

<b>Module Information</b> معلومات المادة الدراسية			
<b>Module Title</b>	<b>General Biology</b>		<b>Module Delivery</b>
<b>Module Type</b>	C		<b>Theory &amp; Lab</b>
<b>Module Code</b>	1101 (level 1 semester1)		
<b>ECTS Credits</b>	7		
<b>SWL (hr/sem)</b>	175		
<b>Module Level</b>		UGI	<b>Semester of Delivery</b> <b>One</b>
<b>Administering Department</b>		biological analysis science	<b>College</b> College of science
<b>Module Leader</b>	Abdulsada A. Rahi		<b>e-mail</b>
<b>Module Leader's Acad. Title</b>		<b>Professor</b>	<b>Module Leader's Qualification</b> Ph.D.
<b>Module Tutor</b>	Not available		<b>e-mail</b> Not available
<b>Peer Reviewer Name</b>		Not available	<b>e-mail</b> Not available
<b>Academic Committee Approval Date</b>		<b>Version Number</b>	

<b>Relation with other Modules</b> العلاقة مع المواد الدراسية الأخرى			
<b>Prerequisite module</b>	None		<b>Semester</b>
<b>Co-requisites module</b>	None		<b>Semester</b>

**Module Aims, Learning Outcomes and Indicative Contents**

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p><b>Module Aims</b> أهداف المادة الدراسية</p>	<ol style="list-style-type: none"> <li>To provide a broad multi-knowledge features in Zoology.</li> <li>This module will offer a strong foundation in biology in an a format by student engagement and encouraging science students tow academic levels which would ultimately lead to more meaningful and me learning experiences for biological students.</li> </ol>
<p><b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية</p>	<p>When you complete this unit successfully, you will be able to:</p> <ol style="list-style-type: none"> <li>Identify the properties of life, organization levels among living orga</li> <li>Define matter and elements and explain the ways in which occurring elements combine to create molecules, cells, tissues, organ and organisms.</li> <li>Understand the synthesis of macromolecules.</li> <li>Describe the role of cells in organisms besides, summarize cell theo</li> <li>Compare and contrast prokaryotic cells and eukaryotic cells. As recognize the components, structure and function of cell.</li> <li>Knowledge the cellular exchange pathways of plasma membrane.</li> <li>Explain the respiration, gas exchange and circulation in animals</li> <li>Demonstrate the excretory systems in animals.</li> <li>Understand the nerve system, muscle types and muscle construction</li> <li>Describe of animal's hormones: feedback mechanisms; chem hormones; actions of hormones besides the endocrine glands.</li> </ol>
<p><b>Indicative Contents</b> المحتويات الإرشادية</p>	<ol style="list-style-type: none"> <li>The Chemistry of Life. Our opening unit introduces students sciences, including the scientific method and the fundamental con chemistry and physics that provide a framework within which comprehend biological processes.</li> <li>The Cell. Students will gain solid understanding of the structures, f and processes of the most basic unit of life: the cell.</li> <li>The diversity of life is explored with detailed study of various or and discussion of emerging phylogenetic relationships among zoology.</li> <li>An introduction to the form and function of the animal body is foll chapters on specific body systems and processes. This unit touches on the of all organisms while maintaining an engaging focus on human anat physiology that helps students connect to the topics.</li> </ol>

**Learning and Teaching Strategies**

استراتيجيات التعلم والتعليم

<p><b>Strategies</b></p>	<ol style="list-style-type: none"> <li>Biology is grounded on a solid scientific base and designed to help understand the concepts at hand. Throughout the text, one can explore fe</li> </ol>
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	<p>zoology that engage the students in scientific inquiry by taking selected step further.</p> <p>2. Provide exam questions that model good assessment tools and determine the level of student understanding of the lab work and the upon which it is based.</p> <p>3. Equal importance is given to practical learning and presentation students</p>
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<b>Student Workload (SWL)</b>			
الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطالب خلال الفصل	94	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطالب أسبوعيا	6
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطالب خلال الفصل	81	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطالب أسبوعيا	2
<b>Total SWL (h/sem)</b> الحمل الدراسي الكلي للطالب خلال الفصل	175		

<b>Module Evaluation</b>						
تقييم المادة الدراسية						
As		Time/Num	Weight (Marks)	Week Due	Relevant Outcome	I
<b>Formative assessment</b>	<b>Quizzes</b>	2	26% (20)	7, 12	LO #1, 2, 3,4 6,7,8,9,10,11	
	<b>Assignments</b>	1	2	15	12,13,14	
	<b>Lab.</b>	2	12% (12)	Continuous	All	
	<b>Report</b>					
<b>Summative assessment</b>	<b>Midterm Exam</b>	2 hr	10% (10)	17	All	
	<b>Final Exam</b>	2hr	50% (50)	19	All	

<b>Total assessment</b>	100% (100 Marks)		
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<b>Delivery Plan (Weekly Syllabus)</b>			
المنهاج الاسبوعي النظري			
Week	Material Covered		
Week 1	; characters of living organisms; elements of life; life molecules <b>Biological chemistry:</b>		
Week 2	cell theory; prokaryotic and eukaryotic cells; the <b>1- Structure and function of cell:</b> cell wall; crystals; vacuoles; cell, membrane; nucleus; ribosomes; mitochondria.		
Week 3	<b>Structure and function of cell:</b> Endoplasmic reticulum; Golgi complex; lysosomes; microtubules and microfilaments; cilia and flagella; centrioles; classification of organisms.		
Week 4	; facilitated diffusion; osmosis; active <b>Exchange through the cell membrane:</b> transport; pinocytosis; phagocytosis; exocytosis; cell communication.		
Week 5	nutrition; macro and micronutrients; balance diet; minerals; <b>Nutrition and digestion:</b> vitamins; digestion; digestive glands and enzyme; absorption; controls of digestion, liver.		
Week 6	<b>Respiration and gas exchange:</b> Respiration organs; body surface; gills; tracheae and lungs; hemoglobin (blood) pigments; oxygen and carbon dioxide transport; respiratory quotient. Metabolism.		
Week 7	<b>Quiz</b>		
Week 8	<b>Transport in animals:</b> Circulatory systems; the heart as a pump; ECG; the heart cycle; blood pressure; blood groups; the lymphatic system.		
Week 9	<b>Excretion:</b> Body fluids; Nitrogen wastes; osmoregulation. Types of excretory organs; excrete kidney; filtration, reabsorption and excretion in the nephron; hormones and kidney function.		
Week 10	<b>Neuron:</b> Structure; action potentials; synapsis, neurotransmission types;		
Week 11	; types of muscle tissue; protein of construction; muscle construction: the muscle switch and tetany contraction; fatigue.		
Week 12	<b>Quiz</b>		
Week 13	<b>Endocrine glands hormones:</b> What is a hormone; feedback mechanisms; chemistry of hormones; actions of hormones; the hypothalamus;		
Week 14	<b>Endocrine glands hormones:</b> the pituitary gland; thyroid and parathyroid; the adrenals; pineal		

	gland; thymus; pancreatic hormones.
<b>Week 15</b>	<b>Quiz</b>
<b>Week 16</b>	<b>Preparatory week before the final Exam</b>

<b>Delivery Plan (Weekly Lab. Syllabus)</b> المنهاج الاسبوعي للمختبر	
<b>Week</b>	<b>Material Covered</b>
<b>Week 1</b>	Microscope, Structure and its Parts
<b>Week 2</b>	Animal Cell
<b>Week 3</b>	Animal Tissues
<b>Week 4</b>	Connective Tissue
<b>Week 5</b>	Special connective tissue
<b>Week 6</b>	Muscle Tissue
<b>Week 7</b>	<b>Quiz</b>
<b>Week 8</b>	Zoology Phylum's
<b>Week 9</b>	Platyhelminthes
<b>Week 10</b>	Nematoda
<b>Week 11</b>	Arthropoda
<b>Week 12</b>	Mollusca
<b>Week 13</b>	Echinodermata
<b>Week 14</b>	Chordata
<b>Week 15</b>	<b>Quiz</b>

<b>Learning and Teaching Resources</b> مصادر التعلم والتدريس		
	<b>Text</b>	<b>Available Library?</b>

<b>Required Texts</b>	<p>1- <b>Biology: A Functional Approach</b> by Roberts; Thomas Nelson and Sons Ltd 4<sup>th</sup> edition (1995).</p> <p>2- <b>Concepts of Biology:</b> by Samantha Fowler, James Rice University (2017).</p> <p>3- <b>Biology (Zoology):</b> by Tmt. V. M. Gayathri F Thiru. T. Sekar</p> <p>4- <b>Practical Zoology:</b> By Uttarakhand Open Universit</p>	Non
<b>Recommended Texts</b>	<p>The following textbooks are recommended but not con text materials. You may use any other textbook provide help you achieve the objects of the course and do your ass</p> <p>1. <b>Biology 2e:</b> by Mary Ann Clark; Jung choi and Douglas. University of Rice (2020).</p> <p>2. <b>General Zoology: Lab Supplement</b> (Stephen W. 2 Accompany the Zoology Lab Manual: Smith, D. G. &amp; Schenk (2020).</p>	Non
<b>Websites</b>	<p><a href="https://openstax.org/books/concepts-biology/pages/1-introduction">https://openstax.org/books/concepts-biology/pages/1-introduction</a></p> <p><a href="http://uou.ac.in">http://uou.ac.in</a></p>	

### Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
<b>Success Group</b> (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
<b>Fail Group</b> (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	Work required but credit awarded
	F – Fail	راسب	(0-44)	Substantial amount of work required

Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for 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				
معلومات المادة الدراسية				
Module Title	<b>Fundamentals of Computer Science</b>		Module Delivery	
Module Type	Basic		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	WUO3			
ECTS Credits	3			
SWL (hr/sem)	75			
Module Level	UGI	Semester of Delivery	One	
Administering Department	WAR	College	College of Engineering	
Module Leader	Nhad K. Frhan Al-Abboodi		e-mail	nkadhun@uowasit.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	PH.D	
Module Tutor			e-mail	
Peer Reviewer Name			e-mail	
Scientific Committee Approval Date	25-6-2023	Version Number	1.0	

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

## Module Aims, Learning Outcomes and Indicative Contents

### أهداف المادة

### الدراسية ونتائج التعلم والمحتويات الإرشادية

<b>Module Objectives</b> أهداف المادة الدراسية	<ol style="list-style-type: none"><li>1. Giving the student a general idea of computer material at a study environment, library, and at home.</li><li>2. Understanding the basic rules for dealing with and managing computers (computer basics, computer components, computer and software licenses, operating systems, .....), With the aim of preparing the student to enter the programs he needs in the department.</li><li>3. Giving the student knowledge about the office applications as basic principles for students in the College of Engineering.</li></ol>
<b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية	<ol style="list-style-type: none"><li>1. Knowing computer peripherals, their connections and Windows system.</li><li>2. Distinguish between the important tabs in the Word program.</li><li>3. The ability to write an entire paragraph with formatting.</li><li>4. Understand the basics of power point program.</li><li>5. Understand the excel sheet program.</li></ol>
<b>Indicative Contents</b> المحتويات الإرشادية	Part A (9 hr) Introduction to computer principles. Part B (12 hr) MS Word program. Part C (12 hr) MS Excel program. Part D (12 hr) MS Power Point program.



## Learning and Teaching Strategies

### استراتيجيات التعلم والتعليم

<b>Strategies</b>	<ol style="list-style-type: none"><li>1. Using computers and display screens to explain lectures to students to increase students' mental comprehension.</li><li>2. Practical applications in the computer lab of what was explained in the theoretical lecture.</li><li>3. Using direct questions in the classroom as brainstorming skills.</li><li>4. Encouraging students to solve class and homework assignments and to perform specialized reports.</li></ol>
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## Student Workload (SWL)

### الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا

<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطلاب خلال الفصل	48	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطلاب أسبوعيا	3
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطلاب خلال الفصل	27	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطلاب أسبوعيا	2
<b>Total SWL (h/sem)</b> الحمل الدراسي الكلي للطلاب خلال الفصل	75		

## Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	15% (15)	4, 8, 12	All
	Assignments	1	5% (5)	10	All
	Lab.	15	15% (15)	Continuous	All
	Projects	1	5%	13	/
Summative assessment	Midterm Exam	2hr	10% (10)	9	All
	Final Exam	3hr	50% (50)	16	All
Total assessment			100		

## Delivery Plan (Weekly Syllabus)

### المنهاج الاسبوعي النظري

	Material Covered
Week 1	<ul style="list-style-type: none"><li>Part1: Chapter One: Computer Fundamentals, Computer Components.</li></ul>
Week 2	<ul style="list-style-type: none"><li>Part1: Chapter Two: Computer Safety and software Licenses.</li></ul>
Week 3	<ul style="list-style-type: none"><li>Part1: Chapter Three: Main operating systems</li></ul>
Week 4	<ul style="list-style-type: none"><li>Part2: Chapter One: Introduction to Microsoft word + Quizzes1</li></ul>
Week 5	<ul style="list-style-type: none"><li>Part2: Chapter Two: Insert Objects to Microsoft word, Editing Documents</li></ul>
Week 6	<ul style="list-style-type: none"><li>Part2: Chapter Three: writing the equations</li></ul>
Week 7	<ul style="list-style-type: none"><li>Part2: Chapter Four: Formatting Pages</li></ul>
Week 8	<ul style="list-style-type: none"><li>Part3: Chapter One: Introduction to Microsoft Excel+ Quizzes2</li></ul>
Week 9	<ul style="list-style-type: none"><li>Part3: Chapter Two: Additional Tasks in Microsoft word+ Midterm Exam</li></ul>
Week 10	<ul style="list-style-type: none"><li>Part3: Chapter Three: Additional Tasks in Microsoft word+ Assignments</li></ul>
Week 11	<ul style="list-style-type: none"><li>Part3: Chapter Four: Additional Tasks in Microsoft word</li></ul>
Week 12	<ul style="list-style-type: none"><li>Part4: Chapter One: Introduction to Power Point+ Quizzes3</li></ul>
Week 13	<ul style="list-style-type: none"><li>Part4: Chapter Two: Insert Objects and Add Animations in Microsoft Power Point+ Project</li></ul>
Week 14	<ul style="list-style-type: none"><li>Part4: Chapter Three: Additional Tasks in Microsoft Excel Cont.</li></ul>
Week 15	<ul style="list-style-type: none"><li>Part4: Chapter Four: Additional Tasks in Microsoft Excel Cont.</li></ul>
Week 16	<ul style="list-style-type: none"><li>Final Exam</li></ul>

## Delivery Plan (Weekly Lab. Syllabus)

### المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	<ul style="list-style-type: none"><li>Part1: Chapter One: Computer Fundamentals, Computer Components.</li></ul>
Week 2	<ul style="list-style-type: none"><li>Part1: Chapter Two: Computer Safety and software Licenses.</li></ul>
Week 3	<ul style="list-style-type: none"><li>Part1: Chapter Three: Main operating systems</li></ul>
Week 4	<ul style="list-style-type: none"><li>Part2: Chapter One: Introduction to Microsoft word</li></ul>
Week 5	<ul style="list-style-type: none"><li>Part2: Chapter Two: Insert Objects to Microsoft word, Editing Documents</li></ul>
Week 6	<ul style="list-style-type: none"><li>Part2: Chapter Three: writing the equations</li></ul>
Week 7	<ul style="list-style-type: none"><li>Part2: Chapter Four: Formatting Pages</li></ul>
Week 8	<ul style="list-style-type: none"><li>Part3: Chapter One: Introduction to Microsoft Excel</li></ul>
Week 9	<ul style="list-style-type: none"><li>Part3: Chapter Two: Additional Tasks in Microsoft word</li></ul>
Week 10	<ul style="list-style-type: none"><li>Part3: Chapter Three: Additional Tasks in Microsoft word</li></ul>
Week 11	<ul style="list-style-type: none"><li>Part3: Chapter Four: Additional Tasks in Microsoft word</li></ul>
Week 12	<ul style="list-style-type: none"><li>Part4: Chapter One: Introduction to Power Point</li></ul>
Week 13	<ul style="list-style-type: none"><li>Part4: Chapter Two: Insert Objects and Add Animations in Microsoft Power Point</li></ul>
Week 14	<ul style="list-style-type: none"><li>Part4: Chapter Three: Additional Tasks in Microsoft Excel.</li></ul>
Week 15	<ul style="list-style-type: none"><li>Part4: Chapter Four: Additional Tasks in Microsoft Excel.</li></ul>
Week 16	<ul style="list-style-type: none"><li>Final Exam</li></ul>

## Learning and Teaching Resources

### مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	اساسات الحاسوب وتطبيقاته المكتبية	نعم
Recommended Texts		
Websites	<a href="https://www.tutorialspoint.com/word/word_move_text.htm">https://www.tutorialspoint.com/word/word_move_text.htm</a>	

## 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 chemistry		Module Delivery
Module Type	core		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	UoB12345		
ECTS Credits	8		
SWL (hr/sem)	200		
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	Assi. 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	01/06/2023	Version Number	1

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

<b>Module Aims, Learning Outcomes and Indicative Contents</b> أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
<b>Module Aims</b> أهداف المادة الدراسية	<p>Module Aims of this course deals with the basic concept of General Chemistry;</p> <ol style="list-style-type: none"> <li>1- Students know how to relate the position of an element in the periodic table to its atomic number and atomic mass.</li> <li>2- Students know atoms combine to form molecules by sharing electrons to form covalent or metallic bonds or by exchanging electrons to form ionic bonds.</li> <li>3- Students know the observable properties of acids, bases, and salt solutions.</li> <li>4- Students know the definitions of solute and solvent.</li> </ol>
<b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية	<p>benchmark and develop a student and discipline–association aligned and equity–centered learning outcomes for General Chemistry.</p> <p>For the purposes of this work, we define learning outcomes as measurable student performance expectations based upon what the student learned in each core topic area.</p>
<b>Indicative Contents</b> المحتويات الإرشادية	<ol style="list-style-type: none"> <li>1: Matter and its Properties</li> <li>2: Measurements</li> <li>3: Atomic Structure</li> <li>4: The Periodic Table</li> <li>5: Bonding and Chemical Interactions</li> <li>6: Compounds and Stoichiometry</li> <li>7: Chemical Kinetics</li> <li>8: Chemical Equilibrium</li> <li>9. Write Lewis symbols for neutral atoms and ions.</li> </ol> <p>Draw Lewis structures depicting the bonding in simple molecules.</p>

<b>Learning and Teaching Strategies</b> استراتيجيات التعلم والتعليم	
<b>Strategies</b>	<p>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.</p>

Student Workload (SWL)			
الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	109	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	91	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	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	All
	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 I
Week 2	Introduction II
Week 3	Draw Lewis structures Matter and its Properties 2: Measurements 3: Atomic Structure



	4: The Periodic Table 5: Bonding and Chemical Interactions 6: Compounds and Stoichiometry 7: Chemical Kinetics 8: Chemical Equilibrium 9. Write Lewis symbols for neutral atoms and ions. depicting the bonding in simple molecules.
Week 4	Solutions
Week 5	Statistical treatment of analytical data
Week 6	Chemical reaction
Week 7	Exam
Week 8	Acids and bases
Week 9	Buffer Solutions
Week 10	Titrimetric methods
Week 11	Example Titration curve
Week 12	Complex metric Titration
Week 13	Spectroscopy
Week 14	exam
Week 15	Review week
Week 16	

<b>Delivery Plan (Weekly Lab. Syllabus)</b> المنهاج الاسبوعي للمختبر	
	<b>Material Covered</b>
Week 1	General safety rules of Lab.
Week 2	General chemicals equip.
Week 3	Standard solutions
Week 4	Preparation of Standard solutions
Week 5	Titration strong acid with strong base
Week 6	PH –Matric titration
Week 7	exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	General chemistry by Darrell 2007	Websites
Recommended Texts	Fundamentals of chemistry by Romain 2012	Websites
Websites	Fundamentals of analytical chemistry by Stook and West 2012	on 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 (فيد المعالجة)	(45-49)	More work required but credit awarded
	F - Fail	راسب	(0-44)	Considerable amount of work required
<p><b>Note:</b> 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.</p>				

## 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	English Language	Module Delivery
Module Type	C	Theoretically
Module Code	FOR011	
ECTS Credits		

SWL (hr/sem)	75		
Module Level		Semester of Delivery	One
Administering Department	Forensic Science	College	College of science
Module Leader		e-mail	
Module Leader's Acad. Title		Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name	Not available	e-mail	Not available
Scientific Committee Approv	28/2/2024	Version Number	

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

Module Aims, Learning Outcomes	
أهداف المادة الدراسية ونتائج التعلم	
Module Aims أهداف المادة الدراسية	The program aims to enhance students' English language skills and work on new methods of language learning that help enhance these skills and improve students' current language level to better achieve the program's ultimate goal, and move the students' linguistic level to a better place
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p><b>1-Knowledge</b></p> <ul style="list-style-type: none"> <li>*Enabling students to obtain knowledge of English grammar.</li> <li>*Introducing students to correct reading and writing in English.</li> <li>*Enabling students to obtain knowledge of the origins of speech and sentences they consist of and their types.</li> <li>*Enabling students to obtain knowledge of the correct pronunciation of vocabulary.</li> </ul> <p><b>2- Skills</b></p> <ul style="list-style-type: none"> <li>* Students acquire general knowledge of the English language.</li> <li>* Gaining students the ability to speak properly and in accordance with the principles of the language.</li> <li>* Gaining students the ability to correctly pronounce letters, vocabulary, and sounds.</li> <li>*Students acquire the skill of writing sentences correctly and with the fewest errors.</li> </ul>
Learning and Teaching Strategies	
استراتيجيات التعلم والتعليم	
Strategies	<p>1-The use of explanation by the teacher in English</p> <p>2-Using image, video and audio presentation methods</p>
Evaluation methods طرائق التقييم	<p>1- Quizzes</p> <p>2- Midterm exams</p> <p>3- Final exams</p> <p>4- Oral exams</p> <p>5- Reports and research</p> <p>6- Activities</p> <p>7- Festivals</p>

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	75	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	81	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	75		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative ass	Quizzes	5	30% (20)	2,4,6,12,14	LO #1, 2, 3,4,5,6 and 6,7,8,9,10,11,12
	Assignments	1	2	15	12,13,14
	Report	2	10%	7	
Summative as	Midterm Exam	2 hr	10% (10)	17	All
	Final Exam	2hr	50% (50)	17	All
Total assessment			100% (100 Marks)		
Delivery Plan (Weekly Syllabus) المنهاج الأسبوعي					
	Material Covered				
Week 1	English Alphabetic, Parts of speech, Sentences, Verb to BE, Verb to DO, Verb to have.				
Week 2	Nouns -Countable Nouns -Spelling Rules for Plurals -Uncountable Nouns Definite & Indefinite Articles				
Week 3	Pronouns -Object Pronouns -Reflexive Pronouns -Relative Pronouns				
Week 4	Making Questions -Uses of How Some/ any				
Week 5	Making Negative Imperative Modals				

Week 6	TENSES -Present Simple Tense -Past Simple Tense -Future Simple Tense
Week 7	-Present Continuous Tense -Past Continuous Tense
Week 8	-Future Continuous Tense -Present Perfect Tense
Week 9	Examination
Week 10	-Past Perfect Tense  -Future Perfect Tense  -Present Perfect Continuous
Week 11	Comparing Adjectives  Adverbs
Week 12	Active & Passive
Week 13	Transitive & Intransitive Verbs  Prepositions
Week 14	Question –Tags  Conditional " if "
Week 15	Reported Speech  Counties and Nationalities

## Course development plan

خطة تطوير المقرر الدراسي

-Study the latest modern sources and modern translations.

-Relying on specialized books.

-Using means of presenting and explaining the vocabulary of the educational material.

## Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Web sites "Grammar For All Levels" By Adnan Naim	yes



Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
Success Group (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 -	FX – Fail	فريد المعالجة)راسب	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
<p>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 to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.</p>				

# MODULE DESCRIPTION FORM

## نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Organic chemistry	Module Delivery	
Module Type	C	<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	FOR008		
ECTS Credits	٧		
SWL (hr/sem)	1٧٥		
Module Level	UGx1		
Administering Department	Type Dept. Code	College	College of science
Module Leader	Name	e-mail	e-mail
Module Leader's Acad. Title	Assi. 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	01/06/2023	Version Number	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

<p><b>Module Aims</b> أهداف المادة الدراسية</p>	<p>Module Aims of this course deals with the basic concept of General Chemistry;</p> <ol style="list-style-type: none"><li>1- Students know how to relate the position of an element in the periodic table to its atomic number and atomic mass.</li><li>2- Students know atoms combine to form molecules by sharing electrons to form covalent or metallic bonds or by exchanging electrons to form ionic bonds.</li><li>3- Students know the observable properties of acids, bases, and salt solutions.</li><li>4- Students know the definitions of solute and solvent.</li></ol>
<p><b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية</p>	<p>benchmark and develop a student and discipline-association aligned and equity-centered learning outcomes for General Chemistry.</p> <p>For the purposes of this work, we define learning outcomes as measurable student performance expectations based upon what the student learned in each core topic area.</p>
<p><b>Indicative Contents</b> المحتويات الإرشادية</p>	<ol style="list-style-type: none"><li>1: carbon and its Properties</li><li>2: chemical bonds</li><li>3: hydrocarbon</li><li>4: The Periodic Table</li><li>5: Bonding and Chemical Interactions</li><li>6: Compounds and Stoichiometry</li><li>7: Resonance and acid-base chemistry</li><li>9. Alkanes, cycloalkanes, and functional groups</li></ol>

## Learning and Teaching Strategies

## استراتيجيات التعلم والتعليم

<b>Strategies</b>	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.
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## Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطالب خلال الفصل	109	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطالب أسبوعيا	7
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطالب خلال الفصل	91	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
<b>Total SWL (h/sem)</b> الحمل الدراسي الكلي للطالب خلال الفصل	200		

## Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
<b>Formative assessment</b>	<b>Quizzes</b>	2	10% (10)	5, 10	LO #1, 2, 10 and 11
	<b>Assignments</b>	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	<b>Projects / Lab.</b>	1	10% (10)	Continuous	All
	<b>Report</b>	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 I
Week 2	Introduction II
Week 3	<p>carbon and its Properties</p> <p>3: hydrocarbon</p> <p>4: The Periodic Table</p> <p>5: Bonding and Chemical Interactions</p> <p>6: Compounds and Stoichiometry</p> <p>7: Resonance and acid-base chemistry</p> <p>9. Alkanes, cycloalkanes, and functional groups8: Chemical Equilibrium depicting the bonding in simple molecules.</p>
Week 4	chemical bonds
Week 5	Alkanes, cycloalkanes, and functional groups
Week 6	Alkenes and alkynes
Week 7	Exam
Week 8	Alcohols, ethers, epoxides, sulfides
Week 9	Aromatic compounds

Week 10	Aldehydes and ketones
Week 11	Carboxylic acids and derivatives
Week 12	Amines
Week 13	Spectroscopy
Week 14	exam
Week 15	Review week
Week 16	

### Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	General safety rules of Lab.
Week 2	General chemicals equip.
Week 3	Standard solutions
Week 4	Preparation of Standard solutions
Week 5	Alkanes preparation
Week 6	Alkenes preparation
Week 7	exam

### Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the

		<b>Library?</b>
<b>Required Texts</b>	General chemistry by Darrell 2007	Websites
<b>Recommended Texts</b>	Fundamentals of chemistry by Romain 2012	Websites
<b>Websites</b>	Fundamentals of analytical chemistry by Stook and West 2012	on Websites

<b>Grading Scheme</b>				
مخطط الدرجات				
<b>Group</b>	<b>Grade</b>	<b>التقدير</b>	<b>Marks (%)</b>	<b>Definition</b>
<b>Success Group</b> <b>(50 - 100)</b>	<b>A - Excellent</b>	امتياز	90 - 100	Outstanding Performance
	<b>B - Very Good</b>	جيد جدا	80 - 89	Above average with some errors
	<b>C - Good</b>	جيد	70 - 79	Sound work with notable errors
	<b>D - Satisfactory</b>	متوسط	60 - 69	Fair but with major shortcomings
	<b>E - Sufficient</b>	مقبول	50 - 59	Work meets minimum criteria
<b>Fail Group</b> <b>(0 - 49)</b>	<b>FX – Fail</b>	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	<b>F – Fail</b>	راسب	(0-44)	Considerable amount of work required
<p><b>Note:</b> 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.</p>				

# MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	General Physics		Module Delivery
Module Type	Support		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	KUSO12		
ECTS Credits	6:00		
SWL (hr/sem)	150		
Module Level	2	Semester of Delivery	
Administering Department	Forensic science	College	Science
Module Leader	Oday Jawad Kadhim	e-mail	Oday.kadhim@uowasit.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	25/2/2024	Version Number	2

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



**Module Aims, Learning Outcomes and Indicative Contents**

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<b>Module Aims</b> أهداف المادة الدراسية	<p>It is desired to identify the physical laws and its rule on Forensic science phenomena and life. Solved problems will cover the applications of physics in on Forensic science systems.</p> <p>Analysis and communication: real on Forensic science systems are extremely complex and rarely well-defined. Making reasonable assumptions and identifying models is the key to progress.</p>
<b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية	<p><b>Objectives:</b> The course provides a general introduction to the physics of on Forensic science systems. <b>Contents:</b> The course introduces the fundamental concepts of living systems, cell structure and functions, the concept of replication, Brownian motion and diffusion, electrophoresis, descriptive models of liquids flow, electrophoresis and osmosis.</p> <p><b>Course Outcomes:</b> At the end of the course the student will be able to deal with different components and problems such as charge, field, volts, currents, etc. Students can read diagrams and connect circuits and get results. He can analyze the results and get the properties of the components ...., Something like that is how to write the outcome of the course</p>
<b>Indicative Contents</b> المحتويات الإرشادية	<p><b>A-Knowledge:</b> Lectures will provide</p> <p>a- basic understanding of the key concepts of physics by applying physical principles, methods and techniques.</p> <p><b>B-Cognitive Skills</b> It is desired to identify the physical laws and its rule on Forensic science phenomena and life. Solved problems will cover the applications of physics in biological systems</p> <p><b>C- Interpersonal skills and responsibilities</b> Students will be encouraged to attempt the problems independently and then collaborate and solve together.</p> <p><b>D- Analysis and communication:</b> Real Forensic science systems are extremely complex and rarely well-defined. Making reasonable assumptions and identifying models is the key to progress.</p>

### 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, interactive tutorials and by considering the types of simple experiments involving some interesting sampling activities for the students.
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### Student Workload (SWL)

#### الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	64	Structured SWL (h/w) العمل الدراسي المنتظم للطلاب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	86	Unstructured SWL (h/w) العمل الدراسي غير المنتظم للطلاب أسبوعيا	3
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	150		

### 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	All
	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%		

## Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction physical principles
Week 2	Kinematics in one dimension
Week 3	Kinematics in two dimensions
Week 4	Newtons laws of motion
Week 5	Dynamics of uniform Circular Motion
Week 6	Component of vector
Week 7	Refraction of Light
Week 8	Interference
Week 9	Structure of the eye
Week 10	Fluids: Statics & Dynamics
Week 11	Temperature and Heat
Week 12	The Ideal Gas Law
Week 13	Thermodynamics
Week 14	Waves
Week 15	Review week
Week 16	Final exam

## Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Lab 1: Simple pendulum
Week 2	Lab 2: Calculate the focal length of a convex lens
Week 3	Lab 3: Calculate the focal length of a concave lens
Week 4	Lab 4: Calculating the focal length of mirrors
Week 5	Lab 5: Calculating the viscosity coefficient of liquids
Week 6	Lab 6: Helical spring
Week 7	Lab 7: Ohm's law
Week 8	Lab 8: Kirchhoff's law
Week 9	Lab 9: Calculate the internal resistance of the voltmeter

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Week 10	Lab 10: Compound pendulum
Week 11	Lab 11: Calculate the coefficient of friction
Week 12	Lab 12: Calculate the density of the liquid
Week 13	Lab 13: Calculate the surface tension coefficient
Week 14	Lab 14: RC Circuits
Week 15	Lab 15: RLC Circuits
Week 16	Final Exam

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Biophysics: An Introduction, by Cotterill, John Wiley and Sons (2000). Supplementary references Biophysics, by R. Glasser, Springer Verlag (2001). - -Introduction to Molecular Biophysics, by J. - Tuszynski, CRC Press (2003). Biophysics: An Introduction, by C. Sybesma, Kluwer Academic (1989)	
Recommended Texts	-Biology in Physics: Is Life Matter, by K. Bogdanov, - Academic Press (2000).	
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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	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	English Language	Module Delivery	
Module Type	C	Theoretically	
Module Code	FOR011		
ECTS Credits			
SWL (hr/sem)	75		
Module Level		Semester of Delivery	One
Administering Department	Forensic Science	College	College of science
Module Leader		e-mail	
Module Leader's Acad. Title		Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name	Not available	e-mail	Not available
Scientific Committee Approval Date	28/2/2024	Version Number	

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

Module Aims, Learning Outcomes أهداف المادة الدراسية ونتائج التعلم	
Module Aims أهداف المادة الدراسية	The program aims to enhance students' English language skills and work on acquiring new methods of language learning that help enhance these skills and improve the students' current language level to better achieve the program's ultimate goal, which is to move the students' linguistic level to a better place
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p><b>1-Knowledge</b></p> <ul style="list-style-type: none"> <li>*Enabling students to obtain knowledge of English grammar.</li> <li>*Introducing students to correct reading and writing in English.</li> <li>*Enabling students to obtain knowledge of the origins of speech and sentences and what they consist of and their types.</li> <li>*Enabling students to obtain knowledge of the correct pronunciation of English vocabulary.</li> </ul> <p><b>2- Skills</b></p> <ul style="list-style-type: none"> <li>* Students acquire general knowledge of the English language.</li> <li>* Gaining students the ability to speak properly and in accordance with the principles of the language.</li> <li>* Gaining students the ability to correctly pronounce letters, vocabulary, and sounds.</li> <li>*Students acquire the skill of writing sentences correctly and with the fewest possible errors.</li> </ul>
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	<p>1-The use of explanation by the teacher in English</p> <p>2-Using image, video and audio presentation methods</p>
Evaluation methods طرائق التقييم	<p>1- Quizzes</p> <p>2- Midterm exams</p> <p>3- Final exams</p> <p>4- Oral exams</p> <p>5- Reports and research</p> <p>6- Activities</p> <p>7- Festivals</p>

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ 15 أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	75	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	81	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	75		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	5	30% (20)	2,4,6,12,14	LO #1, 2, 3,4,5,6 and 6,7,8,9,10,11,12
	Assignments	1	2	15	12,13,14
	Report	2	10%	7	
Summative assessment	Midterm Exam	2 hr	10% (10)	17	All
	Final Exam	2hr	50% (50)	17	All
Total assessment			100% (100 Marks)		
Delivery Plan (Weekly Syllabus) المنهاج الأسبوعي					
Material Covered					
Week 1	English Alphabetic, Parts of speech, Sentences, Verb to BE, Verb to DO, Verb to have.				
Week 2	Nouns -Countable Nouns -Spelling Rules for Plurals -Uncountable Nouns Definite & Indefinite Articles				
Week 3	Pronouns -Object Pronouns -Reflexive Pronouns -Relative Pronouns				
Week 4	Making Questions -Uses of How Some/ any				
Week 5	Making Negative Imperative Modals				



Week 6	TENSES -Present Simple Tense -Past Simple Tense -Future Simple Tense
Week 7	-Present Continuous Tense -Past Continuous Tense
Week 8	-Future Continuous Tense -Present Perfect Tense
Week 9	Examination
Week 10	-Past Perfect Tense -Future Perfect Tense -Present Perfect Continuous
Week 11	Comparing Adjectives Adverbs
Week 12	Active & Passive
Week 13	Transitive & Intransitive Verbs Prepositions
Week 14	Question –Tags Conditional " if "
Week 15	Reported Speech Counties and Nationalities

<p><b>Course development plan</b> خطة تطوير المقرر الدراسي</p>
<p>-Study the latest modern sources and modern translations.</p> <p>-Relying on specialized books.</p> <p>-Using means of presenting and explaining the vocabulary of the educational material.</p>

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Web sites "Grammar For All Levels" By Adnan Naim	yes

**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	(فقد المعالجة) راسب	(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

Forensic DNA نموذج وصف

Module Information			
معلومات المادة الدراسية			
<b>Module Title</b>	<b>Forensic DNA</b>		<b>Module Delivery</b>
<b>Module Type</b>			<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
<b>Module Code</b>			
<b>ECTS Credits</b>	7		
<b>SWL (hr/sem)</b>	100		
<b>Module Level</b>	UGI	<b>Semester of Delivery</b>	One
<b>Administering Department</b>	Forensic DNA	<b>College</b>	College of science
<b>Module Leader</b>	Dr. .Rafed Abbas Kadhum	<b>e-mail</b>	Rafedabbassuowasit.edu.iq
<b>Module Leader's Acad. Title</b>		<b>Module Leader's Qualification</b>	Ph.D.
<b>Module Tutor</b>		<b>e-mail</b>	Not available
<b>Peer Reviewer Name</b>		<b>e-mail</b>	Not available
<b>Scientific Committee Approval Date</b>	28/2/2024	<b>Version Number</b>	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
<b>Prerequisite module</b>	None	<b>Semester</b>	
<b>Co-requisites module</b>	None	<b>Semester</b>	

<b>Module Aims, Learning Outcomes and Indicative Contents</b>	
<b>Module Aims</b>	<p>It aims to provide the student with sufficient scientific and practical experience about DNA and its important role in crime scenes. In addition to learning about methods for extracting DNA</p> <p>From various sources, in a variety of advanced ways and with the latest technologies</p>
<b>Module Learning Outcomes</b>	<p>The graduate of the department was able to analyze and study all events and biological, chemical, physical and legal evidence of crimes and be able to deal with them in a scientific manner.</p> <p>Field of work: Ministry of Interior, Ministry of Defense, Ministry of Justice, Ministry of Higher Education and Scientific Research, and Ministry of Health</p>
<b>Indicative Contents</b>	<ol style="list-style-type: none"> <li>1. Understanding</li> <li>2. Creativity and scientific thinking</li> <li>3. Analysis of accident and crime scene data</li> <li>4. The importance of DNA as criminal evidence</li> <li>5. Extraction methods</li> </ol>
<b>Learning and Teaching Strategies</b>	
<b>Strategies</b>	<ol style="list-style-type: none"> <li>1-Collecting the crime test and DNA samples and analyzing the results based on the laboratory test results.</li> <li>2-Providing exam questions that represent good assessment tools and help determine students' level of understanding of the subject and the concepts on which it is based.</li> <li>3- Focus on the practical aspect equally with the theoretical aspect.</li> <li>4-Diversity in methods of explanation and presentation.</li> </ol>

<b>Student Workload (SWL)</b>			
<b>Structured SWL (h/sem)</b>	78	<b>Structured SWL (h/w)</b>	5
<b>Unstructured SWL (h/sem)</b>	47	<b>Unstructured SWL (h/w)</b>	
<b>Total SWL (h/sem)</b>	125		

<b>Module Evaluation</b>					
		<b>Time/Number</b>	<b>Weight (Marks)</b>	<b>Week Due</b>	<b>Relevant Learning Outcome</b>
<b>Formative assessment</b>	<b>Quizzes</b>	2	10% (10)	7, 12	
	<b>Assignments</b>				
	<b>Lab.</b>	3	10% (10)	Continuous	All
	<b>Report</b>	1	10%(10)		
<b>Summative assessment</b>	<b>Midterm Exam</b>	2 hr	20% (10)	17	All
	<b>Final Exam</b>	3hr	50% (50)	19	All
<b>Total assessment</b>			100% (100 Marks)		
<b>Delivery Plan (Weekly Syllabus)</b>					
	<b>Material Covered</b>				
<b>Week 1</b>	<b>Basic of DNA biology and genetics</b>				
<b>Week 2</b>	<b>Fundamentals of forensic DNA typing</b>				
<b>Week 3</b>	<b>Basic principles of DNA extraction</b> 1-Cell and tissue disruption 2-Lysis of cellular and organelle membranes				
<b>Week 4</b>	<b>4-Storage of DNA solution</b> 5-Contamination				
<b>Week 5</b>	<b>Methods of DNA extraction</b>				
<b>Week 6</b>	<b>Sources of biological evidence</b> 1-Body fluids 2-extracellular nucleic acid				
<b>Week 7</b>	<b>Cells</b> Cell surface markers Nucleated cells Mitochondria and other organelles				
<b>Week 8</b>	<b>Quiz</b>				
<b>Week 9</b>	<b>Cytosol</b> <b>Messenger RNAs</b> <b>MicroRNAs</b>				
<b>Week 10</b>	<b>Tissues</b> <b>Skin</b>  <b>Biology of skin</b> <b>Skin as sources of DNA evidence</b>				
<b>Week 11</b>	<b>Hair</b> <b>Biology of hair</b> <b>Hair as source of DNA evidence</b>				

Week 12	<b>Quiz</b>
Week 13	<b>Teeth</b> Biology of teeth and teeth as source of DNA evidence
Week 14	<b>Bone</b> Biology of bone Bone as source of DNA evidence
Week 15	<b>Quiz</b>
Week 16	<b>Preparatory week before the final Exam</b>

### Delivery Plan (Weekly Lab. Syllabus)

Material Covered	
Week 1	Forensic evidence and DNA samples
Week 2	DNA extraction kit
Week 3	Removal of proteins and cytoplasmic constituents
Week 4	Bodily fluids
Week 5	Types of cells
Week 6	Mitochondrial DNA
Week 7	<b>Quiz</b>
Week 8	Tissues
Week 9	Teeth DNA
Week 10	Bone DNA
Week 11	Gel electrophoresis
Week 14	Preparatory week before the final Exam
Week 15	<b>Quiz</b>

### Learning and Teaching Resources

	Text	Available in the Library?
<b>Required Texts</b>	Forensic biology	yes
<b>Websites</b>		

### Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
<b>Success Group (50 - 100)</b>	<b>A - Excellent</b>	امتياز	90 - 100	Outstanding Performance
	<b>B - Very Good</b>	جيد جدا	80 - 89	Above average with some errors

	<b>C - Good</b>	جيد	70 - 79	Sound work with notable errors
	<b>D - Satisfactory</b>	متوسط	60 - 69	Fair but with major shortcomings
	<b>E - Sufficient</b>	مقبول	50 - 59	Work meets minimum criteria
<b>Fail Group (0 – 49)</b>	<b>FX – Fail</b>	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	<b>F – Fail</b>	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	النظام القانوني للخبير الجنائي		Module Delivery
Module Type	نظري		<input checked="" type="checkbox"/> Theory
Module Code			<input checked="" type="checkbox"/> Lecture
ECTS Credits			<input type="checkbox"/> Tutorial
SWL (hr/sem)			<input type="checkbox"/> Practical
			<input type="checkbox"/> Seminar
Module Level	نظري	Semester of Delivery	1
Administering Department	Type Dept. Code	College	كلية العلوم /جامعة واسط
Module Leader	Name م. وجناء رزاق عبد	e-mail	wagna@uowasit.edu.iq
Module Leader's Acad. Title		Module Leader's Qualification	Ph.D.
Module Tutor	م. وجناء رزاق عبد	e-mail	wagna@uowasit.edu.iq
Peer Reviewer Name	professor	e-mail	E-mail
Scientific Committee Approval Date	1/03/2024	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

<p><b>1. Module Aims</b> <b>2. أهداف المادة الدراسية</b></p>	<p>1-بيان مفهوم الخبرة القضائية وأنواعها 2-التعريف بالخبير الجنائي واهم الشروط وخصائص الخبرة 3- الأساس القانوني للخبرة 4- بيان أوجه العلاقة بين الخبرة والشهادة وكيفية انتداب الخبير 5- الطبيعة القانونية للخبير والمسؤولية الجنائية والمدنية للخبير</p>
<p><b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية</p>	<p>١ - المعرفة والفهم التعرف على مفهوم الخبرة القضائية وأنواعها ٣ - الحماية القانونية للخبير التعرف على مناهج البحث العلمي -٤</p>
<p><b>Indicative Contents</b> المحتويات الإرشادية</p>	<p>Indicative content includes the following.</p> <p><u>Part A - Circuit Theory</u></p> <p>DC circuits – Current and voltage definitions, Passive sign convention and circuit elements, Combining resistive elements in series and parallel. Kirchoff's laws and Ohm's law. Anatomy of a circuit, Network reduction, Introduction to mesh and nodal analysis. [15 hrs]</p> <p>AC circuits I – Time dependent signals, average and RMS values. Capacitance and inductance, energy storage elements, simple AC steady-state sinusoidal analysis. [15 hrs]</p> <p>AC Circuits II - Phasor diagrams, definition of complex impedance, AC circuit analysis with complex numbers. [10 hrs]</p> <p>RL, RC and RLC circuits - Frequency response of RLC circuits, simple filter and band-pass circuits, resonance and Q-factor, use of Bode plots, use of differential equations and their solutions. Time response (natural and step responses). Introduction to second order circuits. [15 hrs]</p> <p>Revision problem classes [6 hrs]</p>

	<p><u>Part B - Analogue Electronics</u></p> <p>Fundamentals</p> <p>Resistive networks, voltage and current sources, Thevenin and Norton equivalent circuits, current and voltage division, input resistance, output resistance, coupling and decoupling capacitors, maximum power transfer, RMS and power dissipation, current limiting and over voltage protection. [15 hrs]</p> <p>Components and active devices – Components vs elements and circuit modeling, real and ideal elements. Introduction to sensors and actuators, self-generating vs modulating type sensors, simple circuit interfacing. [7 hrs]</p> <p>Diodes and Diode circuits – Diode characteristics and equations, ideal vs real. Signal conditioning, clamping and clipping, rectification and peak detection, photodiodes, LEDs, Zener diodes, voltage stabilization, voltage reference, power supplies. [15 hrs]</p>
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<b>Learning and Teaching Strategies</b> استراتيجيات التعلم والتعليم	
<b>Strategies</b>	<p>المهارات العامة والتأهيلية المنقولة (المهارات الأخرى المتعلقة بقابلية التوظيف والتطور الشخصي).</p> <p>١- توفير فرص التعلم المستمر للطلبة وتحفيزهم عليها</p> <p>٢- التعلم الذاتي المنظم</p> <p>٣- التواصل الاجتماعي</p> <p>٤- الإدارة الذاتية</p>

<b>Student Workload (SWL)</b> الحمل الدراسي للطلاب محسوب لـ ١٥ أسبوعا			
<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطلاب خلال الفصل	109	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطلاب أسبوعيا	7
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطلاب خلال الفصل	91	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطلاب أسبوعيا	6
<b>Total SWL (h/sem)</b>	200		

الحمل الدراسي الكلي للطالب خلال الفصل	
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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	All
	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 الأسبوعي النظري	
	Material Covered
Week 1	نبذة عامة عن علم القانون وفروعه
Week 2	مفهوم الخبرة القضائية وأنواعها
Week 3	الخبير الجنائي تعريف وخصائص
Week 4	شروط الخبرة
Week 5	العلاقة بين الخبرة والمخبرين والشهود
Week 6	الأساس القانوني لعمل الخبير
Week 7	المسؤولية الجنائية للخبير
Week 8	المسؤولية المدنية للخبير
Week 9	أهمية الخبير بالنسبة للتحقيق
Week 10	كيفية انتداب الخبير
Week 11	الحماية القانونية للخبير والشاهد والمخبر
Week 12	القيمة القانونية للخبرة القضائية
Week 13	
Week 14	
Week 15	
Week 16	

## Delivery Plan (Weekly Lab. Syllabus)

المنهاج الأسبوعي للمختبر

	Material Covered
Week 1	Lab 1: Introduction to Agilent VEE and PSPICE
Week 2	Lab 2: Thévenin's / Norton's Theorem and Kirchoff's Laws
Week 3	Lab 3: First-Order Transient Responses
Week 4	Lab 4: Second-Order Transient Responses
Week 5	Lab 5: Frequency Response of RC Circuits
Week 6	Lab 6: Frequency Response of RLC Circuits
Week 7	Lab 7: Filters

## Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	محاضرات من أعداد مدرس المادة	Yes
Recommended Texts		No
Websites	محاضرات خاصة بالموضوع / الأنترنت	

## 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
<b>Fail Group (0 – 49)</b>	<b>FX – Fail</b>	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	<b>F – Fail</b>	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			
Study subject information			
<b>Module Title</b>	Principles of forensic sciences		<b>Module Delivery</b>
<b>Module Type</b>	B		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
<b>Module Code</b>	FOR1106		
<b>ECTS Credits</b>	6		
<b>SWL ( hr / sem )</b>			
<b>Module Level</b>	1 1	<b>Semester of Delivery</b>	
<b>Administering Department</b>	B	<b>College</b>	Science
<b>Module Leader</b>	Dr.Rafed abbas kadhum	<b>e-mail</b>	Rafedabbassuowasit.edu.iq
<b>Module Leader's Acad. Title</b>		<b>Module Leader's Qualification</b>	Ph.D
<b>Module Tutor</b>		<b>e-mail</b>	
<b>Peer Reviewer Name</b>		<b>e-mail</b>	
<b>Scientific Committee Approval Date</b>	10/11/2023	<b>Version Number</b>	1.0

Relation with other Modules			
Relationship with other academic subjects			
<b>Prerequisite module</b>		<b>Semester</b>	
<b>Co-requisites module</b>		<b>Semester</b>	

<b>Module Aims, Learning Outcomes and Indicative Contents</b>	
Subject objectives, learning outcomes and indicative contents	
<b>Module Aims</b> Objectives of the study subject	It aims to provide the student with practical experience in collecting forensic evidence , investigating criminal investigations, andLifting fingerprints and criminal traces
<b>Module Learning Outcomes</b> Learning outcomes for the subject	The department’s graduate will be able to analyze and study all events and biological, chemical, physical and legal evidence of crimes and be able to deal .with them in a scientific manner ,Field of work: Ministry of Interior, Ministry of Defense, Ministry of Justice Ministry of Higher Education and Scientific Research
<b>Indicative Contents</b> Indicative contents	Understanding Creativity and scientific thinking Analysis of accident and crime scene data

<b>Learning and Teaching Strategies</b>	
Learning and teaching strategies	
<b>Strategies</b>	Collect the crime profiles and analyze the results based on the laboratory test outputs

<b>Student Workload (SWL)</b>			
The student's study load is calculated for 15 weeks			
<b>Structured SWL (h/ sem )</b> The student’s regular academic load during the semester	30	<b>Structured SWL (h/w)</b> The student's regular academic load per week	
<b>Unstructured SWL (h/ sem )</b> Irregular study load for the student during the semester	30	<b>Unstructured SWL (h/w)</b> The student's irregular academic load per week	
<b>Total SWL (h/ sem )</b> The student's total academic load during the semester	60		

<b>ModuleEvaluation</b>
Evaluation of the academic subject



		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10 %( 10)		
	Assignments				
	Projects/ Lab.	3	10 %( 10)		
	Report	1	10 %( 10)		
Summative assessment	Midterm exam	2hr	20 %( 20)		
	Final exam	3hr	50% (50)		
Total assessment			100%		

<b>Delivery Plan (Weekly Syllabus)</b> theoretical weekly curriculum	
	Material Covered
<b>Week 1</b>	The concept and importance of forensic science
<b>Week 2</b>	Historical development of forensic evidence
<b>Week 3</b>	Species Criminal Evidence
<b>Week 4</b>	Forensic evidence and material traces
<b>Week 5</b>	The importance of genetic imprinting in achieving personality
<b>Week 6</b>	Fingerprints and the use of nanotechnology to detect them
<b>Week 7</b>	Forensic medicine
<b>Week 8</b>	Forensic chemistry
<b>Week 9</b>	Criminal toxicology
<b>Week 10</b>	Forgery of passports and counterfeit banknotes
<b>Week 11</b>	Examination of traces Weapons And the tools
<b>Week 12</b>	Crime scene and preservation procedures
<b>Week 13</b>	Electronic forensic tool
<b>Week 14</b>	Forensic engineering
<b>Week 15</b>	First semester exam
<b>Week 16</b>	

<b>Delivery Plan (Weekly Lab. Syllabus)</b>
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weekly laboratory curriculum	
	Material Covered
Week 1	Forensic evidence and material traces
Week 2	The importance of genetic imprinting in achieving personality
Week 3	Fingerprints and the use of nanotechnology to detect them
Week 4	Forensic forensic medicine
Week 5	Forensic chemistry
Week 6	Criminal toxicology
Week 7	Forgery of passports and counterfeit banknotes

Learning and Teaching Resources		
Learning and teaching resources		
	Text	Available in the Library?
Required Texts	Forensic science	Yes
Recommended Texts		
Websites		

Grading Scheme				
Grading chart				
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	acceptable	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	Deposit (in process)	(45-49)	More work required but credit awarded
	F - Fail	Failed	(0-44)	Considerable amount of work required

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