MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	Fundamental of Forensic Science			**Module Delivery**	
Module Type	**Core**			☐ **Theory** ☒ **Lecture** ☐ **Lab** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	FOR-1101				
ECTS Credits	8				
SWL (hr/sem)	**200**				
Module Level	UGx11 1		**Semester of Delivery**	1	
Administering Department	Forensic Evidence		**College**	Science	
Module Leader			**e-mail**		
Module Leader's Acad. Title			**Module Leader's Qualification**		
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	01/10/2025		**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-Forensic Science is basically the application of science to law. 2-Forensic science is used to investigate criminal cases involving a victim, such as assault, robbery, kidnapping; rape, murder and civil cases such as forgeries, fraud, or negligence.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	On successfully completing the module students will be able to: 1. Show understanding of the role of physical forensic methods in forensic practice. 2. Demonstrate knowledge of the primary evidence types, their transfer and persistence. 3. Demonstrate understanding of emerging developments in forensic science. 4. Consider a broad range of forensic techniques to determine the examination strategy, sequencing, and probative value. 5. Demonstrate understanding of quality standards in respect of scene examination.
Indicative Contents المحتويات الإرشادية	A synopsis of the curriculum [15h] This module will develop students' appreciation of a range of physical techniques applied to the collection of bulk and trace evidence materials in forensic science. Students will look more deeply into aspects of physical evidence and will deal with the practical issues of item examination, legal process and general procedure associated with the collection and submission of a range of forensically relevant materials. Inclusive module design [15h] The Division recognises and has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services. The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas: a) Accessible resources and curriculum b) Learning, teaching and assessment methods Internationalisation [14h] Forensic science is an inherently international subject with physical laws discovered and techniques developed and refined by scientists across the globe. It is facilitated by well-defined conventions in terminology and mathematical modelling which allow complex concepts to be communicated across language barriers. This module introduces students to the work of these pioneers, as well as the fundamentals behind it and so enables them to interact with this community. Where possible, the reading list has been chosen, in part, to demonstrate the diversity of backgrounds of forensic scientists working in the field.

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.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4.1
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	137	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	9.1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	200		

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	**The concept and importance of forensic science**
Week 2	**Historical development of forensic evidence**
Week 3	**Types of criminal evidence**
Week 4	**Forensic evidence and material traces**
Week 5	The importance of the genetic fingerprint in achieving personality
Week 6	**Fingerprints and the use of nanotechnology in detection**
Week 7	**Forensic forensic medicine**
Week 8	**Forensic chemistry**
Week 9	**Criminal toxicology**
Week 10	**Forgery of passports and counterfeit banknotes**
Week 11	**Examination of traces of weapons and tools**
Week 12	**Crime scene and preservation procedures**
Week 13	**Electronic forensic tool**
Week 14	**Forensic engineering**
Week 15	**exam**
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	**Forensic Science: A very short introduction** by Jim Fraser	no
Recommended Texts	**Blood, Powder, and Residue (A rare behind-the-scenes look at the work of forensic scientists)** by Beth A. Bechky	No
Websites	https://www.nap.edu/read/21772/chapter/7	

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**General Biology 1**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	FOR-1102				
ECTS Credits	**7**				
SWL (hr/sem)	**175**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Forensic Evidence		**College**	Science	
Module Leader			**e-mail**		
Module Leader's Acad. Title			**Module Leader's Qualification**		
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	01/10/2024		**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. This module gives students an understanding of the science and techniques that underpin forensic biology. 2. Topics covered will include identification of biological fluids, the analysis the human genome in forensic biology, blood stain pattern analysis and forensic anthropology. 3. Material covered in lectures will be illustrated through lab work. 4. Highlight in most theories that was deal with biology system for live. 5. Our aim is to provide students with opportunities to develop academically, professionally and personally: to broaden their ambitions, extend their attitudes, challenge their assumptions, and assist towards unlocking their potential to succeed in their studies and future lives.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Explain the analytical, laboratory and legal requirements of producing DNA profiles. 2. Summarize what is meant by a basic biology science. 3. Perform interpretation of DNA profiling results, including calculation of likelihood ratios. 4. Critically evaluate DNA profiling results citing significant research in the field. 5. Show an understanding of the scientific basis and utilisation of techniques of bone anthropometry and pathology in the study of human tissue. 6. Demonstrate the ability to critically evaluate body fluid evidence and blood stain patterns.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. On completion of this module, students are expected to be able to: 1 Demonstrate knowledge of the basic structures, functions and growth characteristics of cells.[13h] 2 Demonstrate knowledge of the structure and function of the four principal tissue types.[13h] 3 Demonstrate an understanding of Mendelian genetic inheritance. [15hrs] Demonstrate understanding of the role of variation in speciation and evolution. [15 hrs] Evolution of the eukaryotic cell, membrane structure and membrane transport mechanisms, structure and function of the nucleus, ribosomes, endoplasmic reticulum, Golgi Body, lysosomes, mitochondria and chloroplasts. [15 h] Mitosis and meiosis. Structure and function of epithelial, connective, nervous and muscle tissue. Mendel's Laws, inheritance, genotype, phenotype, dominance, sex determination, sex-linkage, variation, speciation and evolution.. [15 hrs]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	To describe the learning activities of the students and the teaching methods of the staff. Effective module design should result in a varied range of active learning experiences for students, including learning activities which are 'research-like'. Activities should, of course, motivate and encourage deep learning (reflection on wider meanings, rather than superficial memorisation of information). They should also be varied and flexible enough to accommodate different learning styles and orientations, and allow for inclusivity of students from different backgrounds and with different kinds of learning abilities. Learning activities therefore need to include reference to independent, interdependent (peer- supported) and online activities, as well as participation in different kinds of taught class.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	52
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6.5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

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	Course introduction; What is biology?
Week 2	The nature of life
Week 3	Atomic structure and chemistry of water
Week 4	Carbohydrates, proteins, and lipids
Week 5	Nucleic acids
Week 6	Exam Mid-term Exam
Week 7	Cells, Part I
Week 8	Cells, Part 2
Week 9	Energy & metabolism, Part I
Week 10	Energy & metabolism, Part 2
Week 11	Cellular respiration, Part I
Week 12	Cellular respiration, Part 2
Week 13	Photosynthesis
Week 14	DNA & its role in heredit
Week 15	EXAM
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Introduction to Measurement
Week 2	Lab 2: Course intro; Life and the scientific theory
Week 3	Lab 3: Enzyme function I
Week 4	Lab 4: Enzyme function 2
Week 5	Lab 5: Microscope & cell structure
Week 6	Lab 6: Cell behavior
Week 7	Lab 7: Respiration
Week 8	Lab 8 : Photosynthesis
Week 9	Lab 9 : Restriction digest of plasmids

Week 10	Lab 10: Gene transformation
Week 11	Lab 11: Mitosis, meiosis, and gametogenesis
Week 12	Lab 12: Mendelian crosses
Week 13	Lab 13: Outcomes of evolution
Week 14	Lab 14: Blood Typing
Week 15	Exam

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	FReece J, Urry L, Cain M, Wasserman S, Minorsky P, Jackson, R. (Eds) 9th Global Edition, 2011, Campbell Biology, Pearson Benjamin Cummings.	Yes
Recommended Texts	Butler, J. (2005) Forensic DNA Typing 2nd Ed. Elsevier (MA) ISBN: 9780121479527 Forensic Science – Jackson A.R. & Jackson J., Prentice Hall, ISBN: 130432512	No
Websites	https://www.aqa.org.uk/subjects/science/as-and-a-level/biology-7401-7402/subject-content	

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
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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

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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**General Chemistry**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**FOR-1103**				
ECTS Credits	**7**				
SWL (hr/sem)	**175**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Forensic Evidence		**College**	Science	
Module Leader			**e-mail**		
Module Leader's Acad. Title			**Module Leader's Qualification**		
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	01/10/2024		**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 develop skills and understanding of different types of elements through the application of techniques. 2. To understand metals, physical and chemical properties. 3. This course deals with the basic concept of general chemistry. 4. To understand periodic table and distribution elements on it
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Recognize the classification of elements. 2. List the various terms associated with periodic table. 3. Summarize what is meant by a basic chemical property. 4. Discuss the reaction and involvement of atoms in chemical reaction. 5. Describe bonds, oxidation number, and Lewis term. 6. Identify the elements according to conductivity and their applications. 7. Discuss the electrons distribution in the atomic levels. 8. Identify the primary terms that used to characterized physical and chemical properties.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. Part A-Circuit Theory Starting from atomic theory and electron distribution in the outer and inner shells the details required make enough information for the principle of chemistry. [15hrs] Enhance the principle of general chemistry when highlight in more information about losing and acceptance electrons with the abilities for forming any bonds and forming new molecules with new properties. [16hrs] Periodic table with highlight in the orientations of molecules to show different and variance in properties. [12hrs] . Revision problem classes [6hrs] Part B-Analogue chemistry 3-Fundamentals Electron configuration, oxidation number, The ratios of forming molecules. [15hrs] Components and active site. [9hrs] Identification of general properties.[9hrs]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	To describe the learning activities of the students and the teaching methods of the staff. Effective module design should result in a varied range of active learning experiences for students, including learning activities, which are 'research-like'. Activities should, of course, motivate and encourage deep learning (reflection on wider meanings, rather than superficial memorization of information). They should also be varied and flexible enough to accommodate different learning styles and orientations, and allow for inclusivity of students from different backgrounds and with different kinds of learning abilities. Learning activities therefore need to include reference to independent, interdependent (peer- supported) and online activities, as well as participation in different kinds of taught class.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	5.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6.5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

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	Introduction to chemistry
Week 2	Periodic table
Week 3-4	Atomic structure types of bonding
Week 5	Physical and chemical properties/ Drawing Lewis Structures
Week 6	Chemical Reactions
Week 7	Preparation solution (types of concentration)
Week 8	Exam
Week 9-10	Acids and Bases and titration
Week 11-12	Titrimetric Methods
Week 13-14	Separation method of elements
Week 15	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: General safety rules for Laboratory and equibments
Week 2	Lab 2: Standard Solution
Week 3	Lab 3: Preparation of standard solution from liquid solutions
Week 4	Lab 4: Preparation of standard solution from solid materials
Week 5	Lab 5: Titration Strong Acid with Strong Base
Week 6	Lab 6: Titrating Sodium Carbonate With Hydrochloric Acid
Week 7	Lab 7: pH - Metric Titration
Week 8	Lab 8 : exam
Week 9	Lab 9 : Conductometric Titrating of Strong Acid With Strong Base
Week 10	Lab 10: Titration of Acetic Acid in Vinegar
Week 11	Lab 11: Titration of a Mixture of Carbonate (CO32-) and Bicarbonate (NaHCO3-)
Week 12-13	Lab 12: Separation of I Group Cations (Ag+, Pb2+, Hg22+)
Week 14	Lab 14: exam
Week 15	Review All Previous Experiences

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	A Textbook of Physical Chemistry Vol-6 Kapoor,K.L Mc Graw-Hill 2019	Yes
Recommended Texts	Introductory Chemistry Essentials, Global Edition Tro, N. J. Pearson 2015	yes
Websites	https://openstax.org/details/books/chemistry-2e https://open.umn.edu/opentextbooks/textbooks/219	

Grading Scheme مخطط الدرجات				
Group	**Grade**	التقدير	**Marks (%)**	**Definition**
Success Group (50 - 100)	**A -** Excellent	امتياز	90 - 100	Outstanding Performance
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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	Mathematics			**Module Delivery**	
Module Type	Basic			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☒**Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	FOR-1104				
ECTS Credits	**4**				
SWL (hr/sem)	**100**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Forensic Evidence		**College**	Science	
Module Leader			**e-mail**		
Module Leader's Acad. Title			**Module Leader's Qualification**		
Module Tutor			**e-mail**		
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	10/10/2024		**Version Number**		

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. Identify the properties of mathematical functions and their opposites. 2. Familiarity with the properties of polynomials, exponential and logarithmic functions, trigonometric functions and their opposites. 3. Recognize the concept of differential functions and its relationship to speed and the rate of their change with time (acceleration). 4. Identify the integration of the functions and methods of Integration. 5. Knowledge of applications of integral in geometry.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Recognize properties of functions and their inverses; 2. Recall and use properties of polynomials, rational functions, exponential, logarithmic, trigonometric and inverse-trigonometric functions; 3. Apply the differentiation procedures to solve related rates and extreme value problems; 4. To understand the term integration. 5. To distinguish between definite and indefinite integration. 6. To describe the area and volume by means of integration.
Indicative Contents المحتويات الإرشادية	1-To know the methods of differentiation of functions accurately and its applications. 2- To know the relationship between the function term and its differential. 3- To extract the area and volume through integration. 4 - To know the differentiation and integration of functions. 4- To use integration methods to find complex integrals.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	• Following up the scientific development of mathematics by reviewing modern curricula. • Follow-up and development of academic courses and compare them with other universities. • Using the latest teaching aids to motivate the student to learn and understand.

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	3.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	52	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	3.5
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.				
	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	60% (60)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Functions, Inverse Functions.
Week 2	Trigonometric Functions, Inverse Trigonometric Functions.
Week 3	Exponential and Logarithmic Functions.
Week 4	Limits and Continuity
Week 5	The Derivative, The Chain Rule.
Week 6	Implicit Differentiation, L'Hopitals Rule.
Week 7	The Derivative in graphing and applications, Relative Extrema.
Week 8	Rolle's Theorem; Mean –Value Theorem
Week 9	The indefinite integral, Areas under a curve
Week 10	The fundamental theorem of integral calculus, Area between two curves
Week 11	The integral of trigonometric functions, the integral of inverse trigonometric
Week 12	The integral of the functions $\log_u(x)$,$\ln u(x)$,$e^{u(x)}$ and $a^{u(x)}$
Week 13	Methods of integration , powers of trigonometric functions
Week 14	Integration by parts
Week 15	**Volumes**
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	**Thomas & Finney "Calculus and Analytic Geometry" (2005), 11th edition, Addison Wesley.**	yes
Recommended Texts	**Howard Anton,IrI Bivens & Stephen Davis "Calculus"(2009),9thedition,John Wiley & Sons,NC.**	yes
Websites	**Various lectures and lecture notes on the internet.**	

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Human Rights and Democracy**			**Module Delivery**	
Module Type	**Basic learning activities**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **L Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UD14**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level			**Semester of Delivery**		
Administering Department	جميع اقسام الكلية		**College**	College of Engineering	
Module Leader			**e-mail**		
Module Leader's Acad. Title	لجنة حقوق الانسان والديمقراطية		**Module Leader's Qualification**	MSc.	
Module Tutor			**e-mail**		
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	12/06/2023		**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	1. يتعلم الطالب خلال السنه الدراسية اساسيات حقوق الانسان والديمقراطية ما حقوقه كيف يدافع عنها بالطرق القانونية وماهي ضماناتها الداخلية والدولية. 2. استحصال المعرفة في مجال الديمقراطية وأنواع أنظمتها واثرها على حقوق الانسان .

	3. تنمية شخصية الطالب وتعزيز وعيهم في الأنظمة السياسية الديمقراطية وتفاصيلها وكيفية تطبيقها على ارض الواقع واهمية ان يكون فعال في المجتمع من خلال احترامه لحقوق الاخرين ومعرفه ان الحقوق والحريات تنتهي عند بداية حقوقهم وحرياتهم ويؤدي واجباته بدلا من اكتساب الحقوق فقط. 4. تعزيز ثقافة السلام القائمة على العدل والمساواة.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. تمكين الطالب من معرفة اساسيات الدفاع عن حقوقه وحقوق الاخرين بعد معرفتها ومعرفة أهميتها له وللمجتمع بصورة عامة وأيضا معرفه كل شخص حدود حقوقه وحريته . 2. تمكين الطالب في المشاركة السياسية وذلك من خلال معرفته بأهمية مشاركته في الانتخابات وتأثير هذه المشاركة على سير الانتخابات وتشكيل السلطة فيما بعد. 3. معرفة الطالب ضمانات حقوقه وحرياته وماهي مصادرها. 4. معرفة الفرق بين الحقوق والحريات. 5. تمكين الطالب من معرفة ماهي المفهوم العلمي للديمقراطية وماهي جذورها وانواعها واشكالها. 6. يتعلم الطالب كيف يؤثر النظام الديمقراطي على حقوق الانسان وماهي العلاقة بينها. 7. ادراك الطالب ضرورة ان يكون مواطن فعال في المجتمع ايضاً معرفه شروط الناخب وشروط المرشح للانتخابات. 8. معرفة أنظمة الانتخابات وايهما افضل. 9. فهم الطالب للقانون الدولي لحقوق الانسان وايضاً معرفة مختصرة عن المنظمات الدولية والية عملها كالأمم المتحدة ومنظمة الصليب الأحمر وغيرها.
Indicative Contents المحتويات الإرشادية	**الجزء الأول - تعريف حقوق الانسان وحقوق الانسان في الحضارات القديمة** (تعريف الحق وتعريف الانسان ومعرفة أهمية حقوق الانسان بالنسبة للإنسان والمجتمع أيضا دراسة حقوق الانسان في الحضارات كالحضارة المصرية والعراقية واليونانية والرومانية) (٤ساعات) **الجزء الثاني معرف حقوق الانسان في الأديان السماوية واهمها الإسلام (٢ساعة)** مصادر حقوق الانسان تتضمن (مصادر دولية كالإعلان العالمي لحقوق الانسان والعهدان الدوليان والمصادر الإقليمية التي تشمل الاتفاقيات الإقليمية كالاتفاقية الاوربية والأمريكية والدستور)(٢ساعة) ضمانات حقوق الانسان (كالضمانات الدستورية والقانونية)(٢ساعة) الاتفاقيات الدولية والإقليمية لحقوق الانسان (٢ساعة) الحريات العامة وانواعها والمقارنة فيما بينها (٢ساعة) مستقبل حقوق الانسان والعولمة وحقوق الانسان (٢ساعة) تعريف وتاريخ وأنواع الديمقراطية (دراسة تعريف ونشأة وتطور الديمقراطية مبادئها وانواعها كالديمقراطية المباشرة وغير المباشرة والنظام الرئاسي والبرلماني) (٦ساعات) تعريف الانتخاب وشروطه وأنواع النظم الانتخابية وتعريف المجلس النيابي (٦ساعات) العلاقة بين الديمقراطية وحقوق الانسان (٢ساعة)
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1. زيادة وعي الطالب بأهمية معرفه حقوقه وواجباته اتجاه المجتمع وعلاقة حقوق الانسان بالنظام الديمقراطي 2. ثقافة عامة في مجموعة من المجالات ومنها المجال القانوني و السياسي والاجتماعي ورفع ثقة الطالب بنفسه من خلال ربط المادة النظرية بالواقع العملي

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	**33**	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	**2**
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	**17**	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	**1.1**
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	15% (10)	5 and 10	LO #1, #2 #,3,and #6 #7#8
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.				
	Report	1	15% (10)	13	LO #5, #8 and #9
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	محاضرة تعريفية عن المادة واهميتها ..
Week 2	تعريف الحق والانسان وحقوق الانسان واهمية حقوق الانسان ,حقوق الانسان في الدين الإسلامي والحضارات القديمة.
Week 3	مصادر حقوق الانسان الدولية والإقليمية والمحلية.
Week 4	ضمانات حقوق الانسان الدستورية والقانونية وضمانات حقوق الانسان على الصعيد الدولي.
Week5	ضمانات حقوق الانسان في الإسلام
Week 6	دور المنضمات الإقليمية في حماية حقوق الانسان.
Week 7	خصائص حقوق الانسان وتعريف الحريات العامة وانواعه والمقارنة بينها وبين الحقوق القانون الدولي لحقوق الانسان والقانون الدولي الإنساني ومنظمة الصليب الأحمر.
Week 8	مستقبل حقوق الانسان وسبل تطويرها .
Week 9	العولمة وحقوق الانسان .
Week 10	تعريف الديمقراطية وتطورها التاريخي ومبادئها .

	الديمقراطية بين العالمية والخصوصية . اشكال الديمقراطية / الديمقراطية المباشرة.
Week 11	الديمقراطية شبه المباشرة والديمقراطية التمثيلية / اركان النظام التمثيلي / اشكال النظام التمثيلي.
Week 12	المجلس النيابي وانواعه / الانتخاب وشروطه / هيئة الناخبين.
Week 13	تنظيم عملية الانتخاب / تحديد الدوائر الانتخابية / القوائم الانتخابية / المرشحون/ الحملة الانتخابية / التصويت .
Week 14	نظم الانتخابات.
Week 15	علاقة الديمقراطية بحقوق الانسان وكيفية التأثير والتأثر فيما بينها.
Week 16	الامتحان النهائي

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	حقوق الانسان والطفل والديمقراطية /تأليف ماهر صالح علاوي ورياض عزيز هادي وعلي عبد الرزاق محمد واخرون / العاتك / بيروت / ٢٠٠٩	نعم
Recommended Texts	عباس الدليمي / حقوق الانسان الفكر والممارسة فخري رشيد ،صلاح ياسين /المنظمات الدولية / العاتك لصناعة الكتاب / بغداد عصام العطية / القانون الدولي العام / المكتبة القانونية /بغداد/2012	لا
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
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	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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**اللغة العربية 1**			**Module Delivery**	
Module Type	**Basic learning activities**			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UD12**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	UGI		**Semester of Delivery**	1	
Administering Department	All		**College**	All	
Module Leader			**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	3/11/2024		**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 Objectives أهداف المادة الدراسية	الهدف الأساس في تدريس اللغة العربية للأقسام العلمية : • اخذ الطالب الى روعة بيان القران الكريم ، وادراكه يقينا ان التعبير القراني تعبير فني مقصود ، كل لفظة ، وكل حرف وضع وضعا فنياً مقصوداً • تقويم اللسان العربي . واعتماد العربية الفصحى في الحديث والكتابة ، ولزيادة رصيد الطالب من ادب وتراث ، على تناول النصوص المختارة من العصور الأدبية المختلفة ، لزيادة رصيد ادب لتراث والادب المعاصر . • التأكيد على دور الطالب في المتابعة واثراء المعرفة باللغة العربية وفنونها بجهد خاص ، ذا ما وضعنا مفاتيح المنهاج الدراسي لتقع على الطالب بعد ذلك مهمة فتح الأبواب والنوافذ الى مصادر المعرفة الواسعة . في جعل العربية الفصيحة تحتل موضع الصدارة وتجاوز العامية ، خدمة الى لغتنا العربية المقدسة. وحفاظا على قوتها وجمالها . • ومن نافلة القول في اهداف تدريس اللغة العربية : هي الجانب المحقق للوحدة وتلزمنا دوافع الوفاء بالحرص عليها والمحافظة على جوهرها .
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	يمكن ايجاز مخرجات العلم لمادة اللغة العربية العامة لاقسام غير الاختصاص بالنسبة لمرحلة الدراسة الأولى بالاتي :- 1 - سيتمكن الطالب من التعرف على خصائص اللغة العربية كلغة سامية ، وفهم الخصائص المشتركة للغات السامية ، ومكانة اللغة العربية ضمن هذه العائلة اللغوية مما يعزز من ادراكه لاصولها وتطورها عبر التاريخ . 2- تحليل أصوات اللغة العربية من حيث أماكن وطرق النطق ، والتمييز بين مختلف الأصوات العربية . 3- معالجة القضايا الصرفية وتحليل بنية الكلمات العربية ، وفهم كيفية تكوينها وتغييرها لأداء معان مختلفة مما يطور مهاراته في تكوين وصياغة الكلمات بشكل صحيح . 4- تحديد التراكيب النحوية في اللغة العربية واستخدامها بشكل سليم مما يعزز قدرته على بناء جمل صحيحة نحويا ومعبرة بوضوح . 5- فهم العلاقات الدلالية مثل الترادف والتضاد والتضمين بين الكلمات مما يوسع من ادراكه لمعاني الكلمات ، وتوظيفها في سياقات مختلفة .

6- اتباع قواعد الاملاء الصحيحة وتطبيقها مما يسهم في تحسين كتابته ويضمن وضوح المعنى ، ودقته . 7- تحليل الأنواع الأدبية وتوظيف البلاغة في التعبير مما يعزز من فهمها للنصوص الأدبية ويطور مهارته في الكتابة بأسلوب مؤثر وبلاغي.	
1- مقدمة حول اللغة العربية كجزء من اللغات السامية • التعريف باللغة العربية واصولها واهم خصائصها . • مكانة اللغة العربية ضمن عائلة اللغات السامية وتاريخ تطورها . • دراسة خصائص اللغة العربية المتأصلة في جذورها السامية . 2- أصوات اللغة العربية : النطق والأداء • مقدمة في علم الصوتيات واهمية الفهم الدقيق لاصوات اللغة . • تقسيم الأصوات حسب أماكن النطق : الأصوات الحلقية ، الشفوية ، اللثوية وغيرها . • دراسة طرق النطق المختلفة (مثل : الانفجار والاحتاك) والتطبيقات العلمية للنطق الصحيح 3- التحليل الصرفي للكلمات العربية . • شرح أساسي لبنية الكلمة في اللغة العربية واهمية الصرف في بناء المعنى . • دراسة أنواع الكلمات من حيث البناء مثل الأفعال والاسماء والمشتقات . • كيفية تكوين الجذور والاوزان وفهم الصيغ الصرفية المستخدمة في اللغة العربية . • دراسة اساسيات النحو العربي وقواعد الجملة العربية . • التعرف على تراكيب الجملة الفعلية والاسمية والمركبة . • تطبيقات على تركيب الجمل وتصحيحى الأخطاء النحوية الشائعة . • العلاقات الدلالية بين المفردات . • التعريف بالدلالت المختلفة للكلمات والعلاقات بينها مثل الترادف والتضاد • فهم معاني الكلمات في السياقات المختلفة وتوضيح كيفية تداخل المعاني . • دراسة المصطلحات اللغوية المختلفة وطرق استخدامها لتحقيق الدقة في التعبير . • قواعد الاملاء الصحيحة . • أهمية الاملاء في تحسين جودة الكتابة وضمان وضوح المعنى . • دراسة القواعد الأساسية للإملاء ، مثل قواعد الهمزة والالف المقصورة والممدودة . • تدريبات على كتابة القواعد الاملائية بشكل صحيح ؛ لتجنب الأخطاء الكتابية الشائعة . • الادب العربي والبلاغة ، التعرف على الأنواع الأدبية الأساسية مثل : الشعر والنثر والمقالة والقصة . • دراسة الأساليب البلاغية في الادب العربي، واهم أدوات البلاغة مثل التشبيه والاستعارة والمجاز والكناية . • تحليل النصوص الأدبية ، وتوظيف البلاغة في الكتابة لزيادة التأثير والقوة في التعبير .	**Indicative Contents** المحتويات الإرشادية

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	ليحقق التدريسي اهداف ونواتج التعلم المستهدفة لا بد من تحقيق الاتي : ١ _ التركيز على استراتيجيات تقود الى التعلم النشط ، والتأكيد على دور المتعلم واثارة اهتمامه ودفعه الى المشاركة الايجابية ٢ _ الاكثار من النصوص العربية العالية ٣ _ وان نعد بعض القطع للقراءة يمتزج فيها درس القواعد بدرس الادب؛ فان ذلك ادعى لتنمية ذوق الطالب في الفهم والحس والكلمات والاساليب واستعمالها . ٤ _ منح التدريسي حرية اختيار قطع للقراءة من كتب الادب والنصوص ومن ادب المناسبات الذي ينشر في الصحف والمجلات ، لتصحيح النطق عند الطالب ، وتعويده على القراءة الصحيحة الخالية من اللحن . ٥ _ تقع على عاتق التدريسي مهنة اساسية وهي التشويق والتقويم والتصويب في تدريسه اللغة _ العربية العامة لأقسام غير اختصاص . ٦ _ تنشيط عنصر الاعتزاز باللغة العربية لدى طالب العلم وتأصيله والعمل على زرع محبته للغة العربية بوصفها اللغة الام لغة القران الكريم لغة الاعجاز والبيان . من خلال عرضه لقصص تراثية تتعلق بحرص العربي على لغته والاعتزاز بها .

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation

تقييم المادة الدراسية

	Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome

Formative assessment	**Quizzes**	4	20% (10)	3 , 6,8,11	LO #1...#3, #4...#6, #7&#8, #9... #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.				
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	1hr	10% (10)	7	LO #1 - #7
	Final Exam	2hr	50% (50)	15	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	**(الفصل الأول) التعبير القرآني): نص قراني محدد من سورة الكهف (قصة موسى والخضر عليهه السلام) من الاية رقم "60" الى الاية رقم "82" .**
Week 2	**المهارات اللغوية : (1) الحروف الشمسية و القمرية .**
Week 3	**(3) كتابة حرفي الضاد و الظاء .**
Week 4	**(4) كتابة التاء المربوطة و الطويلة .**
Week 5	**(5) علامات الترقيم .**
Week 6	**(الفصل الثاني) الأصوات و المعجم العربي : (6) الأصوات العربية : الأصوات الصامتة و الصائتة .**
Week 7	**(7) أنواع المعاجم (معجمات الألفاظ و معجمات المعاني) و طريقة استخراج الألفاظ من المعجم .**
Week 8	**(الفصل الثالث) القواعد النحوية : (8) أنواع الكلم (الاسم ، و الفعل ، و الحرف) .**
Week 9	**(9) المفرد ، و المثنى ، و الجمع ، و علامات إعرابها .**
Week 10	**(10) الجملة الفعلية و الجملة الاسمية .**
Week 11	**(11) من الأدوات النحوية : أدوات الجر ، أدوات نصب الفعل المضارع ، أدوات جزم الفعل المضارع .**
Week 12	**(الفصل الرابع) البلاغة و الأدب : (12) من الفنون البلاغية : التشبيه .**

Week 13	(13) نصوص من (الشعر الجاهلي = امرئ القيس) ، و (الإسلامي = حسان بن ثابت) .
Week 14	(14) نصوص من (الشعر العباسي = المتنبي) ، و (الأندلسي = الموشحات) .
Week 15	(15) نصوص نثرية عربية قديمة (الخطب ، و الوصايا ، و المقامات) .

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	1 – التعبير القرآني - تأليف الدكتور فاضل السامرائي 2--اللغة العربية العامة لأقسام غير الاختصاص / تأليف مجموعة من أساتذة اللغة العربية. 3- شذا العرف في فن الصرف – تاليف الدكتور احمد الحملاوي 4- البلاغة الواضحة ا – تاليف الدكتور احمد مطلوب	
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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Legal regulation of the criminal expert**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**FOR009**				
ECTS Credits	**3**				
SWL (hr/sem)	**75**				
Module Level		1	**Semester of Delivery**		1
Administering Department		Type Dept. Code	**College**	Type College Code	
Module Leader	Name		**e-mail**	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		01/09/2023	**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	التعريف بالخبرة الجنائية والتنظيم القانوني الخاص بها بيان كيفية توزيع المهام بين الخبراء كل حسب تخصصه فسح المجال للطعن بتقرير الخبير الجنائي الذي يعد دليل اثبات على قدم من المساواة مع الادلة الاخرى اقرار المسؤولية المدنية والانضباطية
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	اعداد خبير جنائي يساهم في تطبيق المواد القانونية اعداد خبراء جنائيين
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	التعريف بالقوانين المقارنة مع التشريعات العراقية من خلال التطبيقات العملية والمناقشة الذهنية والفكرية

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	102	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	98	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6.5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	200		

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	مفهوم الخبرة وانواعها
Week 2	الخبرة في التشريعات القديمة
Week 3	خصائص مهمة الخبير الجنائي
Week 4	الشروط الواجب توافرها في الخبير الجنائي
Week 5	الطبيعة القانونية للخبير
Week 6	المعوقات التي تعترض الخبير
Week 7	سلطة القاضي في تقدير الخبرة
Week 8	حقوق وواجبات الخبير
Week 9	الحالات التي يجوز بها الاستعانة بالخبرة
Week 10	الحالات التي لايجوز الاستعانة بالخبرة
Week 11	ضمانات المتهم فيما يتعلق الاستعانة بالخبرة
Week 12	دور الخبرة وحجيتها في الاثبات
Week 13	مسؤولية الخبير المدنية
Week 14	مسؤولية الخبير التأديبية والجزائية
Week 15	آلية الطعن بالخبرة
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		
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
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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	General Biology 2			**Module Delivery**	
Module Type	C			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	FOR-1206				
ECTS Credits	7				
SWL (hr/sem)	175				
Module Level	1		**Semester of Delivery**		2
Administering Department	Forensic sciences		**College**	College of science	
Module Leader			**e-mail**		
Module Leader's Acad. Title	Lecture		**Module Leader's Qualification**		Ph.D.
Module Tutor			**e-mail**		
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	10/3/2025		**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	**At the end of the course, the students will be able to:** 1. Introduction to botany and its important 2. Explain the plant cell structure (living and non-living) in general 3. Describe the plant physiology, Explain the cell division 4. Outline the classification, anatomy of plants and plant pathology 5. Including their roles in movement and support. 6. To study the nervous system and sensory organs, focusing on how they transmit and process information. 7. To explore the circulatory and respiratory systems, emphasizing how they work together to maintain oxygen and nutrient delivery throughout the body. 8. To examine the digestive and excretory systems and understand their roles in processing and eliminating waste. 9. To analyze the reproductive systems and their functions in human development and continuation of species. 10. To understand the concept of homeostasis and its regulation in maintaining a stable internal environment. 11. To study various human tissues, their classifications, structures, and functions within the body.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Define botany and explain its importance 2. List the defining characteristics of plant cell structures. 3. Describe and explain the various stages of plant cell division. 4. Describe and explain the physiology of plants. 5. Describe photosynthesis and cellular respiration 6. General information about plant pathology. 7. General information of the classification and anatomy of the plant. 8. Demonstrate an understanding of the skeletal and muscular systems by identifying major bones and muscles and explaining their functions in movement and support. 9. Explain the structure and function of the nervous system and sensory organs, including how they coordinate responses to internal and external stimuli. 10. Describe the components and functions of the circulatory and respiratory systems, and analyze how they work together to supply oxygen and remove carbon dioxide. 11. Illustrate the processes of digestion and excretion, identifying key organs and their roles in nutrient absorption and waste elimination. 12. Identify the structures and functions of the human reproductive systems, and explain the processes involved in human development and reproduction. 13. Demonstrate an understanding of homeostasis, including how various body systems regulate internal conditions to maintain balance. 14. Classify different types of human tissues and describe their structural and functional roles in the body.
Indicative Contents المحتويات الإرشادية	**Indicative content includes the following.** • **<u>Plant</u>** • Introduction to botany and its importance to human • Identification of plant cell structure and types of cells (Prokaryotic cell and Eukaryotic cells)

	• Cells structure (living):(The protoplast, a. Cell Membrane (Plasma Membrane), b. Cytoplasm, c. Plastids Plant, endoplasmic reticulum, d. Mitochondria, Ribosomes, Golgi Apparatus, The nucleus. • Plant cell structures (Non -living organelles) The Cell Wall, Function of cell wall, Composition of the Plant Cell Wall, Cytoskeleton functions in plant cells, The Central Vacuole, some key aspects of vacuoles, Plant Metabolites .Cell division stages. • Plant physiology: The structure and properties of water, DIFFUSION, OSMOSIS AND IMBIBITION, Significance of osmosis in plants Plasmolysis,Photosynthesis, Respiration. • Plant anatomy and classification: pits, Steps of wall formation, Compound middle lamella, primary cell wall, secondary cell wall, Tissue, Permanent tissue, Meristematic tissue, Parenchyma tissue, Collenchyma tissue, Sclerenchyma, The vascular tissue system, Plant pathology: some diseases infects the plant • **Human biology** • Overview of the human skeletal system: types of bones, major bones, and their functions. • Structure and function of the central and peripheral nervous systems • Components of the circulatory system: heart, blood vessels, and blood. • Anatomy of the respiratory system: nose, pharynx, larynx, trachea, bronchi, lung. • The e anatomy and functions of the digestive organs: mouth, esophagus, stomach, intestines, liver, pancreas. • Structure and function of the excretory system, focusing on the kidneys, ureters, bladder, and urethra. • Anatomy and function of male and female reproductive organs. • The concept of homeostasis and its significance in maintaining body stability. • Classification of human tissues: epithelial, connective, muscle, and nervous tissues.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Teaching strategies used in general botany and their expected results in terms of acquiring knowledge and achieving learning outcomes for students were as follows: 1. Competitive academic • Students work individually. • Students have common learning goals and tasks.

	2. Individualistic learning • Students work individually and independently to achieve various individual learning goals and tasks that are not related to other students. 3. Cooperative learning • Students work in small groups. • Students shared learning objectives and tasks within the group that may be similar or different from other groups. • The professor evaluates the students on their work as groups and also on their individual work

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	5.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6.5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**175**		

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 and #10, #11
	Assignments	2	10% (10)	2,12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
	Midterm Exam	2hr	10% (10)	7	LO #1 - #7

Summative assessment	**Final Exam**	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to Botany: Plant cell structures (living and nonliving organelles)
Week 2	Plant physiology and Cell division
Week 3	Plant anatomy and classification
Week 4	Plant pathology
Week 5	Exam
Week 6	Human Biology /Skeletal and muscular systems.
Week 7	Nervous system and sensory organs.
Week 8	Circulatory systems.
Week 9	Respiratory systems.
Week 10	Digestive systems.
Week 11	Excretory systems.
Week 12	Reproductive systems.
Week 13	Homeostasis and its regulation.
Week 14	Tissues
Week 15	Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Microscopy and Cell Structure: Preparation and observation of onion epidermis slides
Week 2	Plant Physiology: Experiments on cell division and understanding mitosis
Week 3	Guard Cells: Microscopic examination of guard cells and stomata function.
Week 4	Plant Pathology: Identifying plant diseases through microscopic and macroscopic features
Week 5	Exam
Week 6	Blood: Examination of blood composition and functions, Blood Smear: Preparation and identification of blood cell types.
Week 7	Techniques for safe and sterile blood collection.
Week 8	Blood Groups: Determination of ABO and Rh blood groups
Week 9	Kidney Function and Histology: Urine Analysis
Week 10	Tissue Processing
Week 11	Epithelium tissues
Week 12	Connective tissues
Week 13	Muscular tissues
Week 14	Nervous tissues
Week 15	Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	*** The Biology of Belief: Unleashing the Power of Consciousness, Matter & Miracles"** by Bruce H. Lipton *** Human Biology" (14th Edition)** by Sylvia Mader	No
Recommended Texts	Book: Biology" (12th Edition) **Reference**: Campbell, N. A., & Reece, J. B. (2018). *Biology* (12th ed.). Pearson Education.	No
Websites		

Grading Scheme مخطط الدرجات				
Group	**Grade**	التقدير	**Marks %**	**Definition**
Success Group (50 - 100)	**A** - Excellent	امتياز	90 - 100	Outstanding Performance
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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية				
Module Title	Organic chemistry		**Module Delivery**	
Module Type	C		☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	FOR-1207			
ECTS Credits	7			
SWL (hr/sem)	175			
Module Level	1		**Semester of Delivery**	2

Administering Department		**College**	
Module Leader		**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	10/3/2025	**Version Number**	1.0

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	General chemistry	**Semester**	1
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	On completion of this module students should be able to: 1.Understand the structures of organic molecules and recognize and name examples of them. 2. Predict the properties and reactions of a molecule from its structure. 3. Discuss the reactions of common organic compounds. 4. Design the synthesis of a simple molecule from available starting materials. 5. Understand the molecular basis of life. 6. Safely perform a simple chemical synthesis in the laboratory. 7. Understand the structures of organic molecules and recognize and name examples of them. 8. Predict the properties and reactions of a molecule from its structure. 9. Discuss the reactions of common organic compounds. 10. Safely perform a simple chemical synthesis in the laboratory.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	On successfully completing the module, you will be able to... 1. Evaluate and choose appropriate reducing or oxidizing agents for selective functional group transformations 2. Design protecting group strategies to enable chemo selective transformations to be carried out

	3. Perform retrosynthetic analysis on complex organic molecules 4. Devise multi-step syntheses of complex organic molecules 5. Discuss the mechanisms of important organic transformations 6. Explain how synthetic procedures can be modified to allow the simultaneous generation of a wide range of structurally related compounds and address environmental issues
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. Module content: First part • identify and draw organic compounds • provide the IUPAC name for some organic compounds • classify alcohols • explain the properties of alcohols and ethers Second part • Some organic chemistry fundamentals, basic concepts and terminology • Naming and classification of organic compounds • Basic reactions of alcohols, ethers and carbohydrates • Natural polysaccharides: modification and utilization in various applications • Group work (including presentation and evaluation of the other group works)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	This module builds upon the entry-level knowledge of students covered in A-Level Chemistry. It introduces basic chemical concepts within the context of Organic Chemistry, and starts to develop the more specialist knowledge of organic reactions required for later modules. The latter will be further developed in the Organic Chemistry 2 module. The module will include: 1. General concepts in organic chemistry for predicting atom and electronic structure of molecules, stability, reactivity and molecular properties (bond strength, pH etc.) 2. General concepts and mechanisms underlying organic reactions and ability to draw the mechanism for a given reaction or to give reagents required for an organic reaction.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	5.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6.5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

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	An Introduction to Organic Chemistry
Week 2	Nomenclature of hydrocarbon
Week 3	Nomenclature of hydrocarbon and stereo chemistry
Week 4	Hydrocarbons

Week 5	Unsaturated Hydrocarbons
Week 6	Exam
Week 7	Aromatic Hydrocarbons
Week 8	Organic Halogen Compound
Week 9	Alcohols and Phenols
Week 10	Ethers, Aldehydes and ketones
Week 11	Cyclic compound
Week 12	Carboxyl acid, Esters and Sulfonic acid
Week 13	Nitro compounds, Amines and Amides
Week 14	Review Week
Week 15	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Material Safety Data Sheet (MSDS)
Week 2	Lab 2: Determination of melting points
Week 3	Lab 3: Determination of boiling points
Week 4	Lab 4: Recrystallization
Week 5	Lab 5: Density of Some Organic Compounds
Week 6	Lab 6: exam
Week 7	Lab 7: Identification tests of Alkanes, Alkenes, Alkynes and Aromatic
Week 8	Lab 8: Identification tests of primary, secondary and ternary alcohol
Week 9	Lab 9: Identification tests of Ketones and Aldehydes
Week 10	Lab 10: Identification tests of flash point
Week 11	Lab 11: exam theoretical
Week 12	Lab 12: exam practical
Week 13	Application by identification organic compound
Week 14	Application by identification organic compound
Week 15	Review before final exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	J. Clayden, N. Greeves and S. Warren, Organic Chemistry (Second Edition), Oxford University Press, 2012, ISBN 0-19-927029-5 (essential core text)	Yes
Recommended Texts	C. Willis and M. Wills, Organic Synthesis, (Oxford Chemistry Primer 31), Oxford University Press, 1995, ISBN 0-19-855791-4	No
Websites	ELE page: https://vle.exeter.ac.uk/course/view.php?id=9255	

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**General Physics**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**For-1208**				
ECTS Credits	**7**				
SWL (hr/sem)	**175**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Forensic		**College**	Science	
Module Leader	Rudainah Ali Lateef		**e-mail**	Rudayna2000@yahoo.com	
Module Leader's Acad. Title	Asst.Professor		**Module Leader's Qualification**	Ph.D.	
Module Tutor	N.A		**e-mail**	N.A	
Peer Reviewer Name	N.A		**e-mail**	N.A	
Scientific Committee Approval Date	02/01/2025		**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	6. To have knowledge about General Physics basic principles like Mechanics of motion, liquid mechanics and electricity. 7. To get skills in solving mathematical problems that related to physics subjects. 8. To get practical skills in managing physics experiments in the lab. and record measurements and then calculate required quantities. 9. Analysis the physical information in syllabus and be able to make conclusions by joining between physical concepts. 10. To be able to apply his knowledge in physics in market.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	7. Save in memory basic principles and laws of physics. 8. Produce scientific concepts by joining between physical principles. 9. Joining physical concepts to produce more complicated concepts. 10. The ability to make conclusions by analysis the physical information. 11. The ability to apply all his knowledge to solve problems in reality. 12. To be able to run the devices and apparatus in the lab. 13. Assemble devices and make an experiment to prove physical relation. 14. Discuss the results get from running experiment in the lab. 15. Make reports from theory to conclusion about any physical concept proved in the lab.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. Measurement units, Motion in one dimension, path and displacement, velocity and acceleration. [9 hrs] Free fall motion, gravity, projectile path. [8 hrs] Vector Analysis, Unit vector, Vector addition and subtraction, resultant vector and its direction. [10 hrs] Motion in two dimensions, concept of negative acceleration, average and instantaneous velocity and acceleration. [9 hrs] Revision problem classes [5 hrs]

	Newton laws of motion, principle of continuity, equilibrium, action and reaction, force analysis diagrame. [12 hrs] Circuits and electricity, Current, Voltage, Resistance. [10 hrs] Fluid Mechanics, Pascal principle, Archimedes principle, Pressure, Bernoulli equation in fluid flow. [9 hrs]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	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 and by considering type of simple experiments involving some sampling activities that are interesting to the students.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	5.1
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	5.5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	4	10% (10)	2,4,6,10	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	Physical unit systems and unit conversion
Week 2	Motion in one dimension: velocity and acceleration
Week 3	Free fall motion and gravity
Week 4	Vector analysis: vector addition and subtraction
Week 5	Unit vector and vector resultant calculation
Week 6	Motion in two dimension: velocity and acceleration calculations
Week 7	Mid-term Exam
Week 8	Laws of motion
Week 9	Work
Week 10	Energy
Week 11	Electricity: current, voltage and resistance, Ohm's law
Week 12	Electric circuits: series and parallel circuits
Week 13	Fluid mechanics: pressure and Pascal Principle
Week 14	Archimedes principle
Week 15	Bernoulli equation in fluid flow
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Introduction to diagrams and report writing
Week 2	Lab 2: Surface tension
Week 3	Lab 3: Force equilibrium
Week 4	Lab 4: Static and dynamic friction
Week 5	Lab 5: Ohm's law
Week 6	Lab 6: Series and Parallel circuits
Week 7	Lab 7: Density of materials
Week 8	Exam
Week 9	Lab 8: Simple pendulum
Week 10	Lab 9: Boyles Law
Week 11	Lab 10: Velocity of the sound
Week 12	Lab 11: Velocity of liquid
Week 13	Lab 12: Laser Application
Week 14	Lab 13: half wave rectifier
Week 15	Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Applied Physics by Schaum 2013	No
Recommended Texts	Physics for scientists and engineers by Serway 2004.	No
Websites	https://www.coursera.org/browse/physical-science-and-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

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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**English Language 1**			**Module Delivery**	
Module Type	**Basic learning activities**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **L Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UD 11**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	UG1		**Semester of Delivery**		
Administering Department	All		**College**	All	
Module Leader			**e-mail**		
Module Leader's Acad. Title			**Module Leader's Qualification**	MSc.	
Module Tutor			**e-mail**		
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	12/06/2025		**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	The module aims at enabling students to learn and understand the written and spoken form of English. It also aims at teaching functional English to learners and improving their reading, writing and listening skills.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Read and understand simple texts in English. 2. Answer simple comprehension questions and match sentences about texts. 3. Reconstruct texts by reordering sentences. 4. Understand the main idea of a text. 5. Identify specific information in a text. Writing and paraphrasing paragraphs.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. i) Grammar has a core place in language teaching and learning. ii) A wide variety of practice tasks in all the four skills are essential to language learning. iii) Everyday expressions, particularly of spoken English, also need a place in the syllabus. These can be functional, social, situational or idiomatic.
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Headway's trusted methodology combines solid grammar and practice, vocabulary development, and integrated skills with communicative role-plays and personalization. Authentic material from a variety of sources enables students to see new language in context, and a range of comprehension tasks, language and vocabulary exercises, and extension activities practice the four skills. 'Everyday English' and 'Spoken grammar' sections practice real-world speaking skills, and a writing section for each unit at the back of the book provides models for students to analyze and imitate.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	**33**	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	**2.2**
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	**17**	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	**1.1**
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	**2**	**20% (5)**	3 , 5,8,11	LO #1...#3, #4...#5, #7&#8, #9... #11
	Assignments	**2**	**10% (5)**	**2 and 12**	LO #3, #4 and #6, #7
	Projects / Lab.				
	Report	**1**	**15% (10)**	**13**	**LO #5, #8 and #10**
Summative assessment	**Midterm Exam**	**2hr**	**10% (10)**	**7**	**LO #1 - #7**
	Final Exam	**3hr**	**50% (50)**	**15**	**All**
Total assessment			**100% (100 Marks)**		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Course Introduction (Course material and objectives, learning outcomes, lessons and assessment discussed with the learners).
Week 2	**Unit 1. Hello** **Vocabulary:** People, introduce each other – ways of greetings, Numbers 1-10 and plurals. **Reading:** Introduction dialogues, Everyday English dialogues.

	Listening: People meet each other and introduce someone else. How are you? What's this in English? **Speaking**: Introductions, Good morning! Practicing introduction dialogues- Information gap. **Writing**: Complete the conversations. **Gramma**r: Verb to be with subject, Possessive adjectives, This is …… .
Week 3	**Unit 2. Your World** **Vocabulary:** A set of cities and countries: Brazil, Spain…. ., Adjectives: awful, really good, fantastic, Nouns: center, hospital, building, park. Numbers 10-20 **Reading:** Two people are on holiday in New York. **Listening**: listening to a conversation about Claude and Holly. **Speaking**: Talking about where people are from. **Writing**: Complete the conversations, countries , cities, adjectives, nouns, and numbers. **Gramma**r: Subject verb agreement, possessive pronouns, questions (what, where … ?). **Week 4**
Week 4	**Unit 3. All About You** **Vocabulary:** Jobs (police officer, nurse..), Personal information (surname, first name, address…..). **Reading:** ' Hello! We're on A Mountain' about different students from different countries. **Listening**: Interview on a mountain. **Speaking**: Practice the interview. **Writing**: Social expressions (I am sorry, that's ok …. .) **Gramma**r: Subject pronoun (negatives and questions) , Possessive adjectives.
Week5	**Listening**: Listen and identify the people 'Fatima Al Zamil' , 'Paddy McNab and his family' **Speaking**: Talking about family and friends. **Writing**: Write about a good friend , his/ her family , job, favourite shop, and sport , extra…. . **Gramma**r: Possessive adjectives. Possessive 's. Has/ have Adjective + noun Irregular Plurals.
Week 6	**Assessment Test 1. Feedback and Remedial Work**
Week 7	**Unit 5. The way I live?** **Vocabulary:** The lexical set of sports/food/drinks. Verbs (live, work), Languages and nationalities. **Reading:** ' Colin Brodie from Dundee' **Listening:** Listen to the context of likes and dislikes. At a party: Flavia and Terry are at a party in London, At dinner : two people meet and talk. **Speaking:** Role play: Practice the conversation in different situations. **Writing:** Write sentences, questions, make notes. **Grammar:** Present Simple :(I/you/we/they),Indefinite article(a/an),Adjective + noun(a German car).
Week 8	**Unit 6. Everyday** **Vocabulary:** The time, Words that go together: watch TV, get up early, Days of week. **Reading:** 'Lois Maddox ' Talking about daily routines. **Listening:** Lifestyle questionnaire, Listening a phone conversation between Lois and Elliot. **Speaking:** Asking and answering questions about daily routines. **Writing:** Write the correct preposition, Complete the questions. **Grammar:** Present Simple: He/she Question and negatives, Adverbs of frequency Prepositions of time.
Week 9	**Unit 7. My Favourites** **Vocabulary:** Adjectives: lovely, terrible, comfortable, friendly…, Opposite adjectives: new/old, big/small Places: chemist, post office **Reading:** ' The Famous International Footballer' , An email of San Francisco, **Listening**: Listening the requests with Can I……..? A holiday postcard. Describing lifestyles, preferences

	and places **Speaking:** Role play: conversations in town. **Writing:** Writing an email to a friend. **Grammar:** Question words, Subject pronouns, Object pronouns, Possessive pronouns.
Week 10	**Unit 8. Where I live** **Vocabulary:** Rooms and furniture: living room, bedroom, In and out of town: beach, mountain, sailing,… **Reading: '**Vancouver- a great city'. **Listening:** My home town, Steve talks about living in Vancouver, Listen to the directions. **Speaking:** Talking and asking about rooms and furniture, Giving directions to places. **Writing:** Write about a town you know. **Grammar:** There is /are , Prepositions: in, on, under, next to
Week 11	**Assessment Test 2. Feedback and Remedial Work**
Week 12	**Unit 9. Times Past** **Vocabulary:** Saying years, People and jobs, Irregular verbs Have, do, go: have lunch, do homework, go shopping **Reading:** 'Two Saudi boys find an antiquity vasa' **Listening: '**Magalia Dromard' : Magalia talks about her family. **Speaking:** Telling a story form pictures. **Writing:** complete the sentences, write the words in correct form. **Grammar:** Was/were born , Past simple: irregular verbs (It's a Jackson Pollock).
Week 13	**Unit 10. We had a great time!** **Vocabulary:** Time expressions: on Monday, last night…, Sports and leisure: tennis, skiing, windsurfing… Play or go: play tennis, go skiing , Seasons: winter, summer… . **Listening: '**Jack and Millie Parker's holiday', A couple talk about their holidays. **Speaking:** A questionnaire, Asking about holiday , My last holiday. Making conversations 5 **Writing:** Write about your favourite holiday. **Grammar:** Past simple: regular and irregular, Questions/Negatives, Ago Dialogues with simple past.
Week 14	**Unit 11. I can do that!** **Vocabulary:** Verbs: (draw, run, drive), Verb+noun: (Listen to the radio, chat to friends), Adjective+noun: (fast car, busy city, dangerous sport), Opposite adjectives: dangerous/ safe, old/modern. **Reading: '**The Internet ' **Listening:** ' Five people talk about what they do on the internet' **Grammar:** Can / can't, Adverbs, Adjective + noun, Requests and offers.
Week 15	**Unit 12. Please and thank you** **Vocabulary:** Shopping: (bread, milk, fruit) , Food: (cereal, salad, pasta, fish),In a restaurant: (menu, starter, desert, soup, salmon) **Reading:** People different parts of the world. **Listening: '**Conversation with Adam' , 'After my exam'. **Speaking:** Describe what they eat? Discussion-what is a good diet? **Grammar:** I'd like, Some and Any , Like and would like.

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	New Headway Pre-Intermediate by:John and Liz Soars. Oxford University Press	نعم
Recommended Texts	None	yes
Websites	https://www.scribd.com/document/510746145/New-Headway-Plus-Beginner-Student-sbook	

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
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	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
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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Computer 1**			**Module Delivery**	
Module Type	**Basic learning activities**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **L Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UD13**				
ECTS Credits	**3**				
SWL (hr/sem)	**75**				
Module Level	UG1		**Semester of Delivery**		
Administering Department	All Department		**College**	All colleges of the university	
Module Leader			**e-mail**		
Module Leader's Acad. Title			**Module Leader's Qualification**	MSc.	
Module Tutor			**e-mail**		
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	12/06/2025		**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	1. Training students on the basics of using the computer and providing them with the necessary skills to deal with the computer with high efficiency. 2. Assisting the student in distinguishing and developing his scientific and artistic abilities. 3. Enriching the student's skills to be able to deal with the computer with high efficiency. 4. Providing students with a way to use other modern technologies related to the

	educational process.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Utilize the computer for fundamental tasks. 2. Identify and discuss the hardware components of the computer system. 3. Creating documents using a word processor and creating presentations. 4. Conducting research on the Internet.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. 1. Course Introduction to Computer, Computer Components, and Personal Computer. 2. Working with Operating Systems and Graphical User Interface (GUI). 3. Microsoft Office Word, Excel, and PowerPoint. 4. Working with the Internet and Web browser 5. Working with E-mail and Computer troubleshooting
Course Description	Introduction to Computer: Concepts of Hardware and Software with their components; Concept of Computing, Data and Information; Applications of Information Electronics and Communication Technology (IECT); Connecting input/output devices, and peripherals to CPU. Computer Components: Computer Portions, Hardware Parts, I/O Units, Memory Types, Basic CPU Components, Computer Ports, Personal Computer, Personal Computer (Features and Types). Operating System and Graphical User Interface (GUI): Operating System; Basics of Common Operating Systems; The User Interface, Using Mouse Techniques; Use of Common Icons, Status Bar, Using Menu and Menu-selection, Concept of Folders and Directories, Opening and closing of different Windows; Creating Shortcuts. Word Processing: Word Processing Basics; Opening and Closing of documents; Text creation and Manipulation; Formatting of text; Table handling; Spell check, language setting, and thesaurus; Printing of word document. Spreadsheet: Basics of Spreadsheet; Manipulation of cells; Formulas and Functions; Editing of Spreadsheet, printing of Spreadsheet. Presentation Software: Basics of presentation software; Creating Presentation; Preparation and Presentation of Slides; Slide Show; Taking printouts of presentation/handouts.
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	• In this course, students are guided by: • Using different examples. • Using different styles of discussion that aim to connect the theoretical and practical sides. • Asking questions and giving exercises that require analysis and conclusions related to lectures. • Encourage students to participate in discussions and do practical work. • Encourage students to work in groups.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem)	**48**	**Structured SWL (h/w)**	**3.2**

الحمل الدراسي المنتظم للطالب خلال الفصل		الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	**27**	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	**1.8**
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	**2**	**10% (5)**	**6 and 12**	LO #1...#3, #4...#5, #7&#8, #9... #11
	Assignments	**2**	**10% (5)**	**2 and 13**	LO #3, #4 and #6, #7
	Projects / Lab.	**1**	**10% (10)**	**Continuous**	**All**
	Report	**2**	**10% (5)**	**13**	**LO #2, #4 and #6**
Summative assessment	**Midterm Exam**	**1hr**	**10% (10)**	**9**	**LO #1 - #5**
	Final Exam	**3hr**	**50% (50)**	**16**	**All**
Total assessment			**100% (100 Marks)**		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to Computer: Concepts of Hardware and Software with their components; Concept of Computing, Data and Information: Connecting input/output devices, and peripherals to CPU.
Week 2	Computer Components: Computer Portions, Hardware Parts, I/O Units, Memory Types.
Week 3	Computer Components (Cont.): Basic CPU Components, Computer Ports, Personal Computer, Personal Computer (Features and Types).
Week 4	Operating System and Graphical User Interface GUI: Operating System; Basics of Common Operating Systems; The User Interface, Using Mouse Techniques.
Week5	Operating System and Graphical User Interface GUI (Cont.): Use of Common Icons, Status Bar, Using Menu and Menu-selection, Concept of Folders and Directories, Opening and closing of different Windows; Creating Short cuts.
Week 6	Closing of documents, Text creation and Manipulation; Formatting Text and Paragraphs, Using

	Templates for Document Creation.
Week 7	Word Processing (Cont.): Creating and Managing Tables, Utilizing Styles and Themes, Spell Check and Grammar Tools, Using Headers and Footers.
Week 8	Spread Sheet: Introduction to Spreadsheet Software, Creating and Formatting Worksheets. Sorting and Filtering Data, Using Formulas and Functions.
Week 9	Spread Sheet (Cont.): Using Formulas and Functions, Using Pivot Tables for Data Analysis, Data Validation and Error Checking, Data Visualization: Creating Charts and Graphs.
Week 10	Presentation Software: Introduction to Presentation Software, Overview of Popular Presentation Tools, creating a New Presentation, Using Templates and Themes, Inserting and Formatting Text and Images, Transition and Animation Effects.
Week 11	Presentation Software (Cont.): Using Speaker Notes and Timers,, Advanced Features: Hyperlinks and Action Buttons, Troubleshooting Common Presentation Issues, Future Trends in Presentation Technology.
Week 12	Introduction to Internet and Web Browsers: Computer networks Basic; LAN, WAN; Concept of Internet and its Applications; connecting to internet.
Week 13	Introduction to Internet and Web Browsers (Cont.): World Wide Web; Web Browsing software's, Search Engines; Understanding URL; Domain name: IP Address..
Week 14	Communications and Emails: Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails; Using Emails; Document collaboration.
Week 15	Introduction to Cloud Computing and Services: Definition of Cloud Computing and its concept, Cloud-Based Office Suites (Office 365 and Google Workspace), Google Docs, Google Sheets, Google Drive, Google Meet.

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Introduction to the lab and get started with use of computer Introduction to Connecting input/output devices, and peripherals to CPU.
Week 2	Computer Portions, Hardware Parts, I/O Units, Memory Types.
Week 3	Basic CPU Components, Computer Ports, Personal Computer, Personal Computer.
Week 4	Operating System; Basics of Common Operating Systems; The User Interface, Using Mouse Techniques.
Week 5	Use of Common Icons, Status Bar, Using Menu and Menu-selection, Concept of Folders and Directories, Opening and closing of different Windows; Creating Short cuts.
Week 6	Opening and Closing of documents, Text creation and Manipulation; Formatting Text and Paragraphs, Using Templates for Document Creation.

Week 7	Creating and Managing Tables, Utilizing Styles and Themes, Spell Check and Grammar Tools, Using Headers and Footers.
Week 8	Creating and Formatting Worksheets. Sorting and Filtering Data, Using Formulas and Functions.
Week 9	Using Formulas and Functions, Using Pivot Tables for Data Analysis, Data Validation and Error Checking, Data Visualization: Creating Charts and Graphs.
Week 10	Overview of Popular Presentation Tools, creating a New Presentation, Using Templates and Themes, Inserting and Formatting Text and Images, Transition and Animation Effects.
Week 11	Using Speaker Notes and Timers, Advanced Features: Hyperlinks and Action Buttons, Troubleshooting Common Presentation Issues, Future Trends in Presentation Technology.
Week 12	Computer networks Basic; LAN, WAN; Concept of Internet and its Applications; connecting to internet.
Week 13	Learn World Wide Web; Web Browsing software's, Search Engines; Understanding URL; Domain name: IP Address.
Week 14	Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails; Using Emails; Document collaboration.
Week 15	Definition of Cloud Computing and its concept, Cloud-Based Office Suites (Office 365 and Google Workspace), Google Docs, Google Sheets, Google Drive, Google Meet.

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	1. Graham Brown, David Watson, "Cambridge IGCSE Information and Communication Technology", 3rd Edition (2020). 2. Alan Evans, Kendall Martin, Mary Anne Poatsy, "Technology In Action Complete", 16th Edition (2020). 3. Microsoft Office 2019 Step by Step 1st Edition by Curtis Frye & Joan Lambert 4.الخ ر ض ع ي ل الخ ر ض بحاث. " أساسيات الحاسوب" 2016	نعم
Recommended Texts	• Michael Miller, ABSOLUTE BEGINNER'S GUIDE TO COMPUTER BASICS, 5th EDITION, QUE Indianapolis, Indiana 46240, 2010. • Paul McFedries, TEACH YOURSELF VISUALLY MICROSOFT WINDOWS 10, ANNIVERSARY	yes
Websites	Microsoft Help, https://support.microsoft.com/en-us/products Learn Microsoft Office, https://www.goskills.com/Microsoft-Office	

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

NB 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.

MODULE DESCRIPTION FORM

Module Information		
Module Title	**Biochemistry**	**Module Delivery**
Module Type	**Core**	☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**
Module Code	**FOR-2309**	
ECTS Credits	**7**	
SWL (hr/sem)	**175**	

Module Level		1	**Semester of Delivery**		1
Administering Department		Forensic \FOR	**College**	science	
Module Leader	Dr. Waseem yousif		**e-mail**	Dr.waseem.y@uodiyala.edu.iq	
Module Leader's Acad. Title		Assistant prof	**Module Leader's Qualification**		Ph.D.
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name		Assistant prof Dr. Waseem yousif	**e-mail**	Dr.waseem.y@uodiyala.edu.iq	
Scientific Committee Approval Date		01/09/2025	**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	The module provides an introductory overview of the: 1- Provide students with extensive information about carbohydrates. 2- Teach students the chemical tests related to carbohydrates and how to conduct these tests practically in the laboratory. 3- Provide adequate information about fats, amino acids, and proteins. 4- Teach students the chemical tests related to fats, amino acids, and proteins, along with practical execution in the laboratory. 5- Educate students on all essential and necessary information related to biochemistry, preparing them for work and research in various fields of biochemistry.
Module Learning Outcomes	**A. Cognitive Objectives** 1. Empower students to acquire knowledge and understanding of biochemistry.

مخرجات التعلم للمادة الدراسية	2. Enable students to gain knowledge and understanding of carbohydrates and their specific discoveries. 3. Equip students with knowledge and understanding of fats, proteins, enzymes, and amino acids. 4. Facilitate students' understanding of the chemical reactions that occur in each discovery to achieve different results and colors in practical experiments. **B. Skills Objectives Related to the Course** 1. Knowledge Skills - Recall 2. Reminder and Analysis Skills
Indicative Contents المحتويات الإرشادية	A fundamentals of biochemistry test on carbohydrates, lipids, and amino acids should cover their definitions, classifications, structures, functions, and biomedical importance, including topics like monosaccharides, disaccharides, polysaccharides, fatty acids, triglycerides, amino acid structures, protein synthesis and function, and metabolic processes like ketogenesis and gluconeogenesis. Key concepts also include the hydrophobic nature of lipids, peptide bonds in proteins, the synthesis and energy storage roles of these biomolecules, and their involvement in various metabolic disorders.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	• Enable students to solve problems related to the conceptual framework of biochemical chemistry. • Enable students to analyze, distinguish, and diagnose reactions specific to biochemical chemistry. • (Reinforced) Enable students to solve problems within the conceptual framework of biochemical chemistry. Teaching and Learning Methods • Lectures supported by an interactive whiteboard. • Clear explanation and demonstration. • Provide students with foundational material and supplementary topics related to chemical thinking and biochemical analysis. • Assign weekly and term reports addressing questions arising from laboratory experiments.

	• Pose reflective questions during lectures (what, how, when, why) on specific topics. • Give homework requiring causal, self-explanatory responses. Assessment Methods 1. Practical exams (individual hands-on tests to identify compounds, e.g., carbohydrate detection). 2. Written/theoretical exams. 3. Reports and studies. 4. Short daily quizzes with self-solved questions. 5. Assigned homework graded with specific marks. General and Employability Skills (Transferable Skills) • Keep up with scientific developments via online contact with international universities. • Participate in scientific conferences locally and abroad. • Attend workshops and seminars locally and abroad. • Field visits to projects and university or government laboratories related to the subject.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	5.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6.4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

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	Introduction of biochemistry
Week 2	Introduction of carbohydrate
Week 3	Classification and structure of carbohydrate
Week 4	Amino acids
Week 5	Peptides
Week 6	Proteins
Week 7	Exam
Week 8	Chemical of lipid
Week 9	Structure of nucleic acid
Week 10	Important and different of nucleic acid
Week 11	Enzyme
Week 12	Enzyme
Week 13	Hormones
Week 14	Transport of cell membrane
Week 15	Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered

Week 1	Lab 1: General safety rules for laboratory
Week 2	Lab 2: Introduction of carbohydrates
Week 3	Lab 3: Molisch's Test
Week 4	Lab 4: Benedict's Test
Week 5	Lab 5: Barfoed's test
Week 6	Lab 6: Seliwanoff's test
Week 7	Lab 7: Bial's test
Week 8	Lab 8: Iodin test
Week 9	Exame
Week 10	Lab 10: Lipids
Week 11	Lab 11: Unsaturation test(Copper acetate test)
Week 12	Lab 12: Iodin test
Week 13	Lab 13: Salkowski's test
Week 14	Lab 14: Acrolein Test
Week 15	Exam

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	https://guides.loc.gov/chemistry-resources/print-materials/analyticals	NO
Recommended Texts	https://guides.library.utoronto.ca/chm217/reference-resources	yes
Websites	https://www.coursera.inorg/browse/chem-science	

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Molecular Biology**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**FOR-23010**				
ECTS Credits	**7**				
SWL (hr/sem)	**175**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Foren		**College**	SC	
Module Leader	Ishtar Imad Majeed		**e-mail**	Dr.IshtarImad@uodiyala.edu.iq	
Module Leader's Acad. Title	Instructor Doctor		**Module Leader's Qualification**	Ph.D.	
Module Tutor	Ahmed Kareem Hussein Alatafi		**e-mail**	ahmedkareemalatafi@uodiyala.edu.iq	
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 Aims أهداف المادة الدراسية	16. This module aims to provide a strong foundation in molecular biology and biochemistry that will be built upon in subsequent modules. 17. Core biological molecules will be examined with a focus on their structure and function. 18. Teaching will be delivered using a combination of lectures, workshops and practicals. 19. Problem solving and quantitative skills will be developed through complementary workshops using case studies, applications and examples based on lecture content. 20. Experience of biochemical techniques such as chromatography and enzyme kinetics will be gained through practicals. 21. The module will be aseessed by an open exam at the end of the module.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Students who successfully complete this module will be able to: 1. Describe the main chemical components of cells, their structural properties, how these relate to their functions, and how they are altered during cellular processes 2. Explain theoretical frameworks (such a Michaelis Menten kinetics, the laws of thermodynamics and the chemiosmotic theory) that allow us to understand function of biological molecules and cells 3. Integrate knowledge about heterotrophic metabolism of carbohydrates & lipids and phototrophic metabolism and how they relate to energy metabolism via ATP 4. Relate knowledge of biological molecules to health and disease and to their application in biotechnology 5. Analyse and evaluate enzyme kinetics data
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. The information on this page is indicative of the module that is currently on offer. The University is constantly exploring ways to enhance and improve its degree

	programmes and therefore reserves the right to make variations to the content and method of delivery of modules, and to discontinue modules,[20h] if such action is reasonably considered to be necessary by the University. Where appropriate, the University will notify and consult with affected students in advance about any changes that are required in line with the University's policy on the Approval of Modifications to Existing Taught Programmes of Study[40h]. Developed and demonstrated time management and organisational skills Developed skills at interpreting and retrieving information[20h] (knowledge management) and be able to demonstrate this in examinations Developed, and be able to apply, problem-solving skills Developed, and be able to demonstrate in examinations, written communication skills[15].

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Molecular biology skills can help you work in many scientific fields, such as food science, biotechnology, forensics and more. In this article, we discuss the definition of molecular biology skills, the types of skills to include on your resume and strategies for developing molecular biology skills.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	6.1
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6.5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

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	Introduction and brief historical review
Week 2	Experiments to prove DNA is the genetic material
Week 3	The second evidence using virus (phage) model
Week 4	DNA and RNA as macromolecules: base structure and rules
Week 5	Eukaryotic and prokaryotic DNA
Week 6	Chemical and physical properties of DNA: the hyperchromic effect
Week 7	Haploid chromosome
Week 8	Chromatin organization and chromosome structure
Week 9	DNA replication
Week 10	DNA repair pathways
Week 11	RNA structure and function
Week 12	RNA transcription and post transcription events
Week 13	Translation: protein synthesis
Week 14	Epigenetics
Week 15	Exam
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Lab 1: Preparation of buffers
Week 2	Lab 2: Laboratory safety rules
Week 3	Lab 3: DNA extraction
Week 4	Lab 4: Instruments and equipment in molecular lab
Week 5	Lab 5: Polymerase chain reaction
Week 6	Lab 6: Gel electrophoresis
Week 7	Lab 7: Exam
Week 8	Lab8:Chromosomal DNA extraction from bacteria
Week 9	Lab9:Chromosomal DNA extraction from plant
Week 10	Lab10:Plasmids isolation and extraction
Week 11	Lab11:Protein
Week 12	Lab12:paper chromatography
Week 13	Lab13:Real time PCR
Week 14	Lab14:Seminars
Week15	Review before final exam

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Alberts B, et al. Essential Cell Biology, 5th Edition, Garland Science Pub., 2019 ISBN: 978-0393680393	Yes
Recommended Texts	Human Physiology: From Cells to Systems Lauralee Sherwood 7th ed. Brookes/Cole ISBN 9780495826293	No
Websites	https://www.modules.napier.ac.uk/Module.aspx?ID=BMS09112	

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	**FX –** Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded

(0 – 49)	**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.

MODULE DESCRIPTION FORM

Module Information

Module Title	**Secretions and vital fluids**		**Module Delivery**	
Module Type	**Core**		√ **Theory** √ **Lecture** √ **Lab** ☐ **Tutorial** √ **Practical** ☐ **Seminar**	
Module Code	**FOR-23011**			
ECTS Credits	7			
SWL (hr/sem)	175			
Module Level	1	**Semester of Delivery**	1	
Administering Department	Forensic Science \FOR Second stage	**College**	science	
Module Leader	Dr. Abbas Ammari	**e-mail**	abbas@uodiyala.edu.iq	
Module Leader's Acad. Title	Assistant Professor	**Module Leader's Qualification**	Ph. D. in Biology	
Module Tutor	Dr. Abbas Ammari	**e-mail**	abbas@uodiyala.edu.iq	
Peer Reviewer Name		**e-mail**		
Scientific Committee Approval Date	01/09/2025	**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	The aim of this Module is : 1-to provide the student with an understanding of examination strategies for the range of body fluids encountered in forensic biology casework together with the science underpinning the interpretation of bloodstain patterns. 2-An awareness of the contribution of selected areas of the biological sciences to specialised forensic science studies is also given. 3-to provide a basic grounding in Forensic Criminology. 4- to promote analytical and evaluative skills, as well as encourage the application of material to appropriate case studies. 5- students will, through seminar work, applied approach and problem solving, develop a knowledge and understanding of the subject area, as well as an appreciation of the ethical and complex issues that surround forensic criminology.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	By the end of this module the student should be able to: 1. Understand the rationale for undertaking different body fluid examinations as an aid to crime investigation. 2. Relate the biological characteristics of different body fluids to the methods used for location and identification in the forensic laboratory. 3. Identify and interpret bloodstain patterns and relate these to a theoretical treatment of blood dynamics. 4. Have a basic understanding of how the results of biological examinations are used in the context of case interpretation. 5. Analyse and critically evaluate the contribution of selected areas of biology to specialised aspects of forensic science. 6. Explain the analytical, laboratory and legal requirements of producing DNA STR profiles. 7. Perform interpretation of DNA STR profiling results, including calculation of likelihood ratios. 8. Critically evaluate DNA STR profiling results citing significant research in the field.

	9. Show an understanding of the scientific basis and utilisation of techniques of bone anthropometry and pathology in the study of human tissue. 10. Demonstrate the ability to critically evaluate body fluid evidence and blood stain patterns.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. 1 Body Fluids Methods for detection and confirmation of the presence of blood, saliva, semen, faeces and urine. Interpretation of the presence and distribution of such staining and an understanding of body fluid persistence.[18h] 2 Blood Dynamics and Blood Stain Patterns Rheology of blood and blood behaviour. Impact, cast- off, arterial and transfer patterns, interpretation and evidential value.[18h] 3 Selected Areas of Biology Relevant to Forensic Science For example: aspects of entomology, trichology and other specialist areas of forensic biology may be considered.[15h] 4:Forensic Psychology: the social context of crime; what is forensic and criminal psychology; serial killing; profile analysis: investigative psychology and statistical profiling; false confessions; false allegations; eye witness testimony; lies, detection and credibility; psychology in prison; assessing risk and dangerousness.[15h] 5:Criminal Investigation: Introduction to forensic science; the crime scene; trace and contact evidence: recoverable materials; trace and contact evidence: fingerprints; analysing body fluids; DNA profiling; fires; examination of human remains; questioned documents; forensic science in court and presenting evidence to a jury.[20h]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	This module covers a wide variety of theoretical, conceptual and practical areas, which require a range of knowledge and skills at a more advanced level to be displayed and exercised. Delivery of its syllabus content therefore involves a diversity of teaching and assessment methods suitable to the learning outcomes of the module; these include formal lectures, structured tutorials (work closely integrated with the lecture material), practical exercises, and completion and submission of written coursework making use of appropriate forms of IT and VLE, and independent study.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	6.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6.5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

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	Introduction in body fluid and secretions (Definition and types)
Week 2	Blood, Lymph and Plasma
Week 3	Fluids of Respiratory system
Week 4	Fluids of digestive system
Week 5	Fluids of urinary system
Week 6	Miscellaneous fluids I
Week 7	Miscellaneous fluids II
Week 8	Med term exam
Week 9	Gland secretions
Week 10	Skin secretions
Week 11	Eye secretions
Week 12	Nasal and mucus secretions
Week 13	Vaginal secretions
Week 14	DNA analysis
Week 15	Med term exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Lab Safety
Week 2	Blood, Lymph and Plasma
Week 3	Fluids of Respiratory system
Week 4	Fluids of digestive system
Week 5	Fluids of urinary system
Week 6	Miscellaneous fluids I
Week 7	Miscellaneous fluids II
Week 8	Med term exam
Week 9	Gland secretions
Week 10	Skin secretions
Week 11	Eye secretions
Week 12	Nasal and mucus secretions
Week 13	Vaginal secretions
Week 14	DNA analysis
Week 15	Med term exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Essential Haemotology. Hoffbrand A.V., Pettit J.E. & Moss P.A.H., Blackwell, ISBN: 0632051541	NO
Recommended Texts	Flesh and Bone: An Introduction to Forensic Anthropology. Nafte M., Carolina Academic Press, ISBN:0890896380	yes
Websites	https://modules.abertay.ac.uk/module.cfm?modcode=FOR301&term=S1	

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Statistics and forensic applications**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	FOR-23012				
ECTS Credits	**2**				
SWL (hr/sem)	50				
Module Level		1	**Semester of Delivery**		1
Administering Department		FORN	**College**		SC
Module Leader			**e-mail**		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	01/09/2023	**Version Number**	1.0

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	**none**	**Semester**	2/1
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	On completion of this module the learner will/should be able to; 1.Describe basic statistical terms which are of relevance to the area of forensic science. 2.Graphically display and numerically summarise data using appropriate tables, graphs and measures of centre, spread and position. 3.Explain and apply concepts of basic probability including, conditional probability, Bayes' theorem, independent events and counting formulae; 4.Make interferences about population parameters using sample statistics using confidence interval estimates and tests of statistical hypotheses 5.Describe the application of statistics to sampling, quality control, analytical method validation and experimental design. 6.Use an appropriate method for analysing relationships between variables in a dataset
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Students who successfully complete this unit will be able to: 1. Explain basic concepts in probability as they apply to random events and uncertain evidence, and update probabilities when additional information is obtained 2. Apply probability theory to games of chance, forensic science, and DNA profiling

	3. Identify appropriate applications of binary and multinomial regression and apply these models to forensic problems 4. Compare different models for a survival analysis and apply these to forensic science problems 5. Conduct cluster analyses, particularly in typical forensic science settings, and explain the differences between various clustering methods 6. Compare different classification techniques, and apply these to problems in forensic science settings
Indicative Contents المحتويات الإرشادية	1. Describe basic statistical terms which are of relevance to the area of analytical science Introduction to Statistical Terms Populations and Samples Data Types Introduction to Sampling Methods [12h] 2. Graphically display and numerically summaries data using appropriate tables, graphs and measures of center, spread and position. Graphical Representation of data including frequency tables and charts Measures of Central Tendency, Position and Dispersion. [12h] 3. Explain and apply concepts of basic probability including, conditional probability, Bayes' theorem, independent events and counting formulae; Probability Experiments Probability Trees Classical Probability Experimental Probability Addition and Multiplication Rules of Probability Counting Rules Bayes Theorem Discrete Probability Distributions Binomial Distribution Poisson Distribution The Normal Distribution Applications of the standard Normal Distribution Assessing Normality The Central Limit Theorem [10h] 4. Make interferences about population parameters using sample statistics using confidence interval estimates and tests of statistical hypotheses Introduction to Hypothesis Testing

	Writing hypotheses for statistical tests One Sample, Independent Samples and Paired Samples t-tests One-Way ANOVA and related Post Hoc Tests Repeated Measures ANOVA and related Post Hoc Tests z-tests for proportion size 5. Describe the application of statistics to sampling, quality control, analytical method validation and experimental design Sample Size Calculations Quality of Analytical Measurements Uncertainty Method Validation. Calibration Methods Experimental Design and Optimisation [12h] 6. Use an appropriate method for analysing relationships between variables in a dataset Relationship Modelling Pearson's Correlation Co-efficient Significance of the correlation co-efficient Simple Linear Regression Chi Square test for association Chi Square test of goodness of fit During the Practical element of the course, students will use the Data Analysis ToolPak in Microsoft Excel to carry out the various types of analysis listed in the syllabus above. [12h]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The teaching methods used will be a combination of lectures, self-study, labs, tutorials, and any combination of discussion, case study, problem-solving exercises and computer-based learning. The practical element of the course will be delivered separately to students in their various class groups Forensic Science so that the examples used in the practical application of statistics can be tailored to their field of study.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

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	Introduction to the concept of statistics
Week 2	The importance of statistics and its relationship to other sciences and its fields of application
Week 3-4	The main stages of the statistical process: the interpretation of the number of words, all the data and information, and the link between the data And tabulating it, displaying the data, calculating indicators or parameters for the data, interpretation and prediction
Week 5	The meaning of statistics and criminal statistics 1
Week 6	The meaning of statistics and criminal statistics 2
Week 7	exam

Week 8	The importance of criminal statistics in the security operation
Week 9	Sources of criminal statistics: prison statistics, judicial statistics, police statistics
Week 10	The importance of forensic statistics and its benefits
Week 11	Obstacles to criminal statistics
Week 12	Fundamentals of developing criminal statistics
Week 13	Methods for predicting crime rates
Week 13-14	A brief overview of the use of the SPSS system in forensic statistical analysis
Week 15	Exam
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly tut. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	
Week 2-3	
Week 4	
Week 5	
Week 6	
Week 7-8	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Lovrich, N.P., Pratt, T.C., Gaffney, M.J., Johnson, C.L., Asplen, C.H., Hurst, L.H., and Schellberg, T.M. (2004). National Forensic DNA Study Report, Final Report. Pullman: Washington State University.	Yes
Recommended Texts	National Academies of Sciences, Engineering, and Medicine. 2015. Support for Forensic Science Research: Improving the Scientific Role of the National Institute of Justice.	No

	Washington, DC: The National Academies Press. https://doi.org/10.17226/21772.	
Websites	https://www.sussex.ac.uk/webteam/gateway/file.php?name=sewp161.pdf&site=25	

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

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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية			
Module Title	**English Language 2**	**Module Delivery**	
Module Type	**Basic learning activities**	☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **L Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UD 21**		
ECTS Credits	**2**		
SWL (hr/sem)	**50**		
Module Level	UG1	**Semester of Delivery**	
Administering Department	All	**College**	All
Module Leader		**e-mail**	

Module Leader's Acad. Title		**Module Leader's Qualification**	MSc.
Module Tutor		**e-mail**	
Peer Reviewer Name		**e-mail**	
Scientific Committee Approval Date	12/06/2025	**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	The module aims at enabling students to learn and understand the written and spoken form of English. It also aims at teaching functional English to learners and honing their reading, writing and listening skills>.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Read and understand simple texts in English. 2. Answer simple comprehension questions and match sentences about texts. 3. Reconstruct texts by reordering sentences. 4. Understand the main idea of a text. 5. Identify specific information in a text. Writing and paraphrasing paragraphs.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. i) Grammar has a core place in language teaching and learning. ii) A wide variety of practice tasks in all the four skills are essential to language learning. iii) Everyday expressions, particularly of spoken English, also need a place in the syllabus. These can be functional, social, situational or idiomatic..
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Headway's trusted methodology combines solid grammar and practice, vocabulary development, and integrated skills with communicative role-plays and personalization. Authentic material from a variety of sources enables students to see new language in context, and a range of comprehension tasks, language and vocabulary exercises, and extension activities practice the four skills. 'Everyday English' and 'Spoken grammar' sections practice real-world speaking skills, and a writing section for each unit at the back of the book provides models for students to analyze and imitate.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	**33**	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	**2.2**
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	**17**	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	**1.1**
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	**4**	20% (5)	3 , 6,8,11	LO #1...#3, #4...#5, #7&#8, #9... #11
	Assignments	**2**	10% (5)	5 and 12	LO #3, #4 and #6, #7
	Projects / Lab.				
	Report	**1**	10% (10)	**13**	**LO #5, #8 and #10**
Summative assessment	**Midterm Exam**	**1hr**	10% (10)	**7**	**LO #1 - #7**
	Final Exam	**3hr**	**50% (50)**	**15**	**All**
Total assessment			**100% (100 Marks)**		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Course Introduction (Course material and objectives, learning outcomes, lessons and assessment discussed with the learners).
Week 2	**Unit 1. Getting to know you** **Reading:** People, the great communicators' - the many ways we communicate **Listening**: Neighbours - Steve and Mrs Snell talk about each other as neighbours **Speaking**: Information gap - Joy Darling **Writing**: Informal letters - A letter to a pen friend

	Grammar: Tenses: present, past and future
Week 3	**Unit 2. The way we live** **Reading:** 'Living in the USA' - three people talk about their experiences **Listening**: You drive me mad (but I love you)!' - what annoys you about the people in your life? **Speaking**: Information gap - people's Lifestyles. Exchanging information about immigrants to the USA **Writing**: Linking words, but, however. Describing a person **Gramma**r: Present tense , present continuous
Week 4	**Unit 3. It all went wrong** **Reading:** 'The burglars' friend'. Newspaper stories. A short story - 'The perfect crime **Listening**: A radio drama - 'The perfect crime **Speaking**: Information gap - Zoe's party. Telling stories **Writing**: Linking words: while, during, and for. Writing a story **Gramma**r: Past tenses: Past Simple and past continuous
Week5	**Unit 4. Let's go shopping!** **Reading:** 'The best shopping street in the world' **Listening**: 'My uncle's a shopkeeper' , Buying things **Speaking**: Town survey - the good things and bad things about living in your town, Discussion - attitudes to shopping p **Writing**: Filling in forms **Gramma**r: Quantity , Articles
Week 6	**Assessment Test 1. Feedback and Remedial Work**
Week 7	**Unit 5. What do you want to do?** **Reading:** 'Hollywood kids - growing up in Los Angeles ain't easy **Listening:** A song - You've got a friend **Speaking:** What are your plans and ambitions? Being a teenager **Writing:** Writing a postcard **Grammar:** Verb patterns 1, future intentions
Week 8	**Unit 6. Tell me! What's it like?** **Reading:** A tale of two millionaires' - one was mean and one was generous **Listening:** Living in another country — an interview with a girl who went to live in Sweden **Speaking:** Information gap – comparing cities **Writing:** Relative clauses 1 who/that/which/where. Describing a place **Grammar:** Comparative and superlative adjectives big, bigger, biggest, good, better, best.
Week 9	**Unit 7. Famous couples** **Reading:** Celebrity interview from Hi! Magazine with the pop star and the footballer who are in love **Listening**: An interview with the band Style **Speaking:** Mingle - Find someone who ... Role play - interviewing a band **Writing:** Relative clauses 2 who/ which/ that as the object. Writing a biography **Grammar:** Present Perfect and Past Simple
Week 10	**Unit 8. Do's and don'ts** **Reading:** Problems and suggestions **Listening:** Holidays in January - three people's advice on what to do in their country in January **Speaking:** Jobs - a game. Discussion - house rules, Asking questions about place **Writing:** Writing letters- Formal letters **Grammar:** have (got) to, should, must**Grammar:** There is /are , Prepositions: in, on, under, next to

Week 11	**Assessment Test 2. Feedback and Remedial Work**
Week 12	**Unit 9. Going places** **Reading:** The world's first megalopolis - a city of 40 million people **Listening:** Life in 2050 - an interview with Michio Kaku, Professor of Theoretical Physics **Speaking:** What will you do? Discussion - what will life be like in the 21st century? **Writing:** Linking words 2, Advantages and disadvantages **Grammar:** Time and conditional clauses
Week 13	**Unit 10. Scared to death** **Reading:** 'Don't look down' - walking on a dangerous footpath, 'Into the wild' **Listening:** When I was young p80 It was just a joke - a boy called Jamie kidnapped his friend **Speaking:** 'When I was young' - talking about your childhood **Writing:** Writing letters Formal and informal letters 1 **Grammar:** Verb patterns 2 manage to do, used to do, go walking, Infinitives, Purpose
Week 14	**Unit 11. Things that changed the world** **Reading:** Three plants that changed the world - tobacco, sugar and cotton **Listening:** The world's most common habit: chewing gum **Speaking:** Exchanging information about three plants **Writing:** Writing a review of a book or film **Grammar:** Passive
Week 15	**Unit 12. Dreams and reality** **Reading:** The vicar who's a ghostbuster **Listening:** An interview with a woman who heard voices **Speaking:** Giving advice - If I were you, I'd….. **Writing:** Writing letters Expressions in different kinds of letters **Grammar:** Second conditional

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	New Headway Pre-Intermediate by:John and Liz Soars. Oxford University Press	yes
Recommended Texts	None	
Websites	https://apoyanblog.wordpress.com/wp-content/uploads/2016/09/new-headway-preintermediate-	

	students-book.pdf

Grading Scheme مخطط الدرجات				
Group	**Grade**	التقدير	**Marks %**	**Definition**
Success Group (50 - 100)	**A** - Excellent	امتياز	90 - 100	Outstanding Performance
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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية		
Module Title	**Computer 2**	**Module Delivery**
Module Type	**Basic learning activities**	☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **L Tutorial** ☐ **Practical** ☐ **Seminar**
Module Code	**UD23**	
ECTS Credits	**3**	
SWL (hr/sem)	**75**	

Module Level	UG1	**Semester of Delivery**	
Administering Department	All Department	**College**	All colleges of the university
Module Leader		**e-mail**	
Module Leader's Acad. Title		**Module Leader's Qualification**	MSc.
Module Tutor		**e-mail**	
Peer Reviewer Name		**e-mail**	
Scientific Committee Approval Date	12/06/2025	**Version Number**	1.1

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	1. Training students on the fundamentals of computer networks. 2. Exploring the concept of e-commerce and electronic banking services. 3. Developing practical skills in computer troubleshooting. 4. Providing a foundational understanding of Artificial Intelligence (AI). 5. Introducing various applications of AI across industries. 6. Analyzing the social implications of AI on society and international relations. 7. Addressing ethical challenges associated with AI technology. 8. Exploring future trends and advancements in AI.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Students can describe basic network components, explain their functions, and understand network security fundamentals. As well as diagnose and resolve common network issues. 2. Students will know the concepts of electronic banking services and identify different forms of online banking. 3. Students will be able to identify common hardware and software problems encountered by computer users . 4. Students will describe various AI techniques and approaches, and discuss their applications. 5. Students will be able to analyze the impact of AI on daily tasks and interactions. 6. Students will identify and discuss AI applications in fields such as education, healthcare, finance, transportation, marketing, and advertising. 7. Students will reflect on the potential societal changes brought by AI technology. 8. Students will analyze the role of ethics in guiding the development and application of AI. 9. Students will evaluate potential future applications of AI and consider their

	societal and technological implications
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. 1. Course Introduction Security and Networking, Basic Network Components, and Network Security Basics. 2. Working with Concepts of electronic banking services. 3. Working with Computer Troubleshooting. 4. Introduction to AI, Techniques, Approaches, Challenges, Ethical Considerations and Applications 5. AI and Society, Ethical Challenges in AI and The Future of AI Security and
Course Description	Networking: What is a network? Types of networks. Basic network components. Network Security Basics. Understanding network threats. Network Troubleshooting E-Commerce: Concepts of electronic banking services, this includes online banking: ATM and debit card services, Phone banking, SMS banking, electronic alert, Mobile banking Computer Troubleshooting: Identifying and solving common hardware and software problems that computer users encounter. Basic troubleshooting techniques and tools for diagnosing and resolving issues. Introduction to AI: Definition of AI, History of AI, AI Techniques and Approaches, Challenges and Ethical Considerations. AI in Our Daily Lives: AI in smartphones and virtual assistants like Siri or Google Assistant. Applications of AI: Education, Healthcare, Finance, Transportation, Marketing and Advertising. AI and Society: (How AI affects social, AI and international relations, AI and the future of humanity). Ethical Challenges in AI: (AI ethics, privacy and surveillance, the impact of AI on the job market). The Future of AI: (Future trends in AI, recent research and emerging technolo
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	In this course, students are guided by: 1-Using different examples. 2- Using different styles of discussion that aim to connect the theoretical and practical sides. 3- Asking questions and giving exercises that require analysis and conclusions related to lectures. 4-Encourage students to participate in discussions and do practical work. 5- Encourage students to work in groups.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	**48**	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	**3.2**
Unstructured SWL (h/sem)	**27**	**Unstructured SWL (h/w)**	**1.8**

الحمل الدراسي غير المنتظم للطالب خلال الفصل		الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (5)	6 and 12	All
	Assignments	2	10% (5)	2 and 13	LO #1 to #8
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	2	10% (5)	13	LO #2, #4 and #6
Summative assessment	Midterm Exam	1hr	10% (10)	9	LO #1 - #5
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

	Material Covered
Week 1	Security and Networking: What is a network? Types of networks. Basic network components.
Week 2	Security and Networking (Cont.): Network Security Basics. Understanding network threats.
Week 3	E-Commerce: Concepts of Electronic banking services this include online banking: ATM and debit card services, Phone banking, SMS banking. Electronic alert, Mobile banking.
Week 4	Computer Troubleshooting: Identifying and solving common hardware and software problems that computer users encounter.
Week5	Computer Troubleshooting (Cont.): Basic troubleshooting techniques and tools for diagnosing and resolving issues.
Week 6	Introduction to Al: Definition of Al, Al, History of Al, Al Techniques and Approaches.
Week 7	Introduction to Al (Cont.): Key Characteristics of Al, Benefits of Al, Challenges and Ethical considerations.
Week 8	The Role of Al in Modern Smartphones: Al-Driven Mobile Technologies, Virtual Assistants

	(Siri, Google Assistant, Alexa).
Week 9	The Role of Al in Modern Smartphones (Cont.): Adaptive Learning, Real-Time Translation Services.
Week 10	Applications and Tools of Al: Overview of Al Applications in Various Industries, Education and Healthcare.
Week 11	Applications and Tools of Al (Cont.): Finance, Robotics and Automation Technologies.
Week 12	Al and Society: How Al affects social, Al and international relations, Al and the future of humanity.
Week 13	Ethical Challenges in Al: Al ethics, privacy and surveillance, the impact of Al on the job market.
Week 14	Communications and Emails: Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails; Using Emails; Document collaboration.
Week 15	The Future of Al: Future trends in Al, recent research and emerging technologies.

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Introduction to Networking Tools and Setup • Lab Orientation: Introduction to networking equipment and basic networking tools. • 2- Setup of a simple network, understanding network topologies.
Week 2	Basic Network Configuration • Configuring IP addresses, subnetting, and basic router setup. • Ping and traceroute commands to test network connectivity
Week 3	Network Security Basics • Hands-on with firewalls: Configuring basic firewall rules. • Understanding packet sniffing and analyzing network traffic with tools like Wireshark
Week 4	Troubleshooting Network Issues • Common network troubleshooting commands: `ipconfig`. • Diagnosing connectivity issues and network troubleshooting scenarios.
Week 5	Introduction to E-Commerce Platforms • Overview of popular e-commerce platforms and payment gateways. • Setting up a demo e-commerce website and exploring payment options.
Week 6	Digital Banking Simulation • Simulating online banking transactions (ATM, debit card, mobile banking).
Week 7	Computer Troubleshooting (Hardware) • Identifying and diagnosing common hardware issues. • Practicing component replacement (e.g., RAM, hard drive) and system optimization.

Week 8	Computer Troubleshooting (Software) • Diagnosing and fixing common software issues (e.g., system crashes, software conflicts). • Using system diagnostic tools and software repair utilities.
Week 9	Introduction to AI Tools and Software Exploring basic AI tools and platforms, such as Python libraries (NumPy, Pandas).
Week 10	AI in Daily Life: Virtual Assistants • Setting up and experimenting with virtual assistants like Siri, Google Assistant, or Alexa.
Week 11	AI in Various Industries • Case study labs focusing on AI applications in healthcare, finance, or marketing.
Week 12	AI and Society • Analyzing AI-driven social media algorithms. • Experimenting with recommendation systems and discussing ethical concerns.
Week 13	Ethical AI and Privacy • Using tools to analyze privacy and surveillance aspects of AI (e.g., face recognition demo).
Week 14	Future Trends in AI • Hands-on session with generative AI models or recent AI advancements.
Week 15	Capstone Lab Project and Review • Students work on a mini-project integrating networking, e-commerce, troubleshooting, or AI

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	1. Ahmed Banafa, "Introduction to Artificial Intelligence (AI)", 1st Edition (2024). 2. الدكتور عادل عبد النور, مدخل إلى عالم الذكاء الاصطنا ي ع " 2005	yes
Recommended Texts	• Michael Miller, ABSOLUTE BEGINNER'S GUIDE TO COMPUTER BASICS, 5th EDITION, QUE Indianapolis, Indiana 46240, 2010. • Paul McFedries, TEACH YOURSELF VISUALLY MICROSOFT	

Websites	https://course.elementsofai.com/ https://www.simplilearn.com/tutorials/artificial-intelligence-tutorial/what-is-artificialintelligence https://pll.harvard.edu/course/cs50s-introduction-artificial-intelligence-python	

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

NB 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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية		
Module Title	جرائم نظام البعث في العراق	**Module Delivery**

Module Type	Basic learning activities		☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **L Tutorial** ☐ **Practical** ☒ **Seminar**		
Module Code	**UD24**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	2	**Semester of Delivery**	1		
Administering Department	جميع اقسام الكلية	**College**	College of		
Module Leader		**e-mail**			
Module Leader's Acad. Title		**Module Leader's Qualification**			
Module Tutor	Name (if available)	**e-mail**			
Peer Reviewer Name	none	**e-mail**			
Scientific Committee Approval Date	11/06/2024	**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. التعرف على ماهية الجريمة لغة واصطلاحا وماهية أقسام الجرائم. 2. التعرف على جرائم نظام البعث وفق قانون المحكمة الجنائية العراقية العليا عام 2005 م. 3. تنمية وعي الطلب بجرائم نظام البعث وفق توثيق قانون المحكمة الجنائية العراقية العليا لسنة 2005 م. 4 دراسة الجرائم التي ارتكبها نظام البعث على مدى سنوات طويلة واثارها النفسية والاجتماعية. 5. التعرف على صور انتهاكات حقوق الانسان وجرائم السلطة والتعرف على الجرائم البيئية لنظام البعث

	في العراق. .6 تعزيز الوعي بحقيقة ما جرى من مآسي المقابر الجماعية المرتكبة من النظام البعثي في العراق.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1 . تمكين الطالب من معرفة المفاهيم النظرية للجرائم وأركان الجرئم . 2 . تمكين الطالب من معرفة أقسام الجرائم . 3. تمكين الطالب من معرفة قانون المحكمة الجنائية العراقية العليا لسنة 2005 4 . فهم تشكيل المحكمة الجنائية العراقية العليا لسنة 2005 والتعرف على تشكيل المحكمة أجراءات التقاضي امام المحكمة. 5 . يتعلم الطالب أنواع الجرائم الدولية على وفق النظام الاساسي للمحكمة الجنائية الدولية. 6 . معرفة الطالب بألاثارالنفسية والاجتماعية لجرائم نظام البعث. 7 . يتمكن الطالب من فهم موقف النظام البعثي من الدين من خلال فهم عقيدة النظام السياسي سبيلاً لفهم موقف النظام من الدين. 8 . يتمكن الطالب من التعرف على صور أنتهاكات القوانين العراقية وأنتهاكات حقوق الانسان وجرائم السلطة. 9 . تمكين الطالب من التعرف على بعض قرارات الانتهاكات السياسية والعسكرية لنظام البعث. 10 يتعرف الطالب على أماكن السجون والاحتجاز لنظام البعث. 11 معرفة الطالب بالجرائم البيئية وبأثار الجرائم البيئية لنظام البعث، ويتعرف جرائم المقابر الجماعية.
Indicative Contents المحتويات الإرشادية	**الجزء الاول : جرائم نظام البعث وفق قانون المحكمة الجنائية العراقية العليا لعام 2005 م، والجرائم النفسية والاجتماعية وآثارها وابرز انتهاكات النظام البعثي في العراق:** التعريف بالجريمة لغة وأصطلاحاً اركان واقسام الجريمة (2 ساعة). جرائم نظام البعث وفق قانون المحكمة الجنائية العراقية العليا عام 2005 م : أنواع الجرائم الدولية، القرارات الصادرة من المحكمة الجنائية العليا (2ساعة). وابرز القضايا التي نظرت فيها المحكمة) 2 ساعة (.الجرائم النفسية والاجتماعية وآثارها وابرز انتهاكات النظام البعثي في العراق: الجرائم النفسية، اليات الجرائم النفسية (2 ساعة) اثار الجرائم النفسية ، الجرائم الاجتماعية (2 ساعة) . عسكرة المجتمع، موقف النظام البعثي من الدين (2 ساعة) . أنتهاكات القوانين العراقية، صور أنتهاكات حقوق الانسان (2 ساعة) . جرائم السلطة، بعض قرارات الانتهاكات السياسية والعسكرية لنظام البعث، أماكن السجون والاحتجاز لنظام البعث (2 ساعة.) **الجزء الثاني : الجرائم البيئية لنظام البعث في العراق، جرائم المقابر الجماعية:** الجرائم البيئية لنظام البعث في العراق: التلوث الحربي والاشعاعي – أستعمال الاسلحة المحرمة دوليا ومخاطر الالغام. (2 ساعة) التلوث بالمواد المشعة، أثار ا ستخدام الاسلحة المحرمة دوليا (2 ساعة) تدمير المدن والقرى (سياسة الارض المحروقة): قصف المدن، قصف العتبات المقدسة والمساجد والحسينيات، معركة

	نهر جاسم ، حرق آبار النفط (2 ساعة). تجفيف الاهوارو أثارها البيئية والاجتماعية والاقتصادية (2 ساعة). ، تجريف بساتين النخيل والاشجار والمزروعات (2 ساعة). جرائم المقابر الجماعية وموقف الامم المتحدة منها (2 ساعة). احداث المقابر الجماعية المرتكبة من النظام البعثي في العراق، التصنيف الزمني لمقابر 2ساعة). (2003 - ابادة الجماعية في العراق للمدة 1963

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1- زيادة وعي الطالب بالجرائم التي ارتكبها نظام البعث في العراق وحقيقة ما جرى من مآسي وويلات بحق الشعب العراقي. 2- اكتساب الطالب ثقافة عامة بماهية الجرائم واركانها واقسامها وموقف المشرع العراقي منها. 3- زيادة وعي الطالب بموقف القانون الدولي والمحاكم الجنائية الدولية من الجرائم والانتهاكات التي ترتكبها الانظمة السلطوية

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
	Quizzes	2	10% (10)	5, 10	LO #1, 2, 10 and 11

Formative assessment	**Assignments**	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / tutorial.	1	10% (10)	Continuous	
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	**Midterm Exam**	1 hr	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	محاضرة تعريفية عن المادة واهميتها.
Week 2	التعريف بالجريمة لغة واصطلاحا، أقسام الجريمة، جرائم نظام البعث وفق قانون المحكمة الجنائية العراقية العليا عام 2005م ، أنواع الجرائم الدولية.
Week 3	القرارات الصادرة من المحكمة الجنائية العليا، وأبرز القضايا التي نظرت فيها المحكمة.
Week 4	الجرائم النفسية، اليات الجرائم النفسية.
Week 5	اثار الجرائم النفسية، الجرائم الاجتماعية
Week 6	عسكرة المجتمع، موقف النظام البعثي من الدين.
Week 7	انتهاكات القوانين العراقية، صور انتهاكات حقوق الانسان، جرائم السلطة.
Week 8	بعض قرارات الانتهاكات السياسية والعسكرية لنظام البعث، أماكن السجون والاحتجاز لنظام البعث.
Week 9	الجرائم البيئية لنظام البعث في العراق: التلوث الحربي والاشعاعي – استعمال الاسلحة المحرمة دوليا ومخاطر الالغام .
Week 10	التلوث بالمواد المشعة، أثار ا ستخدام الاسلحة المحرمة دولي ا
Week 11	تدمير المدن والقرى)سياسة الارض المحروقة.)
Week 12	تجفيف الأهوار أثارها البيئية والاجتماعية والاقتصادية.
Week 13	تجريف بساتين النخيل والاشجار والمزروعات.
Week 14	جرائم المقابر الجماعية، أحداث المقابر الجماعية المرتكبة من النظام البعثي في العراق.
Week 15	التصنيف الزمني لمقابرالابادة الجماعية في العراق للمدة 196 - 2003.
Week 16	الامتحان النهائي

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	المنهج المقر الدراسي للجامعات الحكومية و الأهلية كافة كتاب وزارة التعليم العالي والبحث العلمي ذي العدد (ت م 3 7588 في 2023/10/19)	yes
Recommended Texts		No
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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية		
Module Title	**Clinical Biochemistry**	**Module Delivery**
Module Type	**Core**	☒ **Theory** ☒ **Lecture**
Module Code	FOR-23013	

ECTS Credits	7			☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
SWL (hr/sem)	175				
Module Level		1	**Semester of Delivery**		1
Administering Department		Type Dept. Code	**College**	Type College Code	
Module Leader	Name		**e-mail**	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		01/09/2025	**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-This module aims to teach you core concepts in biochemistry including topics on structure of proteins, enzyme kinetics and metabolic pathways. 2-The module will also provide a background to fundamental aspects of chemistry. 3-This module provides you with the core knowledge and skills to enhance performance in the area of biological chemistry towards best benefit for forensic science in:

	❖ Metabolism, Analytical Techniques in Biochemistry, ❖ Bioinorganic Chemistry ❖ Energy Metabolism
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Module-specific skills 1. Understand the biological, chemical and physical principles associated with forensic investigation. 2. Discuss the analytical techniques used in forensic science and their correct choice. 3. Demonstrate knowledge of the principal scientific techniques and skills required for the recognition, processing, recording, preservation, recovery, analysis and interpretation of evidence at and from a range of crime scenes. 4. Evaluate the limitations and principles of uncertainty in analysis and interpretation of forensic evidence. 5. Construct logical arguments and effectively communicate theories in different formats, including crime scene maps and a sequence of events. 6. Interpret written instruction to create time and spatial reconstructions of complex events with attention to detail. Personal and key skills 7. Apply scientific principles to real life situations 8. Analyse and evaluate independently a range of research-informed literature and synthesise research-informed examples from the literature into written work 9. Illustrate and discuss the contested and provisional nature of knowledge and understanding 10. Analyse in detail essential facts and theory in a sub-discipline of the biosciences 11. Apply factual information to develop, with some guidance, a logical and reasoned argument with valid conclusions.

	12. Effectively communicate justifications, evidence and conclusions using both graphical and written means in a manner appropriate to the intended audience. 13. Work in a small team and deal proficiently with the issues that teamwork requires (i.e. communication, motivation, decision-making, awareness, responsibility, and management skills, including setting and working to deadlines)
Indicative Contents المحتويات الإرشادية	• **Examination [10h]** **Written assessment typically includes exams and multiple choice tests.** • **Practical[10h]** **Practical is an assessment of your skills and competencies. This could include presentations, school experience, work experience or laboratory work. [10h]** • **Coursework [12h]** **Coursework typically includes essays, written assignments, dissertations, research projects or producing a portfolio of your work.[10h]** • **Final year research projects allow students to gain considerable research experience in one of the research laboratories. Working alongside world-leading researchers enriches the students experience and assists them in pursuing a career in biochemical research.[12h]**

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 discussion , for verities of information which could be applied to make real and ideal behaviour with forensic as science and as skills should be developed.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.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	6.1
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6.5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

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	Introduction to Biochemistry
Week 2	Enzymes 1
Week 3	Enzymes 2
Week 4	Carbohydrates 1
Week 5	Carbohydrates 2
Week 6	Carbohydrates 3
Week 7	Carbohydrates Metabolism
Week 8	Exam
Week 9	Lipids

Week 10	Lipids Metabolism
Week 11	Cholesterol
Week 12	Amino Acids
Week 13	Proteins 1
Week 14	Proteins 2
Week 15	Exam
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Chemistry Laboratory Safety Rules
Week 2	Lab 2: Spectrophotometry
Week 3	Lab 3: Determination of Ca Concentration in Serum
Week 4	Lab 4: Determination of P Concentration in Serum
Week 5	Lab 5: Determination of Total Iron Concentration in Serum
Week 6	Lab 6: Determination of Mg Concentration in Serum
Week 7	Lab 7: Exam
Week 8	Lab 8:Determination of Glucose Concentration in Serum
Week 9	Lab 9:Determination of Urea Concentration in Serum
Week 10	Lab 10:Determination of Creatinine Concentration in Serum
Week 11	Lab11:Determination of Uric Acid Concentration in Serum
Week 12	Lab 12:SGOT and SGPT
Week 13	Lab 13:Glucose Tolerance Test
Week 14	Exam
Week 15	Review All Previous Experiences

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**

Required Texts	R. H. Garrett, C. M. Grisham, Biochemistry, Brooks / Cole Cengage Leatning, 2011	Yes
Recommended Texts	R. Brückner, Reaktionsmechanismen, Spektrum Verlag, 3rd Edition, 2004	No
Websites	https://biosciences.exeter.ac.uk/staff/module/?mod_code=BIO2068	

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية		
Module Title	**Genetics Science**	**Module Delivery**
Module Type	**Basic**	☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**
Module Code	**FOR-23014**	
ECTS Credits	**5**	
SWL (hr/sem)	**125**	

Module Level		1	**Semester of Delivery**		1
Administering Department		FORN	**College**	SC	
Module Leader			**e-mail**	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		01/09/2025	**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		**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-genetics begins with scientific research, which translates through clinical practice to touch the lives of patients and families with genetic disease on a daily basis. 2- This module aims to provide a lens through which to view the core aspects of this multidisciplinary subject, describing how and why genetics is important in the development, diagnosis and treatment of disease. 3-focus firstly on the basics of how genetic material is replicated, curated, and inherited, to enable an understanding of how genetic sequence variants lead to genetic disease, or to susceptibility to complex diseases. 4-Genetic research and disease often raises challenging ethical questions and considerations, which will also be explored in the module You will also explore the molecular mechanisms by which genes are regulated alongside the contribution and role of environment influences.

	5- Overall the module link clinical genetics practice with internationally-leading research strengths at CMH, to provide a holistic view of medical genetics from the scientific, clinical and patient perspectives.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	On successfully completing the module you will be able to... 1. Describe in some detail and discuss the cellular and molecular basis of inheritance 2. Explain the differences between acquired, monogenic, polygenic and epigenetic disease 3. Explain the different mechanisms by which genes are regulated in humans 4. Discuss the contribution of genetics and environment to disease processes in humans 5. Show awareness of, and discuss the ethical issues in modern genetics 6. Discuss with examples the importance of interaction between patients, scientists and clinician
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. Our genetics influence every aspect of our growth, reproduction and health. Due to this, a deep understanding of how our genes are inherited and regulated, and how genetic sequence variants or epigenetic factors affect gene function is crucial for understanding normal human development, and the basis of genetic diseases.[16h] Knowing how molecular pathways function and are altered by gene variants is important to identify molecular biomarkers to monitor disease onset and progression, and define new therapies to treat disease. For example, research studies have detailed how breast cancer risk is greatly increased by the inheritance of specific *BRCA1* gene variants, and discovered that some patients with maturity-onset diabetes of the young (MODY) may transfer from insulin injections onto sulphonylurea tablets taken orally. [16h] Thus medical genetics as practiced today involves close scientific, clinical and patient interaction. This module describes how genomic research and clinical genetic services work in close synergy to deliver modern diagnostic and clinical genetic services, and discusses some of

	the ethical challenges and considerations, as well as patient perspectives, associated with this ever increasingly important discipline.[16h] Genetics provides an introduction to both classical and modern molecular genetics. We start by looking at Mendelian genetics, including consideration of how genetic maps are created and an introduction to human pedigrees. We then examine the basic mechanisms of transcription and translation and how gene expression can be regulated. The module concludes by considering the molecular tools that geneticists use and how these have been used to uncover the content of diverse genomes.[16h]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	• Aligning genome data to reference sequence using up to date alignment programmes (e.g. BWA). • Assessment of data quality through application of quality control measures. • How to determine the analytical sensitivity and specificity of genomic tests. • Use of tools to call sequence variants e.g. GATK, annotation of variant-call files using established databases. • Filtering strategies of variants, in context of clinical data, and using publicly available control data sets • Use of multiple database sources, in silico tools and literature for pathogenicity evaluation, and familiarisation with the statistical programmes to support this. • Principles of integration of laboratory and clinical information, and place of best practice guidelines for indicating the clinical significance of results.

Student Workload (SWL) الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	75	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	50	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	3.3
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, 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	Introduction - Introduction to genetic
Week 2	Classical Mendelian genetics
Week 3	The population genetic
Week 4	Human genome
Week 5	Functions of gene and chromosome
Week 6	Mitosis and meiosis genetic code
Week 7	Genetic variation
Week 8	Gene flow and new species
Week 9	Mutation and chromosomal abnormalities
Week 10	Medical genetic diseases
Week 11	Karyotype, Banding techniques

Week 12	Mutagens and carcinogens
Week 13	Autosomal dominant inheritance
Week 14	Autosomal recessive inheritance
Week 15	Exam
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Organisms supported as a model system for genetics
Week 2	Lab 2: The first law of Mendel and the deviations from Mendel's first law
Week 3	Lab 3: The second law of Mendel and the deviation from Mendel's second law
Week 4	Lab 4: The quantitative inheritance
Week 5	Lab 5: Genetics and sex
Week 6	Lab 6: Link and crossing over
Week 7	Lab 7: Cases of crossing over suppression
Week 8	Lab 8: Genetic mapping
Week 9	Lab 9: Mutation and chromosomal abnormalities
Week 10	Lab 10: Medical genetic diseases
Week 11	Lab 11: Karyotype, Banding techniques
Week 12	Lab 12: Mutagens and carcinogens
Week 13	Lab 13: Autosomal dominant inheritance
Week 14	Lab 14: Autosomal recessive inheritance
Week 15	Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	FReece J, Urry L, Cain M, Wasserman S, Minorsky P, Jackson, R. (Eds) 9th Global Edition, 2011, Campbell Biology, Pearson Benjamin Cummings.	Yes

Recommended Texts	Butler, J. (2005) Forensic DNA Typing 2nd Ed. Elsevier (MA) ISBN: 9780121479527 Forensic Science – Jackson A.R. & Jackson J., Prentice Hall, ISBN: 130432512	No
Websites	Cochrane reviews: http://www.cochrane.org/cochrane-reviews Pubmed/MedLine: http://www.ncbi.nlm.nih.gov/pubmed	

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.

MODULE DESCRIPTION FORM

Module Information			
Module Title	**Anatomy and Physiology**	**Module Delivery**	
Module Type	**Core**	☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	FOR-23015		
ECTS Credits	6		
SWL (hr/sem)	150		
Module Level	1	**Semester of Delivery**	1

Administering Department	Forensic \FOR	**College**	science
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		**e-mail**	
Scientific Committee Approval Date	01/09/2025	**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. The aim of the module is to introduce and explore the fundamental concepts of human physiology and anatome from cellular functions through to systems that are responsible for homeostasis. 2. The module aims to begin with the broader principles of how cells communicate and how cells function. 3. To explore key anatome with physiological systems: ➢ investigating the central and peripheral nervous systems, ➢ how differing muscles are stimulated to contract, ➢ the digestive system and key associated nutritional principles, the cardiorespiratory system, ➢ the renal system and its regulatory role and the immune system and how it aims to protect the body against infection and disease. 4. This module also aims to introduce the principles of group learning, critical thinking, problem solving and communication of scientific information.

Module Learning Outcomes مخرجات التعلم للمادة الدراسية	On successfully completing the module you will be able to... • 1. Demonstrate an integrated basic knowledge of the biomedical principles underpinning human health with forensic science . • 2. Demonstrate a basic awareness of the scientific principles underpinning the prevention, diagnosis and management of some important diseases • 3. With guidance, apply skills of critical thinking, problem-formulation and problem-solving.
Indicative Contents المحتويات الإرشادية	1-Cardiovascular physiology [10h] Structure and function of the heart and blood vessels from single cell to whole system. Cardiac electrical activity and its measurement. Perfusion and its control. Blood pressure regulation. Embeds a variety of anatomical and pathophysiological examples with reference to both biomedical and forensic applications throughout e.g. coronary heart disease. 2-Respiratory anatome and physiology [10h] Structure and function of the respiratory tract from single cell to whole system. Lung mechanics and ventilation. Oxygen and carbon dioxide transport. Central and peripheral control of respiration. Embeds a variety of pathophysiological examples with reference to both biomedical and forensic applications throughout e,g, asthma 3 -Reproductive anatome and physiology[15h] Structure and functions of the reproductive systems from single cell to whole system. Normal body control of the female reproductive system and hormonal cycles. Embeds a variety of anatomical and psychophysiology examples with reference to both biomedical and forensic applications throughout e.g. infertility. 4- Neuro and sensory anatomical and physiology [15h] Basic structures and divisions of the peripheral and central nervous system from single cell to whole system. Structure and function of nerves and the cells in the nervous system. How nerves communicate. Higher CNS functions and the ANS. Structure and function of key sensory organs. Embeds a variety of anatomical and

	pathophysiological examples with reference to both biomedical and forensic applications throughout e.g. dementia 5 -Skeletomuscular system [14] Skeletal muscle structure and ultrastructure. Muscle and fibre types. Functions of tendons, joints, bones, muscle ligaments and fascia. The neuromuscular junction. Excitation - contraction coupling. The sliding filament theory. Muscle spindles. Golgi tendon organs. Reflex arcs. Embeds a variety of anatomical and pathophysiological examples with reference to both biomedical and forensic applications throughout e.g. muscular dystrophy.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The module will consist of lectures with theoretical analysis and real-world examples and applications to improve students' learning and analytical skills. In-class group discussions of research papers will facilitate deeper understanding and encourage critical thinking. The assessment includes two summative elements that are a group recorded quiz and an individual written essay. The pass mark for the written assignment and module is 50%. A qualifying mark of 40% on each assessed component of the module must be achieved to pass the module. Each of the component marks is then combined, using the appropriate weighting, to give an overall mark for the module. If the overall mark is less than 50% when the weighting has been applied to the components, this constitutes a failure of the module.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	6.1
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	72	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	4.8
Total SWL (h/sem)	150		

الحمل الدراسي الكلي للطالب خلال الفصل	

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	Intruduction for Anatomy and Physiology Organizing Principles such as Homeostasis & Feedback Loops
Week 2	Cell, tissue , and Membrane
Week 3	Skelton,and muscular
Week 4	Nervous and endocrine system
Week 5	Cell Physiology & Membrane Transport
Week 6	Tissue Physiology,Neurophysiology and Sensory Physiology
Week 7	Endocrinology,Muscle Physiology
Week 8	Cardiovascular and Respiratory Physiology
Week 9	Immunology
Week 10	Lymphatic and Respiratory System
Week 11	Osmoregulatory Physiology
Week 12	Gastrointestinal Physiology
Week 13	Reproductive Physiology
Week 14	Digestive and Urinary System
Week 15	exam

Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Erythrocyte Physiology
Week 2	Lab 2: Pulse and Pressure
Week 3	Lab 3: EEG and States of Consciousness
Week 4	Lab 4: Brain Imaging
Week 5	Lab 5: Electromyography & Dynamometry
Week 6	Lab 6: Electrocardiography
Week 7	Lab 7: exam
Week 8	Lab 8: Ventilation & Spirometry
Week 9	Lab 9 : Urinalysis
Week10	Lab10: View film “Fed Up”, food diary assigned
Week11	Lab11: Physiology of Adiposity; SOS of lab instructor
Week12	Lab12: Lower extremely bones
Week13	Lab13: Musules tissue and skin
Week14	Lab14: The brine
Week15	review before final exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Human from Cells to Systems. Sherwood, L. (2016, 9th edition) Cengage Learning.	no
Recommended Texts	https://training.seer.cancer.gov/linksre/	yes
Websites	https://www.ucc.ie/en/physiology/courses/physiologyasamodule/	

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Laboratory equipment and techniques**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**FOR-23016**				
ECTS Credits	**5**				
SWL (hr/sem)	**125**				
Module Level			**Semester of Delivery**		
Administering Department			**College**		
Module Leader			**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			**e-mail**		
Scientific Committee Approval Date	01/09/2025		**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 module aims to introduce students to Microscope and types , the spectroscopic and chromatographic techniques , Electrophoresis , Balance , Temperature control instrument , PCR & RT-PCR and provide them with hands-on experience of laboratory instrumental analysis, further developing the practical skills gained in the Laboratory Chemical & Biological module. This module also aims to provide training to the students on the research methodology and skills, *e.g*. literature survey, experimental design, data acquisition, result analysis and report writing-up, which will pave the way for their final year research project.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Knowledge and Understanding: Formulate experimental methods for all instrument and design appropriate experimental set-ups. Demonstrate the sample preparation and operational skills using the advanced all this instrument. Acquire and critically assess experimental results with comparison to standards or databases. Transferable/Key Skills and other attributes: • Safe-working laboratory practices • Observation, recording and presenting complex scientific data • Numeracy, literacy, IT and Information management • Time management • Problem solving skills • Literature search, data processing and academic writing skills

	• Team working
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. <u>Part A - primary information of laboratory instrument & techniques</u> On completion of this module, students are expected to be able to: 1 Demonstrate knowledge of introduction of instrument & types 2 Demonstrate knowledge of the principle & application & types of instrument. 3 Demonstrate an understanding of Microscope. [15 hrs] 4 Demonstrate understanding of the Electron Microscope. [15 hrs] Balance , Temperature control instrument (Incubator , Water bath , Autoclave , Hot air oven , Hotplate Magenetic Stirrer) and types. [16 h] PCR & RT- PCR , Electrophoresis , chromatography , pHmeter ,Ultrasonic , Centrifuge . [15 hrs] <u>Part B - essential and details</u> Fundamentals To publicise the key learning resources that are important or essential for those studying the module or to demonstrate the academic foundation of the module. To provide a short list, indicating the type and level of information that students are expected to consult. Further, in depth, guidance and a comprehensive list of reading and resources should be made available . [15 hrs] Normally a short list of books or articles in reference format (author, date, title, and publisher). If a core text or textbook exists, this should be indicated. Lists should be indicative, rather than a full bibliography.. [7 hrs] To identify where the whole module may be taken by students at a distance, either by arrangement with the Programme Director or because it forms part of a programme that is wholly or partly delivered virtually. If distance learning is possible, a second module descriptor will need to be created, to identify learning, teaching, assessment and contact methods/support for students in the distance learning version of the module.. [15 hrs]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	

	To describe the learning activities of the students and the teaching methods of the staff. Effective module design should result in a varied range of active learning experiences for students, including learning activities which are 'research-like'. Activities should, of course, motivate and encourage deep learning (reflection on wider meanings, rather than superficial memorisation of information). They should also be varied and flexible enough to accommodate different learning styles and orientations, and allow for inclusivity of students from different backgrounds and with different kinds of learning abilities. Learning activities therefore need to include reference to independent, interdependent (peer- supported) and online activities, as well as participation in different kinds of taught class.

Student Workload (SWL)
الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	47	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	3.1
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, 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	Introduction of instrument
Week 2	Microscope , light microscope and Electron Microscope
Week 3	Balance , Temperature control instrument (Incubator , Water bath) and types.
Week 4	Temperature control instrument (Autoclave , Hot air oven , Hotplate Magenetic Stirrer) and types.
Week 5	Polymerase chain reaction (PCR)
Week 6	Exam Mid-term Exam
Week 7	Real-Time polymerase chain reaction
Week 8	Electrophoresis
Week 9	Spectrophotometey
Week 10	Laboratory Centrifuge (principle , types& Application).
Week 11	Chromatography (principle , types& Application).
Week 12	Ultrasonic (principle , types& Application).
Week 13	PHmeter (principle , types& Application).
Week 14	HPLC
Week 15	EXAM
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1 : Introduction of instrument
Week 2	Lab 2 : Microscope , light microscope and Electron Microscope (particle application on use instrument).
Week 3	Lab 3 : Balance , Temperature control instrument (Incubator , Water bath) and types. (particle application on use instrument).
Week 4	Lab 4: Temperature control instrument (Autoclave , Hot air oven , Hotplate Magenetic Stirrer) and types. (particle application on use instrument).
Week 5	Lab 5: Polymerase chain reaction (PCR) (particle application on use instrument).

Week 6	Exam Mid-term Exam (particle application on use instrument).
Week 7	Lab 6: Real-Time polymerase chain reaction(particle application on use instrument).
Week 8	Lab 7 : Electrophoresis(particle application on use instrument).
Week 9	Lab 8 : Spectrophotometey(particle application on use instrument).
Week 10	Lab 9 : Laboratory Centrifuge (principle , types& Application). (particle application on use instrument).
Week 11	Lab 10 : Chromatography (principle , types& Application). (particle application on use instrument).
Week 12	Lab 11 : Ultrasonic (principle , types& Application). (particle application on use instrument).
Week 13	Lab 12 : PHmeter (principle , types& Application). (particle application on use instrument).
Week 14	Lab 113 : HPLC (principle , types& Application). (particle application on use instrument).
Week 15	Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	FReece J, Urry L, Cain M, Wasserman S, Minorsky P, Jackson, R. (Eds) 9th Global Edition, 2011, Campbell Biology, Pearson Benjamin Cummings.	Yes
Recommended Texts	Lobban C.S. (1992) *Successful Lab Reports: A Manual for Science Students,* Cambridge University Press. Higson, S.P.J. (2003) *Analytical Chemistry*, Oxford University Press. Skoog, D.A., Holler, F.J. and Nieman, T.A. (1998) *Principles of instrumental analysis*, Orlando: Harcourt Brace College Publishers. Mathew Folaranmi Olaniyan (2017) **LECTURE NOTES ON LABORATORY INSTRUMENTATION AND TECHNIQUES.** Edition: 1ST Editor: ACHIEVERS UNIVERSITY, OWO-NIGERIA/DR A.A. OLADELE(READER) ISBN: ACHIEVERS UNIVERSITY, OWO-NIGERIA	No

Websites	Mathew OLANIYAN | Professor | PhD; Cert. in Immunology: PGDE; FMLSCN; FWAPCMLS in Immunology | Medical Laboratory Science/ School of Postgraduate Studies | Research profile (researchgate.net)

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية			
Module Title	**crime scince**	**Module Delivery**	
Module Type	**Basic**	☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**FOR23018**		
ECTS Credits	2		
SWL (hr/sem)	**50**		
Module Level	1	**Semester of Delivery**	1

Administering Department	FORN	**College**	SC
Module Leader		**e-mail**	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	01/09/2025	**Version Number**	1.0

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	none	**Semester**	2/1
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	Upon completion of this module, the student can: 1-explain the key theories and approaches of Crime Science. differentiate the (classical) sociological-criminological approach from modern Crime Science. 2-apply the Crime Science mind-set to real-life crime and security problems. 3-critically reflect upon crime prevention and security policymaking. 4-Formulate a response strategy to security and crime problems. 5-analyse long-standing as well as pressing future issues in crime prevention and detection. 6-Upon completion of this module, the student can: 7-explain the key theories and approaches of Crime Science. 8-differentiate the (classical) sociological-criminological approach from modern Crime Science. 9-apply the Crime Science mind-set to real-life crime and security problems. 10-critically reflect upon crime prevention and security policymaking.

	11-formulate a response strategy to security and crime problems. 12-analyse long-standing as well as pressing future issues in crime prevention and detection.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	On successfully completing the module you will be able to... 1. Describe in some detail and discuss the cellular and molecular basis of inheritance 2. Explain the differences between acquired, monogenic, polygenic and epigenetic disease 3. Explain the different mechanisms by which genes are regulated in humans 4. Discuss the contribution of genetics and environment to disease processes in humans 5. Show awareness of, and discuss the ethical issues in modern genetics 6. Discuss with examples the importance of interaction between patients, scientists and clinician
Indicative Contents المحتويات الإرشادية	Lectures: [6 h] Introduction to Forensic Science, Crime Scene to Court Process. Scenes of Crime: The role of crime scene investigators in the preservation, recovery and recording of evidence at the scene of crime and evaluation of crime scene evidence. Overview of Forensic Science in the UK: Police Forces Scientific Support in relation to other Forensic Agencies. Overview of physical evidence including DNA, Toxicology, footwear and tool marks, finger-marks. Introduction to forensic evidence associated with arson, explosions and firearms. Courts and their structure. Giving expert testimony; evidence-in-chief and cross-examination. Admissibility of forensic evidence in Court: differences between UK and USA. Writing of laboratory reports and expert witness statements. Health and safety issues at scenes and in forensic examination. Thus: the main inductive contents include: [4h for each part] 1-The importance of a crime scene and of material evidence in criminal proceedings 2-The role of the court-appointed expert in criminal proceedings 3- Forms of evidence, kinds of traces and methods of analysis 4-Searching for and securing evidence and Case study 5-Searching for and recovering evidence that is accepted in court 6- Independent analysis and documentation of this evidence 7- Defence and discussion of the results. 8-Computer systems and IT/computing science Internet, WWW, HTML Calculations based on spreadsheet programs Basics of programming .

	9-The students provide evidence of active participation in the tutorial relating to the lecture by solving exercises in class and/or by taking a written test at the end of the semester.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Students will attend formal timetabled lectures throughout the module. There will be class discussions and the opportunity to share information, and develop good communication skills. Students will visit a series of simulated crime scenes, where they will gain practical experience of crime scene examination. This will include the search, identification and recording of evidence located at these scenes. Students will complete reports on crime scene examination including, risk assessment, results and evaluation.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

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	Introduction - crime science
Week 2	collect and package evidence, prepare laboratory submission forms and identify errors in them,
Week 3	recover contact trace material in practical forensic examination, and write a simple expert report
Week 4-5	The role of crime scene investigators in the preservation, recovery and recording of evidence at the scene of crime and evaluation of crime scene evidence.
Week 6	the scope, methods and limitations of crime scene examination and forensic enquiry in the crime to court process.
Week 7	main evidence types in volume, major and serious crimes
Week 8	Evidence found at crime scenes.
Week 9	Investigation of crime scenes.
Week 10	Search techniques.
Week 11	Recovering evidence and other information.
Week 12	Team working at crime scenes.
Week 12-13	Reporting crime
Week 14	scene investigations.
Week 15	Exam
Week 16	**Preparatory week before the final Exam**

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Cook, T. Hill, M. and Hibbitt, S. (2016) Blackstone's Crime Investigator's Handbook. Oxford: Oxford University Press.	Yes

Recommended Texts	Beaufort- Moore, D. (2015) Crime Scene Management and Evidence Recovery, 2nd Edition. Oxford: Oxford University Press	No
Websites	Self html (the English version is still (early 2005) in its infancy at: http://www.selfhtml.org/	

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
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	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

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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية		
Module Title	**اللغة العربية 2**	**Module Delivery**
Module Type	**Basic learning activities**	☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial**
Module Code	**UD12**	
ECTS Credits	**2**	

SWL (hr/sem)	**50**			☐ **Practical** ☐ **Seminar**	
Module Level		UGI	**Semester of Delivery**		1
Administering Department		All	**College**	All	
Module Leader			**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		3/11/2024	**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 Objectives أهداف المادة الدراسية	الهدف الأساس في تدريس اللغة العربية للأقسام العلمية : • اخذ الطالب الى روعة بيان القران الكريم ، وادراكه يقينا ان التعبير القراني تعبير فني مقصود ، كل لفظة ، وكل حرف وضع وضعا فنياً مقصوداً • تقويم اللسان العربي . واعتماد العربية الفصحى في الحديث والكتابة ، ولزيادة رصيد الطالب من ادب وتراث ، على تناول النصوص المختارة من العصور الأدبية المختلفة ، لزيادة رصيد ادب لتراث والادب المعاصر . • التأكيد على دور الطالب في المتابعة واثراء المعرفة باللغة العربية وفنونها بجهد خاص ، ذا ما وضعنا مفاتيح المنهاج الدراسي لتقع على الطالب بعد ذلك مهمة فتح الأبواب والنوافذ الى مصادر المعرفة الواسعة . في جعل العربية الفصيحة تحتل موضع الصدارة وتجاوز العامية ، خدمة الى لغتنا العربية المقدسة. وحفاظا على قوتها وجمالها . • ومن نافلة القول في اهداف تدريس اللغة العربية : هي الجانب المحقق للوحدة وتلزمنا دوافع الوفاء بالحرص عليها والمحافظة على جوهرها .

Module Learning Outcomes مخرجات التعلم للمادة الدراسية	يمكن ايجاز مخرجات العلم لمادة اللغة العربية العامة لاقسام غ ري الاختصاص بالنسبة الدراسة الأولى بالاتي: *علمه اليق ر ي بان القران الكريم قد اعطى للغة قيمة عليا ، وم يلة رفيعة . واجبه الحفاظ عليها وصيانتها من اللحن والخطا ، ومن كل ما يشوبها * تمكين الطالب من قرائة النص القراني بنفسه وتمكنه من معرفة مافي الايات الكريمة من امور لغوية وبلاغية ومعنوية , وتمكنه من فحصها فحصا دقيقا. *سيتمكن الطالب من معرفة مافي لغته العربية من دقة في التعبير واحكام في الفن والعلو في الصنعة. *اضهار القواعد العلمية , والاسس الفنية , التي يقوم عليها العمل الادبي في جزئياته وكلياته لبيان الروح الجمالية والابداعية التي تتجلى في النص الادبي. *فهم طبيعة اللغة من حيث اعرابها (علم النحو), من الفعل والفاعل الذي يقع عليه فعل الفاعل , والحال والتمييز والاوجه الاعرابية لما بعد التمييز. *تمكين الطالب من التفريق بين الافعال الثلاثية والرباعية والخماسية , وتمكينه من التمييز بين الافعال ومصادر الافعال, فالفعل: لفظ يدل على حدث الى جانب دلالته على الزمن , مصدره لا يدل على زمنه اي زمن فعله. *التعريف بالمفهوم الزمني الفني: للحداثة والمعاصرة في الادب , واعطائه صورة لتطور ادب وصولا الى ادب العصر الحديث. *معرفة الطالب لمفهوم النثر العربي , وكيفية تطور النثر من القديم وكيفية تطور من القديم الى العصر الحديث من : المقالة والقصة المسرحية, ومعرفة اهم خصائصه الفنية , وتطور المصطلح من النثر الى مفهوم السرد في العصر الحديث. *تعريف الطالب بمفهوم الشعر الحر او " شعر التفعيلة " ورواد مدرسة الشعر الحر , نازك الملائكة وبدر شاكر السياب, وكيف تفجرت حركة الشعر كلون من الوان الاحتجاج على الواقع الفني العربي.
Indicative Contents المحتويات الإرشادية	1-الاهتمام بالكلام ، ومحاولة التعمق في دراسة قواعده واصوله وتاريخه 2-الاهتمام بقواعد اللغة تاصيلا وتقعيدا ، وتاريخ ادبها تسجيلا وتدوينا ، ونقد نصوصها تفسريا وتاويلا. 3-الفهم الدقيق لاصوات اللغة العربية ، ومعرفة مخارج الاصوات ، ومعرفة مخرج كل صوت من اصوات العربية بطريقة مبسطة .وعلاقة الدال بالمدلول. 4-البحث في نشاة اللغة ، وعلاقتها بغريها ، وخصائص اصواتها ، وابنية مفرداتها وتراكيبها. 5-البحث في عناصر لهجاتها وتطور دلالالتها ، والعوامل التي اثرت فيها والقوانين التي تحكم الصلة ببين الفاظها. 6-الاهتمام بالكلام ومحاولة التعمق في دراسة قواعده واصوله وتاريخه. - 7-توليد القدرة على تذوق النصوص ، وفتح نافذة القدرة على التحليل والتاويل ، ومعرفة ما يريد ان يقوله النص الادبي . 8-دراسة اساسيات النحو العربي وقواعد الجملة العربية. 9-التعرف على تراكيب الجملة الفعلية والاسمية والمركبة.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم

Strategies	ليحقق التدريسي اهداف ونواتج التعلم المستهدفة لا بد من تحقيق الاتي : ١ _ التركيز على استراتيجيات تقود الى التعلم النشط ، والتأكيد على دور المتعلم واثارة اهتمامه ودفعه الى المشاركة الايجابية ٢ _ الاكثار من النصوص العربية العالية ٣ _ وان نعد بعض القطع للقراءة يمتزج فيها درس القواعد بدرس الادب؛ فان ذلك ادعى لتنمية ذوق الطالب في الفهم والحس والكلمات والاساليب واستعمالها . ٤ _ منح التدريسي حرية اختيار قطع للقراءة من كتب الادب والنصوص ومن ادب المناسبات الذي ينشر في الصحف والمجلات ، لتصحيح النطق عند الطالب ، وتعويده على القراءة الصحيحة الخالية من اللحن . ٥ _ تقع على عاتق التدريسي مهنة اساسية وهي التشويق والتقويم والتصويب في تدريسه اللغة _ العربية العامة لأقسام غير اختصاص . ٦ _ تنشيط عنصر الاعتزاز باللغة العربية لدى طالب العلم وتأصيله والعمل على زرع محبته للغة العربية بوصفها اللغة الام لغة القران الكريم لغة الاعجاز والبيان . من خلال عرضه لقصص تراثية تتعلق بحرص العربي على لغته والاعتزاز بها .

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	4	20% (10)	3 , 5,8,11	LO #1...#3, #4...#6, #7&#8, #9... #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7

	Projects / Lab.				
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	1hr	10% (10)	7	LO #1 - #7
	Final Exam	2hr	50% (50)	15	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	**(الفصل الأول (مهارات التعبير و فن الإنشاء و مهارات التعبير : (1) كتابة الإنشاء.**
Week 2	**(2) كتابة الخاطرة و المقالة.**
Week 3	**(الفصل الثاني (من القواعد الصرفية :) 3 (الأفعال الثلاثية و الرباعية و الخماسية و السداسية**
Week 4	**(4) من مصادر الأفعال.**
Week 5	**(الفصل الثالث (القواعد النحوية :) 5(الفاعل ، و نائب الفاعل**
Week 6	**6(الأفعال الناقصة) كان و أخواتها .**
Week 7	**(7) الأحرف المشبهة بالفعل (إنَّ و أخواتها)**
Week 8	**(8) من أنواع المفاعيل (المفعول به + المفعول المطلق + ظرفا الزمان و المكان)**
Week 9	**(9)الحال ، و التمييز ، و الاستثناء.**
Week 10	**(10) من أنواع التوابع : (النعت و التوكيد) .**
Week 11	**(11) قواعد كتابة العدد.**
Week 12	**الفصل الرابع (الأدب العربي :) 12 (نصوص من الشعر الحديث) محمد مهدي الجواهري)**
Week 13	**(13) نصوص من الشعر الحر (أ) بدر شاكر السياب.**
Week 14	**(14) (ب) (نازك الملائكة) .**
Week 15	**(15) من فنون النثر الحديث (الرواية و المسرحية) .**

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	**1 – التعبير القرآني - تأليف الدكتور فاضل السامرائي** **2--** شح ابن عقيل على الفية ابن مالك – لابن عقيل **3-** علم اساليب البيان – غازي يموت. **4 -** اللغة العربية لاقسام غ ري الاختصاص مجموعة من اساتذة اللغة العربية.	
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.