxicology	
2. Course Code	
PHA12101	
3. Semester and Year	
First Year / Second Semester Total credits: 4 Theory credits: 3 Practical credits: 1	
4. Date this description was prepared	
23/8/2026	
5. Available attendance forms	
On-campus theoretical lectures and practical laboratory classes.	
6. Total academic hours	
Weekly contact hours: 5 (3 theory + 2 practical). Semester allocation over 15 weeks: 45 theory + 30 practical = 75 contact hours. Credit hours: 4 (3 theory credits + 1 practical credit). The practical schedule covers 15 weeks (30 hours). Topics for weeks 11–15 require departmental confirmation.	
7. Name of course coordinator(s)	
Name and academic title: Asst. Lect. Rawaa Muayad Jabar Email: rawaa.muayad@muc.edu.iq	
8. Course objectives	
Objectives of the study subject	By the end of the course, students should be able to: 1. Explain the principles of human physiology, body organization, and homeostasis. 2. Describe cell structure, cellular functions, membrane transport, metabolic pathways, and cell signaling. 3. Explain nervous system organization, neuronal signaling, and sensory physiology. 4. Demonstrate and interpret the basic physiological measurements and blood investigations included in the practical syllabus.

9. Teaching and learning strategies

Teaching strategies	Interactive lectures, explanatory diagrams, guided discussion, and examples relating physiological mechanisms to pharmacy. Practical teaching includes demonstrations, supervised laboratory work, and interpretation of observations.
Learning strategies	Guided reading, concept mapping, group discussion, laboratory records, and formative questions. Students relate experimental findings to physiological principles and receive feedback on their understanding and practical performance.

10. Theoretical course structure

The seven theoretical units comprise 45 contact hours. Delivery is scheduled at 3 hours per week over 15 weeks; a teaching week may include parts of two units.

Unit	Hrs	Required learning outcomes	Name of the unit or topic	Learning method	Evaluation method
1	5	Explain physiological organization from cells to organ systems.	Introduction to physiology: How is the body organized?	Lecture; diagrams; discussion	Quiz; oral and written questions
2	5	Explain homeostasis and the role of physiological control systems.	Homeostasis: Framework for Human Physiology	Lecture; diagrams; discussion	Quiz; oral and written questions
3	7	Relate cell structures and proteins to cellular functions and metabolism.	Cellular structure, proteins, and metabolic pathways	Lecture; diagrams; discussion	Quiz; oral and written questions
4	7	Explain mechanisms of membrane transport and their physiological significance.	Movement of Molecules across Cell Membranes	Lecture; diagrams; discussion	Quiz; oral and written questions
5	6	Describe how cells receive, transmit, and respond to signals.	Cell signaling in physiology	Lecture; diagrams; discussion	Quiz; oral and written questions
6	9	Explain neuronal communication and nervous system organization.	Neuronal signaling and the structure of the nervous system	Lecture; diagrams; discussion	Quiz; oral and written questions
7	6	Explain sensory reception and the processing of sensory information.	Sensory physiology	Lecture; diagrams; discussion	Quiz; oral and written questions

Total theoretical contact hours: 45

10. Practical course structure

Two practical contact hours per week. The activity for week 10 and topics for weeks 11–15 are pending departmental confirmation.

Week	Hrs	Practical subject and expected learning outcome
1	2	Introduction and General Instructions for Students Recognize laboratory instructions, equipment, and requirements for recording observations.
2	2	General Physiology of Blood Describe the main components and physiological functions of blood.
3	2	Estimation of Hemoglobin Concentration in the Blood Understand the measurement principle and interpret a hemoglobin concentration result.
4	2	Blood Types Identify blood groups from the observations obtained in the laboratory exercise.
5	2	Hematocrit Determination Determine and interpret the proportion of packed red blood cells.
6	2	Bleeding and Clotting Time – Part I Explain the principles of the assigned bleeding and clotting time exercise.
7	2	Bleeding and Clotting Time – Part II Record and interpret the observations from the continued exercise.
8	2	Measurement of Blood Glucose Levels Explain the measurement principle and record and interpret glucose results.
9	2	Measurement of Body Temperature Measure and record body temperature using the assigned instrument.
10	2	Additional Practical Activity Pending confirmation by the course coordinator: specify the activity, learning outcome, and assessment.
11–15	10	Pending departmental confirmation: specify practical topics, learning outcomes, and assessment for weeks 11–15.
Total	30	20 scheduled hours + 10 hours with topics pending confirmation.

Learning methods: instructor demonstration, supervised practical work, recording observations, and discussion. Evaluation methods: practical performance, laboratory reports, oral questions, and practical examinations.

11. Course evaluation

Assessment covers theoretical understanding and practical performance, with a total score of 100 marks. The proposed distribution below is subject to departmental approval.

Assessment component	Marks
Coursework, quizzes, and assignments	10
Mid-semester theoretical examination	20
Practical assessment and examinations	10
Final theoretical examination	60
Total	100

12. Learning and teaching resources

Main reference	Vander's Human Physiology: The Mechanisms of Body Function. Eric P. Widmaier, Hershel Raff, and Kevin T. Strang. Teaching edition to be confirmed by the Department of Pharmacy.
Practical resources	Department-provided laboratory instructions and teaching materials for the listed practical subjects.
Recommended supporting materials	Lecture notes, physiological diagrams, and guided exercises selected by the course coordinator.
Electronic references and websites	Department-designated electronic learning materials.

13. Course Development Plan

Complete the practical syllabus for weeks 11–15 and define the extra activity in week 10. Review the alignment of laboratory activities with course outcomes, update teaching resources, and use student feedback and assessment results to improve understanding of cellular mechanisms, homeostasis, and nervous system function.