



Ministry of Higher Education and
Scientific Research - Iraq
University of AL-Mustaqbal
College of Sciences
Department of Biology



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Environmental pollution		Module Delivery
Module Type	Basic		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	UOMU0305231		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level	1	Semester of Delivery	
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	e-mail		
Module Leader's Acad. Title	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	14/06/2023	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 Aims أهداف المادة الدراسية	This is the principles of osinization, and then the osinization process, and the osinization process, and the evolution of the osinization process Likewise, this is a mixture of real osprey in melted sauerkraut and dried osprey in Al-Sabtaz Al-Dolukh, Al-Amalmakh, Al-Tazf, Al-Awsin Al-Awsin Al-Tammouk, Al-Tammouk The osprey was achieved in the late jabot, and the amalkh and waqif were applied to it.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Realize the osprey, get it and go. 2- The roots of the osprey trunk and its purification in the brackish brow: The osprey trunk in the middle The stump and the middle 3- The ospenes achieved in the middle ages. 4- Achieve ospenes in the spicules of the spur without concentrating on the spicules. 5- The osprey was achieved in the abscessed perfume and the ooze. 6- Oспен achieved in altars, altars, and marshy butter.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. <u>Part A - Circuit Theory</u> DC circuits – Current and voltage definitions, Passive sign convention and circuit elements, Combining resistive elements in series and parallel. Kirchhoff's laws and Ohm's law. Anatomy of a circuit, Network reduction, Introduction to mesh and nodal analysis. [15 hrs] AC circuits I – Time dependent signals, average and RMS values. Capacitance and inductance, energy storage elements, simple AC steady-state sinusoidal analysis. [15 hrs] AC Circuits II - Phasor diagrams, definition of complex impedance, AC circuit analysis with complex numbers. [10 hrs]

RL, RC and RLC circuits - Frequency response of RLC circuits, simple filter and band-pass circuits, resonance and Q-factor, use of Bode plots, use of differential equations and their solutions. Time response (natural and step responses). Introduction to second order circuits. [15 hrs]

Revision problem classes [6 hrs]

Part B - Analogue Electronics

Fundamentals

Resistive networks, voltage and current sources, Thevenin and Norton equivalent circuits, current and voltage division, input resistance, output resistance, coupling and decoupling capacitors, maximum power transfer, RMS and power dissipation, current limiting and over voltage protection. [15 hrs]

Components and active devices – Components vs elements and circuit modeling, real and ideal elements. Introduction to sensors and actuators, self-generating vs modulating type sensors, simple circuit interfacing. [7 hrs]

Diodes and Diode circuits – Diode characteristics and equations, ideal vs real. Signal conditioning, clamping and clipping, rectification and peak detection, photodiodes, LEDs, Zener diodes, voltage stabilization, voltage reference, power supplies. [15 hrs]

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	Type something like: The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.
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Student Workload (SWL)

الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	58	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	1
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	2	10% (10)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab.	1	10% (10)	Continuous	
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO # 1-7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Human insanity definition and objectives
Week 2	The roots of human insanity and its development in history Al-Bishri: Human Foolishness in the Ancient Ages
Week 3	Human rights in ancient civilizations in particular Mesopotamia civilization
Week 4	Human foolishness in the divine laws with emphasis On human rights in Islam
Week 5	Foolishness of man in the Middle Ages: Foolishness Man in doctrines, schools and theories Political/human insanity in companies and their advertisements And revolutions and constitutions
Week 6	the first exam
Week 7	Human insanity in contemporary and modern history: State recognition of human folly since the war The First World War and the League of Nations
Week 8	The painful acknowledgment of human insanity/indifferentism European Human Foolishness 0591 Altvla The American Society for Human Folly 0
Week 9	Non-governmental organizations and human rights (Committee International Red Cross, Amnesty International, Human Rights Debtor Organization
Week 10	National human rights organizations
Week 11	Relationships between human rights and public freedoms.
Week 12	Revelation is the world of human folly
Week 13	Islamic conventions and national constitutions for Hamouk Human
Week 14	collective human rights
Week 15	group human rights

Week 16	The final exam
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Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	National human rights organizations
Week 2	Relationships between human rights and public freedoms.
Week 3	Revelation is the world of human folly
Week 4	Islamic conventions and national constitutions for Hamouk Human
Week 5	collective human rights
Week 6	Human insanity definition and objectives
Week 7	The roots of human insanity and its development in history Al-Bishri: Human Foolishness in the Ancient Ages and middle

Learning and Teaching Resources			مصادر التعلم والتدريس
	Text	Available in the Library?	
Required Texts	Fundamentals of Electric Circuits, C.K. Alexander and M.N.O Sadiku, McGraw-Hill Education	Yes	
Recommended Texts	DC Electrical Circuit Analysis: A Practical Approach Copyright Year: 2020, dissidents.	No	
Websites	https://www.coursera.org/browse/physical-science-and-engineering/electrical-engineering		

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.

