MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	physiology			Module Delivery	
Module Type	B			☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	UOMU031036				
ECTS Credits	5				
SWL (hr/sem)	125				
Module Level	2		Semester of Delivery	1	
Administering Department	Biology		College	sci	
Module Leader	Dr ameer		e-mail		
Module Leader's Acad. Title	Professor		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	01/06/2023		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 Objectives **أهداف المادة الدراسية**	**This course is designed so that the student of third year will achieve a general understanding about:-.** 1. - Normal Functions Of Different Systems In Mammals . 2. Normal Behavior Of Animals 3. Knowledge And Understanding Of The Normal Physiological Basis Of Organ Function And Homeostasis.
Module Learning Outcomes **مخرجات التعلم للمادة الدراسية**	*Knowledge And Understanding 1.The Student Will Have A Comprehensive Knowledge And Understanding On Normal Functions Of Cell Organelles 2.Functions Of Different Body Systems And Interaction Between Them During Different Physiological Conditions 3. Knowledge About The Interaction Between Body Systems During Different Physiological Conditions 4. The Interaction Responses Between Different Body Systems During Different Non Physiological Conditions 5.Know The Type And Methods Of Completion .Laboratory Tests For Different Blood parameter 6 .How To Read And Analyze The Laboratory Tests Results
Indicative Contents المحتويات الإرشادية	**Indicative content includes the following.** **Introduction an cell and energy :** included Physiology subdivided, General physiology, Specific physiology, comparative physiology, Characteristics of living things, energy conservation law, Releases energy in cells or Cellular

respiration(1-Glycolysis -2- Kreb's cycle 3- Respiratorychain phosphorylation). **(2h)**

- **Thermal regulation and Metabolism**: Regulation of body temperature (physical and chemical regulation), animals are divided into two groups: Poikilothermic and Homeothermic , Mechanism activated by cold and heat Disturbances in thermoregulation, Metabolic rate and methods of measurement (direct and indirect), The factors effect metabolic value, Factors affecting the basal metabolic rate, Resistant to extreme temperatures**(4h)**
- **Circulatory system in human:** Blood vascular system and Lymphatic vascular system, Pulmonary and Systemic Circulations , The origin and transmission of the pulse and Pacemake, Electrical events of the heartbeat, Electrocardiography, Cardiac units(Cardiac out put and minute volume), heart beat rat, Factors affecting blood pressure.**(4h)**
- **Digestion &absorption physiology:** Alimentry tract or gastrointestinal tract Accessory gland: Included salivary gland, pancrease and liver, Salivary glands divided in to three types depended on the localization, Gastric juice components, Control of gastric secretion, Gastric Secretion Stage, pancreatic Secretion and digestive enzymes, Control of pancreatic secretion, Intestinal Secretion, Absorption, Regulating the amount of food intake and the centers of hunger and satiety.**(4h)**

- **Respiration Physiology:** included Pulmonary ventilation , Pulmonary and internal respirationgases, Cellular respirationcatabolism, Mechanism of respiration ((inhalation & exhalation)with Boyle's law, Respiration Volumes and lung capacities by respirometer, A number of terms are used to describe the rate and depth of breathing, Alveolar ventilation, Oxygen and Co_2Transport, Oxygen Saturation (Dissociation) Curve with Bohr effect**(4h)** carbon dioxide transport ,Regulation of Respiration (Nervous control of Respiratory Movements and Chemical Regulation of Respiration).

- **Osmoregulation and urinary system:** Water balance, Extracellular fluid and Intracellular fluid Regulation of Body Fluid or Homeostasis , Exchange between different bodily fluids, Exchange between serum and interstitial fluid, Acid-Base Balance , control on pH (Buffer ,respiratory and kidneys control) , Microscopic structure of kidneys including nephrone ,kidney's functions (filtration, reabsorption and secretion) ,hormonal control.**(4h)**
- **Endocrinology**: chemical messenger (hormone), classification of hormone depended on chemical structure, comparison between exocrine and endocrine ,neuro-endocrine co-ordination. Target cell,receptors , pituitary hormones**(4h)**

	The laboratory portion of this course will emphasize introductory exercises, experimental techniques, and data collection of physiological variables (18h)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Type something like: Lectures and practical of every topic in the course. Collection of some information from textbooks. The main strategy that will be adopted in delivering this module is presentation and Discussion sessions with the participation of students in the interpretation and analysis of some basic concepts of physiology, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering types of simple experiments involving collected blood sample and estimation some physiological parameter.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	94	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	31	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	2

Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	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 , Physiology subdivided, cell and energy , Releases energy in cells or Cellular respiration
Week 2	The physiological effect of heat and its regulation
Week 3	Metabolism and basal metabolism
Week 4	Circulation system physiology , The Conducting System of the Heart

Week 5	Cardiac cycle , Cardiac units, *Blood pressure*
Week 6	Digestion &absorption physiology ,mechanical digestion, Salivary glands & Salivation,
Week 7	Monthly- Exam
Week 8	Stomach digestion, *Control of gastric secretion, pancreatic Secretion, Liver, centers of hunger and satiety*
Week 9	*Respiration Physiology,* Mechanism of respiration, *Respiration Volumes and lung capacities,* Alveolar ventilation
Week 10	Transport Of Oxygen Oxygen Capacity, transports O2 in the blood, Forms of carbon dioxide in the blood, *Regulation of Reapioration.*
Week 11	Urinary system physiology, Osmoregulation, Regulation of Body Fluid or Homeostasis, Exchange between different bodily fluids
Week 12	*Acid-Base Balance*, pH control mechanisms, Kidney and it principle function, hormonal regulation
Week 13	Kidney and it principle function, hormonal regulation.
Week 14	Introduction to endocrinology and chemical co-ordination
Week 15	chemical nature of hormone ,type of endocrine gland ,
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: The Blood (Blood functions , Blood Components, Blood Cells ,Anticoagulation) Practical part /Conducting a blood separation experiment to identify cells and components using anticoagulant tubes and centrifuges
Week 2	Lab 2: Osmosis (Erythrocyte fragility,- types of tonicity) Practical part / conducting an experiment to Osmotic fragility Tests

Week 3	Lab 3: conducting an experiment to Red Blood Cells (RBCs) Count
Week 4	Lab 4: conducting an experiment to White blood cell (WBCs) count
Week 5	Lab 5: Measurement of arterial blood pressure methods to measurement of ABP(Direct method , Indirect method ,Palpatory method and Auscultatory method) Practical part / conducting an experiment to measure blood pressure using the pulse and auscultation method using the sphygmomanometer
Week 6	Lab 6: The ABO Blood Group (-Agglutinins of ABO System-Rhesus factors (RH) factor-Clinical Significance of Rh factor-Agglutination) Practical part/detection of ABO Blood Group
Week 7	Lab 7: Bleeding Time And Clotting Time(Abnormal Results of A Bleeding Time Test,methods based on the length and location of the incision:1- Duke's Method 2- IVY method Practical part/ detection of A Bleeding Time by Duke's and IVY methods
Week 8	Clotting Time Test
Week 9	Blood hemoglobin and its methods of measurement: 1-Sally device method: 2-Determination of hemoglobin by Drabkin Method

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Principles of Animal Physiology , 2014 • 53.45 MB • English by Christopher D. Moyes & Patricia Schulte	No
Recommended Texts	Human Physiology by Wikibooks contributors ,2007	No
Websites	Essential Haematology A. V. Hoffbrand , Sixth Edition ,University of Birmingham	

	Birmingham, UK,2010

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.