

	Ministry of Higher Education and Scientific Research - Iraq Al-Naji University College of Engineering Department of Cybersecurity Engineering	
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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية				
Module Title	Biology		Module Delivery	
Module Type	S		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	CE1108			
ECTS Credits	5			
SWL (hr/sem)	125			
Module Level	UG I	Semester of Delivery		1
Administering Department	CSE	College	College of Engineering	
Module Leader	Muna Mahdi Salih		e-mail	muna.mahdi@alnaji-uni.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	MSc	
Module Tutor		e-mail		
Peer Reviewer Name				
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

Aims أهداف المادة الدراسية	1-To understand life, chemistry and water continued: biological molecules, 2-To recognize cells and membranes 3-To identify Energy, Enzymes and Biological reactions, cellular respiration, photosynthesis 4-To understand cell division: mitosis and miosis: Mendel, Genes and inheritance, genes, chromosomes and human genetics 5-To understand DNA structure, Replication and Organization. From DNA to protein Biotechnology and cell processes and transport (Passive and active)
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1.Describe life, chemistry and water continued: biological molecules. 2.Explain the basic concepts of cells and membranes. 3.Demonstrate knowledge of Enzymes and Biological reactions, cellular respiration, photosynthesis. 4. Identify cell division: mitosis and miosis: Mendel, Genes and inheritance, genes, chromosomes and human genetics 5.Explain the DNA structure. 6.Understand Replication and Organization. From DNA to protein Biotechnology and cell processes and transport (Passive and active)
Indicative Contents المحتويات الإرشادية	Indicative content includes the following: A- <u>Introduction to Biology</u> Concepts: Life, Chemistry and water, Life, Chemistry and water continued: Biological Molecules, Cells and Membranes, Energy, Enzymes and Biological reactions continued, Cellular respiration, Photosynthesis, Cell division: Mitosis and Miosis: Mendel, Genes and inheritance [33 hrs] B- Genes and DNA Genes, chromosomes and Human Genetics, DNA structure, Replication and Organization, From DNA to protein Biotechnology, Cell processes I- Transport (Passive and active) [12 hrs]

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The main strategy will be adopt in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their thinking skills. This will be achieve through classes, interactive tutorials and by considering types of simple experiments involving some sampling activities that are interesting to the students.
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Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	47	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	78	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
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	3	10% (10)	2, 8, 12	1,5,6
	Assignments	3	10% (10)	3, 9, 12	3, 6
	Projects / Lab.	-	-	-	-
	Report	1	10% (10)	---	All
Summative assessment	Midterm Exam	2 hr	10% (10)	6, 11	1-5
	Final Exam	3 hr	60% (60)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
Material Covered	
Week 1	Introduction to Biology concepts: Life, Chemistry and water
Week 2	Life, Chemistry and water continued: Biological Molecules
Week 3	Cells and Membranes
Week 4,5,6	Energy, Enzymes and Biological reactions continued
Week 7, 8	Cellular respiration
Week 9	Photosynthesis
Week 10,11	Cell division: Mitosis and Miosis: Mendel, Genes and inheritance
Week 12	Genes, chromosomes and Human Genetics
Week 13	DNA structure, Replication and Organization
Week 14	From DNA to protein Biotechnology
Week 15	Cell processes I- Transport (Passive and active)
Week 16	Final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Peter J. Russell, Paul E. Hertz, Beverly McMillan , “Biology: The Dynamic Science”, Cengage Learning Publisher, 2nd Edition 2011	Yes
Recommended Texts		
Websites	https://mdl.coie-nahrain.edu.iq	

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.

