

Review the performance of the higher education institution.

((Review of the academic program))

This course description provides a summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he has made the most of the available learning opportunities and must be linked to the program description.

1. Educational Institution: Al- Zahrawi University College

2. Course Name: Theoretical Human Physiology

3. Course Code:

4. Semester / First Semester : 2024/2025

5. Description Preparation Date:2024-2025

6. Available Attendance Forms: Daily attendance

**7. Number of Credit Hours (Total) / Number of Units 2 Hours/week
(Total) 30**

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

Me: Dr. Hanan Mohsen Ali

Email: hananmuhsen71@gmail.com

Course Objective .⁹

Course Objectives	<ol style="list-style-type: none"> 1. To provide students with fundamental knowledge of the vital functions of human body systems and organs, and to develop an understanding of the regulatory mechanisms that maintain internal homeostasis. 2. To promote an integrated understanding of the relationship between anatomical structure and physiological function, thereby enabling the interpretation of both normal and pathological biological phenomena. 3. To equip students with the ability to analyze and comprehend physiological changes associated with various clinical conditions, supporting their capacity to interpret laboratory test results effectively. 4. To develop the scientific and practical skills necessary for applying physiological concepts in a medical laboratory setting, including proficiency in the use of functional assessment tools and techniques. 5. To prepare students for professional practice in the field of pathological analysis through a comprehensive understanding of vital organ functions, thereby enhancing the quality of laboratory evaluation and diagnosis
--------------------------	--

10. Teaching and Learning Strategies

Strategy	<p>A. Knowledge and Understanding:</p> <p>By the end of this course, the student will be able to:</p> <ul style="list-style-type: none"> • Understand the fundamental principles of human physiology, including the functions of various organs and body systems. • Demonstrate knowledge of core physiological processes such as neural conduction, muscle contraction, and hormonal regulation. • Recognize the influence of internal and environmental factors on organ function. • Identify physiological changes associated with various pathological conditions. • Understand the interdisciplinary connection between physiology and other medical sciences such as anatomy, biology, and biochemistry. <hr/> <p>B. Subject-Specific Skills</p> <p>Cognitive Skills</p> <p>By the end of the course, the student will be able to:</p> <ul style="list-style-type: none"> • Analyze and interpret physiological data effectively.
-----------------	---

	<ul style="list-style-type: none"> • Apply physiological knowledge to the interpretation of laboratory test results. • Utilize physiological models to understand interactions between different organs and systems. • Develop scientific research skills within the field of human physiology. <p>Teaching and Learning Methods</p> <ul style="list-style-type: none"> • Lectures: To present foundational information and theoretical concepts. • Discussion-based learning: To encourage critical thinking and dialogue. • Workshops: To enhance practical skills and engage with real-life scenarios. • Exploratory lectures: To foster inquiry-based learning and independent exploration.
	<p>Assessment Methods</p> <ol style="list-style-type: none"> 1. Theoretical Examinations: To evaluate students' understanding of core concepts and fundamental knowledge. 2. Continuous Assessment: Through assignments, projects, and written reports. 3. Self-Assessment: To encourage students to reflect on their performance and identify areas for improvement. 4. Peer Assessment: To promote collaboration and enhance group learning. 5. Weekly Reports: To monitor ongoing progress and reinforce regular engagement with course material. 6. Discussion Seminars and Presentations: To assess communication skills, critical thinking, and depth of understanding through dialogue and oral delivery.
<p>C. Thinking Skills</p>	<ol style="list-style-type: none"> 1. Interactive Dialogue: Encouraging critical thinking through guided discussions between the student and the instructor. 2. Weekly Report Preparation: Developing analytical and reflective thinking through regular written reports.

	<p>3. Results Discussion: Engaging in the interpretation and analysis of outcomes to enhance problem-solving skills.</p> <p>4. Exploratory Thinking: Promoting inquiry-based learning and independent exploration of concepts.</p>
D. General and Transferable Skills	<p>By learning these skills , the students will be able to :</p> <ul style="list-style-type: none"> • Communicate physiological concepts effectively in written and oral forms. • Collaborate successfully in team-based academic activities. • Apply problem-solving skills to analyze physiological cases. • Manage time efficiently to meet academic requirements. • Use modern learning resources and technologies to enhance understanding. • Engage in self-directed learning for continuous professional growth

11. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	The Knowledge	General Introduction to Physiology Cell Physiology: General Functions, Cell Membrane Transport	Using the whiteboard and screen	Daily exam and oral questions
2	2	The Knowledge	General Idea about Body fluids: Types, Composition, and Functions. Unit of Measurement, Conversion and Conversion factor.	Using the whiteboard and screen	Daily exam and oral questions
3	2	The Knowledge	Blood: Composition, Specific Functions of each Compartment. Plasma and Serum Differences and Separation.	Using the whiteboard and screen	Daily exam and oral questions

			Monthly exam		
٤	2	The Knowledge	RBCs: Definition, Structure, and Normal Value; Hb Definition, Structure, and Normal Value; Blood Groups.	Using the whiteboard and screen	Daily exam and oral questions
٥	2	The Knowledge	Erythropoiesis, Homeostasis, Death and Disposal.	Using the whiteboard and screen	Daily exam and oral questions
٦	2	The Knowledge	White Blood Cells: Classification, Specific Function, Normal Value.	Using the whiteboard and screen	Daily exam and oral questions
٧	2	The Knowledge	Platelet: Definition, Function, Normal Value, Thrombopoiesis and Hemostasis.	Using the whiteboard and screen	Daily exam and oral questions
٨	2	The Knowledge	Heart Physiology: Conductive System, Cardiac Output (Mechanics and Control), and Factor Affecting.	Using the whiteboard and screen	Daily exam and oral questions
١٠-٩	4	The Knowledge	Vascular (Blood Vessels) Physiology: Mechanics and Control; Blood Pressure; and Factor Affecting.	Using the whiteboard and screen	Daily exam and oral questions
١١	2	The Knowledge	Lymphatic Physiology: Organs: Composition, Function of Each part. Lymph: Structure, Hemodynamic and Factor Affecting their Movement.	Using the whiteboard and screen	Daily exam and oral questions
١٢	4	The Knowledge	Respiratory Physiology: Parts and Specific Functions; Ventilation: Mechanics and Control. External Respiration, Gas Blood Transport, Internal	Using the whiteboard and screen	Daily exam and oral questions

			Respiration: Mechanics, Control and Factor affecting.		
13	2	The Knowledge	Lung Volumes: Normal Values and Factor Affecting; Conscious and Un-Conscious Control of Respiration. Role of Pons and Medulla in Respiratory Transient.	Using the whiteboard and screen	Daily exam and oral questions
14	2	The Knowledge	Acid-Base Balance: Definition, Buffer Systems, and Role of Body Systems In the Regulation.	Using the whiteboard and screen	Daily exam and oral questions
15	Mid-term Examination				

12. Course Evaluation	
<ul style="list-style-type: none"> • 5 marks are calculated on reports • 5 points are calculated on daily exams • 5 degrees are calculated on the daily preparation • And the rest of the grade is for the monthly exams 	
13. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> • Human Physiology Books
Main references (sources)	<ul style="list-style-type: none"> • Curriculum scheduled within the sectoral committees
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> • Text book of medical physiology (Guyton and Hall) • Review of medical physiology (Ganong's) • Anatomy & Physiology (OpenStax College)
Electronic References, Websites	<ul style="list-style-type: none"> • ncbi, google scholar, research gate

١٤.	
Prerequisites	
Minimum Number of Students	
Maximum Number of Students	

اسم التدريسي : م.د. حنان محسن علي

Email: hananmuhsen71@gmail.com