MODULE DESCRIPTION FORM

Module Information					
Module Title	Physiology				
Module Type	Basic	☒ Theory ☐ Lecture ☒ Lab ☐Tutorial ☐Practical ☐ Semina			
Module Code	Zu-Sc-MPH23114				
ECTS Credits	6				
SWL (hr/sem)	150				
Module Level	UG II		Semester of Delivery	3	
Administering Department	Department of Medical Physics		College	the sciences	
Module Leader	ghasaq Jaafar Sadiq		e-mail	ghasaqgafar@gmail.com	
Module Leader's Acad. Title	Assistant teacher		Module Leader's Qualification	Physiology	
Module Tutor			e-mail		
Peer Reviewer Name	Krar Hassan Obaid		e-mail	Krar.h.obaid@uowa.edu.iq	
Scientific Committee Approval Date	15/11/2025		Version Number	1.0	

Module Aims, Learning Outcomes and Indicative Contents			
Prerequisite module	No one	Semester	No one
Co-requisites module	No one	Semester	No one

Module Objectives	1. To provide students with an understanding of the structure and function of several major physiological systems and their role in maintaining homeostasis. 2. To study human physiology as a model for physiological processes in other organisms. 3. To describe a range of tissues and physiological processes in humans at an introductory level. 4. To connect physiological processes to their fundamentals at the cellular level. 5. To understand and analyze experimental work in physiology. 6. To apply problem-solving skills to scientific problems in physiology, including the use of mathematics and data analysis. 7. To further develop the practical biological skills presented in this physiology course.
Module Learning Outcomes	1. Introductory knowledge of the cellular and biochemical processes that form the basis of physiological processes in humans. 2. Demonstrate an understanding of the specific mechanisms used to transport selected molecules that cannot cross the plasma membrane on their own: carrier-mediated transport; intracellular uptake; and exocytosis. 3. Describe the anatomy, physiology, and control of several major physiological systems essential for the functioning of the human body. 4. Basic knowledge of the mechanisms of intercellular communication, which are largely mediated by extracellular chemical messengers: paracrine substances, neurotransmitters, and neurohormones. 5. Explain the principles and solve problems in human physiology. 6. Introductory knowledge of the physiology of major processes, such as the cardiovascular, nervous, digestive, respiratory, endocrine, and reproductive systems in humans. 7. Demonstrate an understanding of the levels of organization of major physiological systems, from the cellular to the functional level. 8. Fundamental knowledge for performing, analyzing, and reporting experiments and observations in physiology. 9. Connecting knowledge of the physiological systems mentioned above to the mechanisms of homeostasis and its control.

	10. Identifying the major tissue structures for understanding the basic physiological systems.
Indicative Contents	Theoretical Lectures: Learn the concepts of each theoretical lecture or group of lectures. [Student's scheduled hours are 28 hours] Practical Lectures: Learn the concepts of each practical lecture or group of lectures. [Student's scheduled hours are 30 hours] Midterm Exam: 1 hour Final Exam: 3 hours Total Hours: 62 hours

Learning and Teaching Strategies	
Strategies	Lectures: In traditional lecture-based courses, instructors present the content to students through oral presentations. This format is often supported by slides, multimedia, or supplementary materials to enhance understanding. 2. Workshops: Workshops reinforce the knowledge and understanding gained from lectures and develop both basic and specialized skills in the subject. 3. Self-Learning: This contributes to the acquisition of specialized knowledge and fosters self-motivation. 4. Examinations: Examinations assess the achievement of an appropriate level of specialized knowledge in physiology, focusing on comprehension and communication (essay and problem-solving questions) or recall of factual knowledge (multiple-choice or short-answer tests). 5. Tutoring Sessions: These are small, mentor-led sessions where students can ask questions, receive individual support, and clarify concepts covered in lectures or readings. 6. Practical Analysis: This is based on subject-specific knowledge and demonstrates subject-specific skills in understanding experimental work and analyzing data. 7. Practical Exercises: These allow students to apply knowledge gained from lectures and support the development of key and specialized skills. 8. Flipped Classroom: In the flipped classroom model, course material is presented to students through self-learning activities outside of class (such as watching pre-recorded lectures or reading texts), freeing up class time for interactive discussions, problem-solving, and practical activities.

Student Workload (SWL)			
Structured SWL (h/sem)	62	Structured SWL (h/w)	4.13
Unstructured SWL (h/sem)	88	Unstructured SWL (h/w)	5.87
Total SWL (h/sem)	150		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10%	2	
	Assignments	2	10%	5.7	
	Projects / Lab.	1	10%	12	
	Tutorial	1	10%	1.2.3.4.5.6	
Summative assessment	Midterm Exam	1 hr	10%	16	
	Final Exam	3hr	%50		
Total assessment					%100

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	General laboratory rules and safety procedures
Week 2	Introduction to Blood Physiology
Week 3	Circulating body fluids
Week 4	The cardiovascular system: function, organs, and diseases
Week 5	Generation and transmission of the cardiac impulse
Week 6	Physiology of the nervous system I
Week 7	Physiology of the Nervous System II
Week 8	Midterm exam
Week 9	Renal physiology
Week 10	The digestive system: structures and tissues
Week 11	The digestive system: digestion and absorption
Week 12	Anatomy and physiology of the respiratory system
Week 13	Endocrine glands: Introduction and energy balance
Week 14	Endocrine glands: II. Pituitary gland and thyroid gland
Week 15	Reproductive system
Week 16	Midterm exam

Delivery Plan (Weekly Lab. SyUabus)	
	Material Covered
Week 1	General laboratory rules and safety procedures
Week 2	Introduction to Blood Physiology
Week 3	Blood types and blood transfusion
Week 4	Size of packed cells
Week 5	Determining hemoglobin concentration
Week 6	Determining bleeding time and clotting time
Week 7	blood pressure
Week 8	The effect of exercise on blood pressure
Week 9	Erythrocyte sedimentation rate (ESR)
Week 10	Differential white blood cell count
Week 11	Total white blood cell count
Week 12	Experiments on the respiratory system (respiratory rate and volumes)
Week 13	Red blood cell count
Week 14	Insulin regulation of blood sugar levels
Week 15	Electrocardiogram (ECG)

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Medical Physiology:Principles for Clinical Medicine ,Fourth Edition,Rodney A.Rhoades and David R.Bell, Lippincott Williams & Wilkins;2012	
Recommended Texts	Human Physiology ,Tweifth Edition ,Widmaier ,Raff and Strang ,2011	
Websites	Website Address	

Grading Scheme			
Group	Grade	Marks %	Definition
Success Group (50 - 100)	A - Excellent	90 - 100	Outstanding Performance
	B - Very Good	80 - 89	Above average with some errors
	C - Good	70 - 79	Sound work with notable errors
	D - Satisfactory	60 - 69	Fair but with major shortcomings
	E - Sufficient	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	(45-49)	More work required but credit awarded
	F – Fail	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

Name of the Instructor:

ghasaq Jaafar Sadiq