



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Biology		Module Delivery
Module Type	Support or related learning activity		☒ Theory ☐ Lecture ☐ Lab ☒ Tutorial ☐ Practical ☐ Seminar
Module Code	BIOL110		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level	1	Semester of Delivery	1
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Dr. Basim Ali Kraidi		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	4/12/2024	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. To contribute to students' general education through their involvement in the process of scientific investigation and the acquisition of biological knowledge and understanding 2. To encourage in students an attitude of scientific enquiry, of curiosity and self-discovery through (i) individual study and personal initiative (ii) team work (iii) class-directed work 3. To develop an understanding of biological facts and principles 4. To enhance an interest in and develop an appreciation of the nature and diversity of organisms 5. To create an awareness of the application of biological knowledge to modern society in personal, social, economic, environmental, industrial, agricultural, medical, waste management and other technological contexts 6. To develop in students an ability to make informed evaluations about contemporary biological issues.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. This course introduces the students to fundamental concepts in biology. 2. Identify and describe the main features of the four main classes of important biological macromolecules. 3. Identify and explain a variety of cellular components 4. Identify membrane-bound organelles found in eukaryotic cells. 5. Describe and explain the structure and function of membranes 6. Relate DNA structure to the process of DNA replication 7. Describe the conversion of DNA to RNA to proteins 8. Describe and explain the various stages of cell division 9. Explain the metabolic pathways involved in the capture and release of energy in cells
Indicative Contents المحتويات الإرشادية	1. Introduction to biology. 2. The essential Biomolecules. 3. Cell as the basic units of living organisms (prokaryotic and Eukaryotic cells). 4. Structure of Eukaryotic cell (Plasma membrane, Organelles and Cytoplasm). 5. Cell membranes and transport (Fluid mosaic membranes, Movement into and out of cells) 6. Introduction genetics: • Gene Expression (transcription and translation) • Protein synthesis and RNA types • Cell division and control of cell division • Reproductive cell division. • Cellular diversity and aging of cells 7. Energy and respiration

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	Assessment is based on hand-in assignments, written exam, Case study, Quizzes, seminars, Practical testing and Online testing.
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Student Workload (SWL)

الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	52	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	3.4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	15% (5)	4,8, 10	LO # 1, 2, 3, 7 and 8
	Onsite Assignment	1	5% (5)	11	LO # 1-15
	Seminars	1	10% (10)	8,9	LO # 1-15
	Report	1	10% (10)	10	LO # 1-15
Summative assessment	Midterm Exam	1 hr	10% (10)	7	LO # 4-6
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	The properties of life, the levels of organization of living things
Week 2	The main features of the four main classes of important biological biomolecules
Week 3	Types of cells, animal cell
Week 4	Cell structure (The cytoplasm, cytoskeleton, cilia and flagella, ribosomes, Endoplasmic reticulum, golgi apparatus, lysosomes, peroxisomes, proteasomes, mitochondria)

Week 5	The function of the plasma membrane, Membrane fluidity, membrane permeability, Gradient across the plasma membrane.
Week 6	Transport across the plasma membrane, passive transport, simple diffusion, facilitated diffusion, carrier-mediated facilitated diffusion, osmosis
Week 7	The nucleus, transcription, translation
Week 8	Cell division, control of cell division
Week 9	Midterm Exam
Week 10	Reproductive cell division, cellular diversity, aging and cells
Week 11	The reactants and products of cellular respiration and where these reactions occur in a cell
Week 12	The process of glycolysis and identify its reactants and products
Week 13	The process of pyruvate oxidation and identify its reactants and products
Week 14	The process of the citric acid cycle (Krebs cycle) and identify its reactants and products
Week 15	The respiratory chain (electron transport chain) and its role in cellular respiration
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Biology 2e, Senior Contributing Authors Mary Ann Clark, Texas Wesleyan University Jung Choi, Georgia Institute Of Technology Matthew Douglas, Grand Rapids Community College, 2018.	No

Recommended Texts		
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.