Ministry of Higher Education and Scientific Research - Iraq
AL Mustaqba University
College of science
Department of biology

"COURSE PORTFOLIO"

Module Information معلومات المادة الدراسية					
Module Title	**Animal physiology**			**Module Delivery**	
Module Type	**Basic**			✓ **Theory** ✓ **Lecture** ✓ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**Bio-**				
ECTS Credits	**7.0**				
SWL (hr/sem)	**175**				
Module Level	**3**	**Semester**	**1**		
Department	**Biological**	**College**	**College of Science**		
Module Leader	**Dr. Nazima Bahaa Hussein**	**E-mail**			
Module Leader's Acad. Title		**Module Leader's Qualification**			
Module Tutor	**Name (if available)**	**e-mail**	**E-mail**		
Peer Reviewer Name	**Name**	**e-mail**	**E-mail**		
Scientific Committee Approval Date		**Version Number**			

Student Workload (SWL): Structured SWL (h/w) (Two contact hours of lectures) + Unstructured SWL (h/w) .

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	64	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	111	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	7.40
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

Relation with other Modules:-

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	
COURSE DESCRIPTION:	The course covers the fundamental physiological processes responsible for maintaining homeostasis, including nervous, endocrine, muscular, circulatory, respiratory, digestive, and excretory functions. Students will explore how organs and systems interact to sustain life and how physiological responses change under varying internal and external conditions. Through a combination of lectures and laboratory experiments, the course develops students' abilities to measure, record, and analyze physiological variables, preparing them for advanced studies in human physiology, neuroscience, pharmacology, and related biomedical fields.
Module Aims أهداف المادة الدراسية	1. Introduce students to the fundamental physiological processes that regulate organ functions in animals. 2. Provide an understanding of regulatory mechanisms responsible for maintaining homeostasis. 3. Explore the relationship between organ structure and physiological function. 4. Enable students to interpret physiological changes under normal and abnormal conditions. 5. Develop students' abilities to perform physiological experiments and analyze results. 6. Prepare students for advanced studies in human physiology, neuroscience, pharmacology, and enzymology.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	**Knowledge and Understanding** Upon successful completion of this course, students will be able to: 1. Explain the basic principles of animal physiology. 2. Describe physiological mechanisms of major body systems (nervous, circulatory, respiratory, digestive, etc.). 3. Understand mechanisms of homeostasis and neuroendocrine regulation. **Cognitive Skills** 4. Analyze physiological changes in response to internal and external factors. 5. Interpret physiological data within a scientific context. **Practical Skills** 6. Conduct laboratory experiments such as measuring pulse, blood pressure,

	neural and muscle responses. 7. Operate physiological instruments and analyze recorded data.
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
1- Required textbooks		No
2- Main references (sources)		No
A- Recommended books and references (scientific journals, reports, etc.)		No

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)	A considerable amount of work is 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.

COURSE SCHEDULE:-

Week	hours	Topics Covered	Learning Outcomes
1	2	Energy release, Krebs cycle, aerobic respiration	
2	2	Physiological effect of temperature and its regulation	
3	2	Basal metabolism and its relation to body size	
4	2	Physiology of the circulatory system, components of blood	
5	2	Cardiac circulation, cardiac units and blood pressure	
67,	2	Physiology of the digestive system	
8	2	Digestion in the stomach, control of gastric secretions	
9	2	Physiology of the urinary system	
10	2	Acid-base balance of the body	
11	2	The kidney and its primary function	
12	2	Endocrinology	
13	2	The pituitary gland	
14	2	Hormones, their action and chemical nature	

15	2	Physiology of the reproductive system	
Final Exam			

Delivery Plan (Weekly Lab. Syllabus) **المنهاج الاسبوعي للمختبر**	
Week	**Material Covered**
Week 1	**Differential Count of White Blood Cells**
Week 2	**White and Red Blood Cell Count**
Week 3	**Blood and Hemoglobin**
Week 4	**Capillary Circulation**
Week 5	**Frog Heartbeat**
Week 6,7	**Osmosis and Permeability of Red Blood Cell Membranes**
Week 8	**Muscle Contraction**
Week 9	**Spatiotemporal Complex**
Week 10	**Reflex Actions in the Frog**
Week 11	**Exam**
Week 12	**Study of Salivary Amylase**
Week 13	**Smooth Muscle Contraction**
Week 14	**Absorption**

Learning Outcomes and Assessment Methods for " Immunology " Course.

Topics Covered	Learning Outcomes	Strategies for Achieving Outcomes	Assessment Methods
Energy release, Krebs cycle, aerobic respiration	1-6	Report Writing, Field Visits, Theoretical Lectures, Scientific Films, Exploratory Work Teams.	Quizzes, Major reports, discussions during lectures, Written Exams, and oral exams.
Physiological effect of temperature and its regulation	1-3	Problem-Based Learning, Report Writing, Field Visits, Scientific Trips, Theoretical Lectures, Small Group Discussions, Scientific Films, Exploratory Work Teams.	Seminars, Major reports, and discussions during lectures. Written Exams, oral exams.
Basal metabolism and its relation to body size	3-6	Problem Based Learning, Report Writing, Theoretical Lectures, Small Group Discussions, Scientific Films.	Quizzes, discussions during lectures, Written Exams, homework, and oral exams.
Cardiac circulation, cardiac units and blood pressure	1-6	Report Writing, Scientific Trips. Theoretical Lectures, Small Group Discussions, and Scientific Films.	Seminars, Major reports, and discussions during lectures. Written Exams, oral exams.
Acid-base balance of the body	1-3	Theoretical Lectures, Small Group Discussions,	Seminars, quizzes, discussions during lectures, Written Exams, and oral exams.
The kidney and its primary function	1-6	Problem-Based Learning, Report Writing, Field Visits, Scientific Trips, Theoretical Lectures, Small Group Discussions, Scientific Films, and Exploratory Work Teams.	Seminars, quizzes, Major reports, Written Exams, homework, and oral exams.
The pituitary gland	2-3	Problem-Based Learning, Theoretical Lectures, Small Group Discussions.	Quizzes and discussions during lectures. Written Exams, Homework.

Module Evaluation:-

Module Evaluation تقييم المادة الدراسية				
	Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome

Formative assessment (40%)	**Quizzes**	2	10% (10)	5, 10	LO #1, 3 and 5
	Assignments & H.W.	2	10% (10)	2, 12	LO # 1, 3 and 6
	Projects / Lab.	1	10% (10)	Continuous	
	Seminar	1	10% (10)		
	Field Visits Report	1	10% (10)	10	LO # 3, 6
	Discussions During Lectures	10	10% (10)	Continuous	ALL
Summative assessment	**Midterm Exam (10%)**	2 hr	10% (10)	8	LO # All
	Final Exam (50%)	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

توزيع الساعات المجدولة و الغير مجدولة (SWL= SSWL +USWL)

Activity types	Structured SWL	Un structured SWL	No. of weeks	Time Factor	SWL (hr)
Class	32	66	15	2	98
Lab.	32	45	15	2	77
Tutorial					
Self Study		7.40	15		7.40
Quizzes	2		2	30 min.	2
discussions during lectures	5		15	20 min.	5
Projects / Lab.	15	2	15	1 hr.	16
Seminar	2	5	1	15 min.	12
Assignments, Home Work		4	1		4
Report		10	1		10
Midterm Exam (10%)	4		1		4
Final Exam (50%)	4		1		4
		Total SWL (hr/ Semester)			175
		ECTS			7