



MODULE DESCRIPTION

وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Principles of physiology		Module Delivery
Module Type	Core		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☒ Seminar
Module Code	Path-214		
ECTS Credits	6		
SWL (hr/sem)	150		
Module Level	2	Semester of Delivery	
Administering Department		College	Science
Module Leader	Muna Adnan	e-mail	
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date		Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1- A comprehensive review of the functional activities of the various body systems. 2- Introducing the student to the latest developments in knowledge in the field of physiology. 3 - Enabling students to use scientific thinking methods. 4 - Refining the student's scientific and practical personality so that he can serve the community in teaching and research. 5 - Students acquire the skill of self-learning through writing research papers. 6- Enriching the cognitive status by asking questions and discussing them in class. 7 - Expanding the students' perceptions, enhancing their self-confidence, and strengthening their scientific and professional personalities. 8- To provide students with the required practical skills. 9- Training students to prepare reports, analyze results, and design posters. 10 - Encouraging students to use modern scientific sources and cite them in their graduation research and prepare them for research for postgraduate studies.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1 - Preparing graduate students who have the ability to research and learn. 2- The ability to use laboratory tools and equipment and to teach students how to properly deal with different equipment. 3 - Develop students' ability to conduct laboratory analyzes related to this science. 4- The ability to analyze and discuss the results of practical experiments by following the scientific method in reasoning. 5- Training students on how to write a thesis and scientific research. 6- Preparing specialized cadres for the labor market by providing students with the required skills.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following: - <u>Introduction to the Human Body</u> : Anatomy and physiology, different branches of physiology. Structural and functional organization; chemical level, cell level, tissue level, organ level, system level, organism level. [14. hrs] - <u>Characteristics of Life and Homeostasis</u> : Characteristics of life; organization, metabolism, responsiveness, growth, development, & reproduction. Homeostasis; negative-feedback mechanism & positive-feedback responses. [14. hrs] - <u>Movement Through the Plasma Membrane</u> : Plasma membrane; the structure and function of cell membrane. Movement types of materials across the plasma membrane; diffusion, facilitated diffusion, active transport, filtration, endocytosis and exocytosis. [14.. hrs]

	<u>Neural Control:</u> Divisions of the nervous system; central nervous system, peripheral nervous system, autonomic nervous system, "fight-or-flight" mechanism. Nervous cells, membrane potentials, the synapse, neural reflexes. [14 hrs] - <u>Hormonal Control:</u> Hormones; chemical categories of hormones, hormone action. Endocrine glands; pituitary gland, The pineal body, thyroid gland, parathyroid glands, thymus gland, adrenal glands, pancreas, testes and ovaries, other hormones, prostaglandins. [14 hrs]
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Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The educational institution should evaluate the academic program and develop the courses in accordance with the approved international standards in conjunction with the knowledge progress taking place in order to ensure the achievement of quality and academic accreditation, and that this institution should be able to continuously improve in order to achieve the desired strategic goals of the education outcomes. In addition to updating the course by expanding some topics that are of importance in the context of cognitive development, expanding the research horizons of students, and obtaining new information related to the prescribed curriculum.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	79	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	71	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	15% (15)	2,6,9	LO #1, 2, 4,5,7, and 8
	Assignments	2	10% (10)	4,11	LO # 3, 6,9 and 10
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	5% (5)	14	LO # 11,12, and 13
Summative assessment	Midterm Exam	2 hr	10% (10)	8	LO # 1-7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to the human body
Week 2	Structural and functional organization
Week 3	Characteristics of life
Week 4	Homeostasis mechanism
Week 5	Movement types of materials across the plasma membrane
Week 6	Divisions of the nervous system; autonomic nervous system
Week 7	Membrane potentials, the synapse, & Neural reflexes
Week 8	Exam.
Week 9	Hormones; definition, the term & chemical categories
Week 10	Hormone action mechanisms
Week 11	Thyroid gland, parathyroid glands, & adrenal glands
Week 12	The pancreas
Week 13	The pineal body & thymus gland
Week 14	Testes and ovaries & prostaglandins
Week 15	Exam.

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Maintenance and regulation of body temperature
Week 2	Osmotic relations; study the osmosis of erythrocytes to water and some other substances
Week 3	Determination the types of laboratory physiological solutions
Week 4	Effect of some drugs on osmotic regulation
Week 5	How to use a spectrophotometer to examine samples
Week 6	How to use a flame photometer to examine the minerals
Week 7	How to use ELISA to examine biochemical parameters
Week 8	Exam.
Week 9	Electroencephalography
Week 10	Study of reflexes in the nervous system
Week 11	Pithing the frog
Week 12	Neural control of skeletal muscle
Week 13	Contractility of skeletal muscle; the twitch and motor unit summation
Week 14	Contractility of skeletal muscle; mechanical summation, contracture, tetanus & fatigue
Week 15	Exam.

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	1) Seeley R. R., Tate P., Stephens T. D. Anatomy & Physiology. McGraw-Hill Science Inc. 2) Hall J.E. Guyton and Hall, Textbook of Medical Physiology. Saunders Inc.	no
Recommended Texts	Anatomy & Physiology	yes
Websites		

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	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(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.				