

Module Information					
معلومات المادة الدراسية					
Module Title	PHYSIOLOGY			Module Delivery	
Module Type	CORE			✓ Theory ✓ Lecture Report	
Module Code	UOMU0101056				
ECTS Credits	5				
SWL (hr/sem)	125				
Module Level		3	Semester of Delivery		1
Administering Department		Type Dept. Code	College	Type College Code	
Module Leader	Zainab Sattar Jaba		e-mail	zainab.sattar.jabbar@uomus.edu.iq	
Module Leader's Acad. Title		lecturer	Module Leader's Qualification		Msc
Module Tutor	None		e-mail	None	
Peer Reviewer Name			e-mail		
Review Committee Approval		1/09/2025	Version Number		1.0

Relation With Other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	Anatomy II BME 202	Semester	1
Co-requisites module		Semester	
Module Aims, Learning Outcomes and Indicative Contents			

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p><b>Module Aims</b> أهداف المادة الدراسية</p>	<ol style="list-style-type: none"> <li>1- Students would be able to explain basic structure and functions of cell</li> <li>2- Students would be able to explain interconnect of various systems</li> <li>3- This course deals with the basic concept of living cells.</li> <li>4- Students would be learnt about anatomy and physiology of various systems of human body</li> <li>5- To enable the student to develop an understanding of the structure, location and function of the systems of the human body.</li> </ol>
<p><b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية</p>	<ol style="list-style-type: none"> <li>1- Define the main structures composing human body.</li> <li>2- Tells chemical structure of human body.</li> <li>3- Explains structure and functions of cell.</li> <li>4- Relates structure and functions of tissue.</li> <li>5- explain structure of skeletal system.</li> <li>6- Lists tissues of skeletal system.</li> <li>7- Defines structure and functions of joints.</li> <li>8- Explains properties of bone tissue.</li> <li>9- tell nervous system and sense organs.</li> <li>10- Categorizes nervous system.</li> <li>11- Recognizes cells of nervous system.</li> <li>12- Explains structure and functions of sense organs.</li> <li>13- Students would be able to explain interconnect of various systems</li> <li>14- Respiratory system</li> <li>15- Tells how urinary system work</li> </ol>

<p><b>Indicative Contents</b> المحتويات الإرشادية</p>	<ol style="list-style-type: none"> <li>1. Label the relevant anatomical structures within each system.</li> <li>2. Understand the inter-relationship between systems in the maintenance of homeostasis.</li> <li>3. Summarize the functions of each system</li> <li>4. Understand the Principles of Human Physiology</li> <li>5- Structure and function of body systems</li> <li>6-Physiology of Nervous system, Cardiovascular system, 7-7-Respiratory system, Urinary system and Muscle physiology.</li> <li>8-Homeostasis</li> </ol> <p>Understand the 1) inter-relationship between systems in the maintenance of homeostasis. We will focus upon understanding the 1) interrelationship between the nervous system and all body systems 2) interrelationship between cardiovascular, renal and respiratory system and 3) endocrine system on all body systems</p>
<p><b>Learning and Teaching Strategies</b> استراتيجيات التعلم والتعليم</p>	
<p><b>Strategies</b></p>	<p>The main strategy that will be adopted in delivering this module is to encourage students' participation in the class, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive by considering type of simple experiments involving some sampling activities that are interesting to the students like identification and enumeration of blood cells, enumeration of hematological parameters and analysis of special sensory organs test.</p> <p>Explain the application of Physiological models</p>

	Describe the methods and techniques for analysis and synthesis of Linear and dynamic system Develop differential equations to describe the compartmental physiological model Describe Nonlinear models of physiological systems Illustrate the Simulation of physiological systems
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<b>Student Workload (SWL)</b> الحمل الدراسي للطالب			
<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطالب خلال الفصل	93	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطالب أسبوعياً	4
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطالب خلال الفصل	32	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطالب أسبوعياً	2
<b>Total SWL (h/sem)</b> الحمل الدراسي الكلي للطالب خلال الفصل	125		

<b>Module Evaluation</b> تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
<b>Formative assessment</b>	<b>Quizzes</b>	2	10% (10)	5, 10	LO #1, 2, 10 and 11
	<b>Assignments</b>	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	<b>Lab.</b>	2 hr.	10% (10)	Continuous	
	<b>Report</b>	0	10% (0)	13	LO # 5, 8 and 10
<b>Summative assessment</b>	<b>Midterm Exam</b>	2 hr.	10% (20)	7	LO # 1-7
	<b>Final Exam</b>	3hr.	50% (50)	16	All

Total assessment			100% (100 Marks)								
									Module Evaluation		
									تقييم المادة الدراسية		
									Time/Number		
									Weight (Marks)		
Formative assessment	Quizzes	Formative assessment	Formative assessment	Quizzes	Formative assessment	Formative assessment	Formative assessment	Quizzes	2	10% (10)	
	Assignments							2	10% (10)		
	Lab.							2 hr.	10% (10)		
	Report							0	10% (0)		
Summative assessment	Midterm Exam	Summative assessment	Summative assessment	Midterm Exam	Summative assessment	Summative assessment	Summative assessment	Midterm Exam	2 hr.	10% (20)	
	Final Exam							3hr.	50% (50)		
Total assessment			Total assessment			Total assessment			Total assessment		
									100% (100 Marks)		
									Module Evaluation		
									تقييم المادة الدراسية		
									Time/Number		
									Weight (Marks)		
Formative assessment	Formative assessment	Formative assessment	Formative assessment	Quizzes	Formative assessment	Formative assessment	Formative assessment	Quizzes	15	10% (10)	LO #1 10% (50)
								Assignments	12	10% (10)	LO #2 10% (50)
								Lab.	10	10% (10)	LO #3 10% (50)
								Report	10	10% (10)	LO #4 10% (50)
Summative assessment	Summative assessment	Summative assessment	Summative assessment	Midterm Exam	Summative assessment	Summative assessment	Summative assessment	Midterm Exam	10	10% (10)	LO #5 10% (50)
								Final Exam	10	10% (10)	LO #6 10% (50)
Total assessment			Total assessment			Total assessment			Total assessment		
									100% (100 Marks)		
									Module Evaluation		
									تقييم المادة الدراسية		
									Time/Number		
									Weight (Marks)		

	Formative assessment	Quizzes	Formative assessment	Formative assessment	Quizzes	Formative assessment	Formative assessment	Quizzes		115	100%	2(10)	Lab #1	12%	(50)	101
		Assignments			Assignments			120	100%	4(16)	Lab #3	4%	(20)	102		
		Lab. Report			Lab. Report			200	100%	6(10)		10%	(10)	Continuous		
	Summative assessment	Midterm Exam	Summative assessment	Summative assessment	Midterm Exam	Summative assessment	Summative assessment	Midterm Exam		LO #1	70%	7(20)	LO #1	70%	(20)	
		Final Exam			Final Exam			All	100%	(50)	All	50%	(50)			
	Total assessment		Total assessment		Total assessment		Total assessment		Total assessment		Total assessment		Total assessment		Total assessment	
	Formative assessment	Quizzes	Formative assessment	Formative assessment	Quizzes	Formative assessment	Formative assessment	Quizzes		115	100%	2(10)	Lab #1	12%	(50)	101
		Assignments			Assignments			120	100%	4(16)	Lab #3	4%	(20)	102		
		Lab. Report			Lab. Report			200	100%	6(10)		10%	(10)	Continuous		
	Summative assessment	Midterm Exam	Summative assessment	Summative assessment	Midterm Exam	Summative assessment	Summative assessment	Midterm Exam		LO #1	70%	7(20)	LO #1	70%	(20)	
		Final Exam			Final Exam			All	100%	(50)	All	50%	(50)			
	Total assessment		Total assessment		Total assessment		Total assessment		Total assessment		Total assessment		Total assessment		Total assessment	
	Formative assessment	Quizzes	Formative assessment	Formative assessment	Quizzes	Formative assessment	Formative assessment	Quizzes		115	100%	2(10)	Lab #1	12%	(50)	101
		Assignments			Assignments			120	100%	4(16)	Lab #3	4%	(20)	102		
		Lab. Report			Lab. Report			200	100%	6(10)		10%	(10)	Continuous		
	Summative assessment	Midterm Exam	Summative assessment	Summative assessment	Midterm Exam	Summative assessment	Summative assessment	Midterm Exam		LO #1	70%	7(20)	LO #1	70%	(20)	
		Final Exam			Final Exam			All	100%	(50)	All	50%	(50)			
	Total assessment		Total assessment		Total assessment		Total assessment		Total assessment		Total assessment		Total assessment		Total assessment	
Formative assessment	Quizzes	Formative assessment	Formative assessment	Quizzes	Formative assessment	Formative assessment	Quizzes		115	100%	2(10)	Lab #1	12%	(50)	101	
	Assignments			Assignments			120	100%	4(16)	Lab #3	4%	(20)	102			
	Lab. Report			Lab. Report			200	100%	6(10)		10%	(10)	Continuous			
Summative assessment	Midterm Exam	Summative assessment	Summative assessment	Midterm Exam	Summative assessment	Summative assessment	Midterm Exam		LO #1	70%	7(20)	LO #1	70%	(20)		
	Final Exam			Final Exam			All	100%	(50)	All	50%	(50)				
Total assessment		Total assessment		Total assessment		Total assessment		Total assessment		Total assessment		Total assessment		Total assessment		

	Total assessment		Total assessment	Total assessment		Total assessment		Total assessment		Marked 100% (100 Marks)	
										Module Evaluation	
										تقييم المادة الدراسية	
				Time/Number	Weight	Time/Number	Time/Number	Weight	Time/Number	Time/Number	Weight (Marks)
Formative assessment	Formative assessment	Quizzes	Formative assessment	Formative assessment	Quizzes	Formative assessment	Formative assessment	Quizzes	115	10% (20)	10 # 112% (50) 11
		Assignments			12			10% (20)	10 # 112% (50) 12		
		Lab. Reports			10			10% (20)	10 # 112% (50) 10		
Summative assessment	Summative assessment	Midterm Exam	Summative assessment	Summative assessment	Midterm Exam	Summative assessment	Summative assessment	Midterm Exam	10	10% (20)	10 # 112% (50) 10
		Final Exam			10			10% (20)	10 # 112% (50) 10		
Total assessment	Total assessment		Total assessment	Total assessment		Total assessment		Total assessment		Marked 100% (100 Marks)	
										Module Evaluation	
										تقييم المادة الدراسية	
				Time/Number	Weight	Time/Number	Time/Number	Weight	Time/Number	Time/Number	Weight (Marks)
	Formative assessment	Formative assessment	Formative assessment	Formative assessment	Quizzes	Formative assessment	Formative assessment	Quizzes	115	10% (20)	10 # 112% (50) 11
					Assignments			12	10% (20)	10 # 112% (50) 12	
					Lab. Reports			10	10% (20)	10 # 112% (50) 10	
	Summative assessment	Summative assessment	Summative assessment	Summative assessment	Midterm Exam	Summative assessment	Summative assessment	Midterm Exam	10	10% (20)	10 # 112% (50) 10
Final Exam					10			10% (20)	10 # 112% (50) 10		
Total assessment		Total assessment	Total assessment		Total assessment		Total assessment		Marked 100% (100 Marks)		
Module Evaluation									Module Evaluation		
									تقييم المادة الدراسية		
		Time/Number	Weight (Marks)		Week D	Time/Number	Weight	Time/Number	Time/Number	Weight (Marks)	

Formative assessment	Quizzes	2	Formative assessment	Quizzes	Formative assessment	Formative assessment	Quizzes	5, 10% (10)	LO # 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
	Assignments	2		Assignments			2, 10% (10)	LO # 3, 4, 5, 6, 7, 8, 9, 10, 11	
	Lab.	2 hr.		Lab.			2, 10% (10)	LO # 3, 4, 5, 6, 7, 8, 9, 10, 11	
	Report	0		Report			1, 10% (10)	LO # 3, 4, 5, 6, 7, 8, 9, 10, 11	
Summative assessment	Midterm Exam	2 hr.	Summative assessment	Midterm Exam	Summative assessment	Summative assessment	Midterm Exam	20% (20)	LO # 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
	Final Exam	3hr.		Final Exam			30% (30)	LO # 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	
Total assessment			Total assessment		Total assessment		Total assessment		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Structure of cell, structure and functions of sub organelles
Week 2	Cell Membrane –Transport of Across Cell Membrane — Action Potential
Week 3	Homeostasis
Week 4	Components of Blood and functions.- Blood Groups and importance – Structure of Heart – Conducting System of Heart
Week 5	Properties of Cardiac Muscle - Cardiac Cycle - Heart Beat – Types of Blood vessel
Week 6	Regulation of Heart rate and Blood pressure.
Week 7	Cells of Nervous systems – Types of Neuron and Synapses
Week 8	Mechanisms of Nerve impulse – Parts of Brain
Week 9	Spinal Cord – Tract and Pathways of Spines – Reflex Mechanism
Week 10	Classification of Nerves - Autonomic Nervous systems and its functions.
Week 11	Structure of Kidney and Nephron, Mechanisms of Urine formation
Week 12	Regulation of Blood pressure by Urinary System – Urinary reflex



<b>Week 13</b>	Types of Bone and function – Physiology of Bone formation – Division of Skeleton – Types of joints and function – Types of cartilage and function.
<b>Week 14</b>	Muscular: Parts of Muscle – Movements.
<b>Week 15</b>	Respiratory: Parts of Respiratory Systems – Types of respiration - Mechanisms of Breathing – Regulation of Respiration
<b>Week 16</b>	<b>Final Exam</b>

<b>Learning and Teaching Resources</b> <b>مصادر التعلم والتدريس</b>		
	<b>Text</b>	<b>Available in the Library?</b>
<b>Required Texts</b>	<p>1-David Shier, Jackie Butler, Ricki Lewis: 2017, Hole's Essentials of Human Anatomy &amp; Physiology, 13, McGraw-Hill Education, McGraw-Hill Education, 978-125927736</p> <p>2-Seeley &amp; Tate: 2011, Essential of Anatomy and Physiology, McGraw Hill, UK,</p> <p>3- Guyton &amp; Hall, —Medical Physiologyl, 13<sup>th</sup> Edition, Elsevier Saunders, 2015</p> <p>4-Prabhjot Kaur. Text Book of Anatomy and Physiology. Lotus Publishers. 2014</p>	No

<b>Recommended Texts</b>	1-Michel C Khoo, —Physiological Control Systems - Analysis, simulation and estimation, Prentice Hall of India, 2001. 2- Eldra Pearl Solomon, —Introduction to Human Anatomy and Physiology, W.B. Saunders Company, 2015	No
<b>Websites</b>	<a href="http://libguides.madison college.edu">http://libguides.madison college.edu</a>	

#### APPENDIX:

GRADING SCHEME				
مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				
NB 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.				

