

First and Second Semester

Module 1

Module Information			
Module Title	Workshops		Module Delivery <input type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Type	Support		
Module Code	WORSH11		
ECTS Credit/year	4		
SWL/year	100		
Module level	1	Semester of Delivery	1, 2
Module Leader	Training and Workshops Center	College	
Module Leader Academic Title	Prof.	e-mail	twc@uotechnology.edu.iq
Module Tutor		Module Leader's Qualification	Ph.D.
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	1/6/2023	e-mail	
		Version Number	1

Relation with other Modules			
Prerequisite Module	-	Semester	-
Co-requisite Module	-	Semester	-

Module Aims, Learning Outcomes and Inductive Contents	
Module Aims	1-Preparing applied engineers in the field of engineering sciences who are distinguished by a high level of knowledge and technological creativity, in line with the strict standards adopted globally in quality assurance and academic accreditation of the corresponding engineering programs, while adhering to the ethics of the engineering profession. 2. Enable the student to know and understand work systems, risks, and the factors surrounding them. 3. Enable the student to know and understand theoretical principles in handicrafts and measurements.
Module Learning Outcomes	1- To familiarize the student with the vocabulary of occupational safety and its importance in the field of work. 2- Acquisition of the student's manual operation skills, for example (Filings and

	<p>Tinsmith workshops), and mechanical operation skills, for example (Turning).</p> <p>3- Acquisition of the student’s mechanical forming skills, for example (Casting and Blacksmithing).</p> <p>4- The student acquires basic engineering skills such as Welding, Carpentry, and Electrical installations that serve him in the professional field.</p> <p>5- Enabling the student to operate the various machines and devices in mechanical operations and formation.</p> <p>6- Cooperative learning by working collectively.</p>
<p>Inductive Contents</p>	<ol style="list-style-type: none"> 1. Introducing the student to the basics of the art of turning and milling, types of cold working machines, the skill of dealing with them, choosing metals, operational tools, and methods of measurement and standardization 2. Introducing the student to the basics of the art of casting, hot forming, metal selection, method of working on casting furnaces and tools, and manufacturing casting molds 3. Familiarize students with the basics of cars and the systems they use, as well as maintenance, disassembly, and assembly processes. 4. Introducing students to the basics of household and industrial electrical appliances, the skill of using tools, and designing electrical circuits and control panels 5. Introducing the student to the basics of the art of plumbing, leveling surfaces, the skill of using tools, manufacturing and installing geometric shapes, and methods of measurement and standardization 6. Introducing the student to the basics of the art of blacksmithing, cold and hot forming of metals, the method of hardening them, and the skills of dealing with hand tools, forming machines, and heating furnaces 7. Introducing the student to the basics of the art of filing and manual operation of metals with the help of manual, electrical, and mechanical tools, the skills of dealing with them, and the methods of measurement and standardization 8. Introducing the student to the basics of the art of welding, the installation and assembly of metals, the types of welding machines, the skills of dealing with them, the types of welding, and the methods of measurement and standardization 9. Introducing the student to the basics of the art of carpentry and woodworking with the help of manual, electrical, and mechanical tools, the skills of dealing with them, and methods of measurement and standardization

<p>Learning and Teaching Strategies</p>	
<p>Strategies</p>	

Student Workload (SWL)			
Structured SWL (h/sem)	46.5	Structured SWL (h/w)	3.00
Unstructured SWL (h/sem)	3.5	Unstructured SWL (h/w)	0.23
Total SWL (h/sem)	50		
Structured SWL (h/year)	93	Structured SWL (h/w)	3.00
Unstructured SWL (h/year)	7	Unstructured SWL (h/w)	0.23
Total SWL (h/year)	100		

Module Evaluation					
		Time/No.	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative Assessment	Quizzes				
	Assignments				All
	Projects / Practice	Every 3 weeks	60%	Continuous	
	Report				
Summative Assessment	Midterm Exam				
	Exam	Every 3 weeks	40%	Continuous	All
Total assessment			100%		

Delivery Plan (Weekly Syllabus)	
	Materials Covered
Week 1	Welding workshop. -Occupational safety and its importance in welding workshops. -Introduction to the basics of welding. -Electric arc exercise. -An exercise for welding straight lines in a circular motion (helical).
Week 2	Welding workshop - An exercise for welding straight lines with a crescent movement and other welding methods -Construction welding exercise.
Week 3	Welding workshop. -Welding two pieces together. -Written exam in practical exercises. -
Week 4	Casting workshop -Occupational safety and its importance in plumbing workshops.

	<ul style="list-style-type: none"> -Introduction to the basics of metal casting. -Simple wooden disc exercise. Half workout.
Week 5	<ul style="list-style-type: none"> Casting workshop Wheel exercise. Pushing arm exercise.
Week 6	<ul style="list-style-type: none"> Casting workshop. -Complete pulley exercise. -Circular pole exercise. -Written exam in practical exercises.
Week 7	<ul style="list-style-type: none"> Blacksmith Workshop -Occupational safety and its importance in blacksmithing workshops. -Introduction to the Basics of Blacksmithing. - Barbell adjustment exercise. -Eight-star exercise. - Exercise forming the number eight in English. -Six formation exercises in English.
Week 8	<ul style="list-style-type: none"> Blacksmith Workshop -An exercise forming the number five in English. - Exercise forming the number nine in English. -An exercise in forming an iron model in the form of a circle .
Week 9	<ul style="list-style-type: none"> Blacksmith Workshop - S-shape exercise. - Air hammer hot barbell exercise. - Exercise to form a circle on an electric bending machine. - Exercising cold and hot ornament formation. - A written exam in practical exercises .
Week 10	<ul style="list-style-type: none"> Automotive Workshop -Occupational safety and its importance in car maintenance workshops. -An introduction to cars and their basic parts. -Parts of the engine, how it works, types of engines, and methods of classification.
Week 11	<ul style="list-style-type: none"> Automotive Workshop - Open the engine and identify the parts -Lubrication system -Cooling system.
Week 12	<ul style="list-style-type: none"> Automotive Workshop -The fuel system. -The old and new ignition circuits. -Written exam in practical exercises.
Week 13	<ul style="list-style-type: none"> Turning Workshop -Introduction to lathe machines and identifying their parts -Measuring tools and the use of an oven measuring instrument

	-Circular column lathing exercise on different diameters.
Week 14	Turning Workshop -Exercise using the pen (semicircular R) brackets. An exercise in making different angles using a pen (square + angle pen 55).
Week 15	Turning Workshop - Making shaft with different diameter exercises using (left and right pen) - Workout (Tube Connection). -Written exam in practical exercises.
Week 16	Fitting workshop Occupational safety and its importance in filing workshops -An introduction to the basics of filing -Pen holder exercise “preparation and preparation”
Week 17	Fitting workshop Pencil holder exercises finishing and assembling.
Week 18	Fitting workshop -The catcher exercise. - Clamping exercise. Written exam in practical exercises.
Week 19	Carpentry workshop -Occupational safety and its importance in carpentry workshops. - An introduction to carpentry, its types, types of wood, tools used, and preparation Preparing the tools used Face modification exercise using the reindeer
Week 20	Carpentry workshop Garden fence work and how to connect its parts, the eight-star exercise
Week 21	Carpentry workshop - Wood smoothing exercise using smoothing paper - Wood dyeing exercise in three stages Final smoothing and varnishing exercise Written exam in practical exercises
Week 22	The tinsmith workshop Occupational safety and its importance in plumbing workshops An introduction to plumbing, its tools, and plumbing stages Planning and marking exercise on metal plates
Week 23	The tinsmith workshop Geometric shapes Types of individuals and methods of individuals Geometric shape individuals exercise on a metal board
Week 24	The tinsmith workshop Cone members exercise

	<ul style="list-style-type: none"> - Exercise of cylinders with an oblique cut Roll forming operations Connection without the use of an intermediary Written exam in practical exercises
Week 25	<p>Electric Workshop</p> <p>Occupational Safety and its importance in electrical workshops</p> <p>An introduction to the basics of electrical installations</p> <ul style="list-style-type: none"> - Linking a simple circuit consisting of a lamp to the control of a single-way switch. <p>Connect two lamps in series with one-way switch control.</p> <p>Connecting two lamps in parallel with the control of a single road switch.</p> <p>Connect two lights with one-way dual switch control.</p>
Week 26	<p>electric Workshop</p> <p>Connect a fluorescent lamp circuit to a one-way switch control</p> <p>Connecting an electric supply socket circuit to the control of a separate or combined one-way switch</p> <p>Written exam in practical exercises</p>
Week 27	<p>electric Workshop</p> <p>Occupational Safety and its importance in blacksmithing workshops</p> <p>Introduction to the basics of Blacksmithing</p> <ul style="list-style-type: none"> - Barbell adjustment exercise <p>Eight-star exercise</p> <ul style="list-style-type: none"> - Exercise forming the number eight in English <p>Exercise forming the number six in English</p>
Week 28	<p>supplementary training curriculum</p> <p>Welding workshop</p> <p>Plumbing workshop</p> <p>Blacksmith's workshop</p>
Week 29	<p>supplementary training curriculum</p> <ul style="list-style-type: none"> - Automotive workshop - Turning workshop <p>Fitting workshop</p>
Week 30	<p>supplementary training curriculum</p> <p>Carpentry workshop</p> <p>The plumbing workshop</p> <p>electric Workshop</p>

Learning and Teaching Resources		
	Text	Available in the library
Required Texts	Workshop technology and measurements, Ahmed Salem Al-Sabbagh,	yes

Recommended Texts		
Websites		



Ministry of Higher Education and
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Department of Biotechnology



MODULE DESCRIPTOR FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	ANALYTICAL CHEMISTRY		Module Delivery
Module Type	BASIC		✓ Theory ✓ Lecture ✓ Lab ✓ Tutorial Practical Seminar
Module Code	ANCH113		
ECTS Credits	6		
SWL (hr/sem)	150		
Module Level	1	Semester of Delivery	1
Administering Department	BIOT005	College	APSC008
Module Leader	Iman Ismael	e-mail	Iman.I.Alsaedi@uotechnology.edu.iq
Module Leader's Acad. Title	Assistant Professor	Module Leader's Qualification	MSC.
Module Tutor	None	e-mail	None
Peer Reviewer Name		e-mail	
Review Committee Approval		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	<p>Course Main Objective The purpose from this course is to relate the fundamental concepts of general chemistry to the world around us, and in this way illustrate how chemistry explains many aspects of everyday life. * In this course we will follow two guiding principles • use relevant and interesting applications for all basic chemical concepts. • present the material in a student friendly fashion using bulleted lists, extensive illustrations, and step-by-step problem solving. * Keep abreast of developments in scientific research through a review of the latest research in the field of chemistry and linking of information theory in practical side through research published in this area in the form of scientific research useful.</p>		
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p>Course Objectives and Learning Outcomes:</p> <p>1. Course Description: This course is an introductory chemistry course designed to prepare students for college level chemistry courses. The course introduces: - concepts of basic chemistry - Explain interested examples of how chemistry applies to life - Describe the matter and its classification, states, physical and chemical properties - Study the measurements and dimensional analysis in solving problems - Study atoms, molecules and ions - Describe the mass relationships in chemical reactions - Study the chemical bonding - Study acids and bases This Course is designed for students who have an interest in nursing, nutrition, environmental science, food science, and a wide variety of other health-related professions. The content of this book is designed for an introductory chemistry course with no chemistry prerequisite, and is suitable for either a two-semester sequence or a one-semester course.</p> <p>1 Knowledge:</p> <p>1.1 Identify the main concepts in the course: like:</p> <p>1.2 a- states, properties, and changes of matter.</p> <p>1.3 b- Types of matter. (pure, mixtures, solutions).</p> <p>1.4 c- chemical bonding (Ionic and covalent).</p> <p>1.5 d- redox processes.</p> <p>1.6 e- Acid-base substances.</p>		

	<p>.2 Write the chemical equations (for example: combustion reaction, redox reaction, acid-base neutralization reaction, ...etc.) distinguish its components, balance and Make chemical calculations based on balanced equation</p> <p>3 knowledge and Naming of ionic and covalent compounds Identify the oxidation and reduction reactions and their applications, and acids and bases, its characteristics, and their application.</p> <p>2 Skills :</p> <p>2.1 Skill of introduce a lecture and face the people without distraction.</p> <p>2.2 Brainstorm by group work without strict or mind close opinion</p> <p>2.3 The communication skills acceptance,</p> <p>2.4 Acquisition student skill to take responsibility for himself and his group and teamwork, and to improve Self-confidence in solving problems</p> <p>3 Competence:</p> <p>3.1 search, collect, organize and interpret Chemical information from different databases and sources</p> <p>3.2 use information and communication technology to complete assigned tasks</p> <p>3.3 Development of student skills of statistically analyzing of data and make comparisons and understand application and limitations of information technology</p>
<p>Indicative Contents المحتويات الإرشادية</p>	<p>1 Introduction</p> <p>2 Matter and Measurement</p> <p>3 Atoms and periodic table</p> <p>4 Ionic Compounds</p> <p>5 covalent compounds</p> <p>6 Chemical reactions</p> <p>7 Solution</p> <p>8 Acids & Bases</p> <p>Teaching and Assessment</p> <p>1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods</p> <p>Code Course Learning Outcomes Teaching Strategies Assessment Methods</p> <p>1.0 Knowledge</p> <p>1.1</p> <p>Identify the main concepts in the course: like: a- states, properties, and changes of</p>

matter.

b- Types of matter. (pure, mixtures, solutions).

c- chemical bonding (Ionic and covalent).

d- redox processes.

e- Acid-base substances.

- **Direct teaching**

through lecture

- Presentation skills and diction through activities and duties to be presented as discussions

- Teamwork through a related research work between a group of students

- The application of problem-solving skills and decision-making

- Open discussions

Performance-based assessment

1- Presentation

2- Demonstration

3- Performance

4- Speech

Pencil & Paper

Test/quiz/Exam

Test item types:

1-short-term questions

*Multiple choice

items

2-Open-ended answer

items

*Short answer

*Essay and problem

solving

Observation

• Random observation

Systematic observation

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

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

الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	108	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	2.8
Total SWL (h/sem) الحمل الدراسي الكلي للطالب 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	
	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	Introduction

Week 2	Atoms and periodic table
Week 3	Ionic Compounds
Week 4	covalent compounds
Week 5	Chemical reactions
Week 6	Solution
Week7	Acids & Bases
Week8	Preparatory Week
Week 9	Final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Laboratory instructions
Week 2	Lab 2: Laboratory instruments & glass ware
Week 3	Lab 3: Preparation of standard solutions , percentage solutions, molar solutions & dilution methods
Week 4	Lab 4: Normal solutions. 6 Buffer- acid, base.
Week 5	Lab 5: Test
Week 6	Lab 6: Volumetric analysis, standard solution titration, neutralization reaction.
Week 7	Lab 7: Perception titration
Week8	Lab8: Separation & purification of organic compounds
Week9	Lab9: Unknown test

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Fundamentals of Analytical Chemistry by	Yes

	<p>Stook and West. Organic Chemistry by Robert T. Morrison and Robert N. Boyd . Organic Chemistry by McCurry; 5th ed. Thomason learning; CA,USA; 2000</p>	
Recommended Texts	<p>-Organic Chemistry by Robert T. Morrison and Robert N. Boyd</p> <p>- Chemistry by Block, Roche Soine and Wilson, latest edition</p> <p>-Wilson and Gisvold Textbook of Organic</p> <p>-Spectrometric Identification of Organic Compounds by Silverstein, Bassler and Morrill; 2. Applications of absorption spectroscopy of organic compounds by Dyer JR.</p>	No
Websites		

APPENDIX:

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	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note:

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.



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MODULE DESCRIPTOR FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	COMPUTER SCIENCE		Module Delivery
Module Type	BASIC		✓ Theory Lecture ✓ Lab Tutorial Practical Seminar
Module Code	COSC114		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level	1	Semester of Delivery	
Administering Department	BIOT005	College	APSC008
Module Leader	Lec. Amer H. Abbas	e-mail	Amer.H. Abbas@uotechnology.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Master
Module Tutor	None	e-mail	None
Peer Reviewer Name		e-mail	
Review Committee Approval		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	<ol style="list-style-type: none"> 1. To develop problem solving skills and understanding of computer science through the application of techniques. 2. To understand how the computer works from zero. 3. This course deals with the basic concept of computer science. 4. This is the basic subject for all computers and programs circuits subject. 5. To understand how to solve computer problems. 6. To perform solutions for the problems. 		
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<ol style="list-style-type: none"> 1. Recognize how computer works. 2. List the various terms associated with computer programs. 3. Summarize what is meant by a basic computer science. 4. Discuss the relation and involvement of programs. 5. Describe operating programs. 6. Define Windows 10. 7. Identify the basic principles of applications of Windows 10 . 8. Discuss the operations of Windows 10. 9. Discuss the various properties of Windows 10. 10. Explain the general Windows 10 laws used in programming. 11. Identify the applications and pathways relationship with respect to windows 10 . 		
Indicative Contents المحتويات الإرشادية	<p>Indicative content includes the following.</p> <p>Principal areas of study and careers within computer science include artificial intelligence, computer systems and networks, security, database systems, human-computer interaction, vision and graphics, numerical analysis, programming languages, software engineering, bioinformatics, and theory of computing.</p>		

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	A computer science teacher is responsible for teaching students computer and programming knowledge and skills. Computer science teachers often help students understand how computers work, covering scientific and mathematical concepts behind them and their hardware and software components.

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 أسبوعياً	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	37	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	2.4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects	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	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Windows 10 Interface

Week 2	Searching for Programs , Saving Documents
Week 3	Saving to the Hard Drive , Saving to an External Drive
Week 4	The Windows Taskbar
Week 5	Pinning a Program to the Taskbar
Week 6	Date Time
Week 7	Adjusting Date/Time
Week 8	Personalizing the Desktop
Week 9	Deleting Shortcuts
Week 10	Change the Desktop Background
Week 11	Managing Files and Folders
Week 12	Moving Files and Folders
Week 13	Deleting Files or Folders
Week 14	Restoring Deleted Files or Folders
Week 15	Preparatory Week
Week 16	Mid exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Microsoft Windows 10 Getting Started Guide	No
Recommended Texts	Windows 10 Backup & Restore	No
Websites	https://www.collateralrepairproject.org/educational-programs/computer-classes/?gclid=CjwKCAjwvpCkBhB4EiwAujULMgpTknF6yz68cb8wbXuQ9lTO D9YzaPfAAZNqlkJBMLE2SHirZlG4YhoCtEQQA vD_BwE	

APPENDIX:

GRADING SCHEME مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
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Fail Group (0 – 49)	FX – Fail	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note:

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MODULE DESCRIPTOR FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	GENERAL BIOLOGY (ANIMAL)		Module Delivery
Module Type	CORE	✓ Theory ✓ Lecture ✓ Lab ✓ Tutorial Practical Seminar	
Module Code	GEBI111		
ECTS Credits	8		
SWL (hr/sem)	200		
Module Level	1	Semester of Delivery	1
Administering Department	BIOT005	College	APSC008
Module Leader	Dr. Entesar H. Ali	e-mail	Entesar.H.Almosawi@uotechnology.edu.iq
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor	None	e-mail	None
Peer Reviewer Name		e-mail	
Review Committee Approval		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	7. To develop information about biology . 8. To understand how living organism divided. 9. This course deals with living organism animal and microorganism. 10. This is the basic subject for all living organism.		
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	12. Recognize living organism. 13. List the various living organism. 14. Summarize what is meant living organism. 15. Discuss the reaction and involvement that effect in organism. 16. Describe living cell.		
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. <u>Part A – what the living organism</u> Type organism microorganism and animal. How name organism and how can classification organism. [15 hrs] The eukaryotic and prokaryotic . [15 hrs] The type of animal tissue. [10 hrs] Connective tissue ,nerve tissue , blood tissue . [15 hrs] Revision problem classes [6 hrs] <u>Part B – how can classification animal</u> The scientific name of organism and class of organism . [15 hrs] The phylum , order , species , genius . [15 hrs]		
Learning and Teaching Strategies			

استراتيجيات التعلم والتعليم

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

الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	108	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	92	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	6.13
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 الأسبوعي النظري

	Material Covered
Week 1	Introduction - Difference between living and non living microorganism.
Week 2	Biology divided it
Week 3	Cell size and shape.
Week 4	Type of cell eukaryotic cell.
Week 5	Prokaryotic cell.
Week 6	Animal tissues.
Week 7	Types of animal tissues.
Week 8	Epithelial tissue.
Week 9	Connective tissue.
Week 10	Components of connective tissue.
Week 11	Connective tissue blood
Week 12	Cartilage tissue
Week 13	Muscular tissue.
Week 14	Nervous tissue.
Week 15	Preparatory Week
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Introduction - Difference between living and non living microorganism.
Week 2	Biology divided it
Week 3	Cell size and shape.
Week 4	Type of cell eukaryotic cell.
Week 5	Prokaryotic cell.
Week 6	Animal tissues.
Week 7	Types of animal tissues.
Week 8	Epithelial tissue.
Week 9	Connective tissue.
Week 10	Components of connective tissue.
Week 11	Connective tissue blood
Week 12	Cartilage tissue

Week 13	Muscular tissue.
Week 14	Nervous tissue.

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts		Yes
Recommended Texts		No
Websites		

APPENDIX:

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	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				

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.



Ministry of Higher Education and
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MODULE DESCRIPTOR FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	HUMAN RIGHTS		Module Delivery
Module Type	SUPPLEMENT		✓ Theory ✓ Lecture Lab ✓ Tutorial Practical Seminar
Module Code	HURI116		
ECTS Credits	2.00		
SWL (hr/sem)	50		
Module Level	1	Semester of Delivery	
Administering Department	BIOT005	College	APSC008
Module Leader	Nagham A. Hussein	e-mail	150006@uotechnology.edu.iq
Module Leader's Acad. Title	Asst. Professor	Module Leader's Qualification	master
Module Tutor	None	e-mail	None
Peer Reviewer Name	-	e-mail	-
Review Committee Approval	-	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			
Module Aims أهداف المادة الدراسية	<p>1. Developing and flourishing the human personality in its emotional, intellectual and social dimensions, and rooting in its sense of dignity, freedom, equality, social justice and democratic practice.</p> <p>2. Enhancing people's awareness - women and men - of their rights in a way that helps enable them to transform the principles of human rights into a social, economic, cultural and political reality, and raise their ability to defend, maintain and advance them at all levels.</p> <p>3. Strengthening the bonds of friendship and solidarity among peoples, enhancing respect for the rights of others, preserving cultural pluralism and diversity, flourishing national cultures for all groups and peoples, enriching the culture of dialogue and mutual tolerance, rejecting violence and terrorism, promoting non-violence and combating intolerance, and providing all people with strong immunity against hate speech.</p> <p>4. Promoting a culture of peace based on justice and respect for human rights, foremost of which is the right to self-determination, the right to resist occupation, and the democratization of international relations and the institutions of the international community, so as to reflect the common interests of humanity.</p>		
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p>1- Students benefit from knowing the types of rights and their field of application.</p> <p>2- Clarifying the historical stages of human rights and the extent of their development.</p> <p>3- Knowing the correct concept of freedoms and democracy.</p> <p>4 - Providing the student with the moral values that require adherence to them and clarifying the most important rights and duties entrusted to the individual.</p> <p>5- Knowing the rights and duties of the Iraqi individual</p> <p>6 - Introduction to the history of human rights and stages of development.</p> <p>7 - Spreading culture and feeding students from the Islamic side.</p> <p>8 - How to preserve society and the country by strengthening the country's</p>		

	<p>love for them.</p> <p>9 - Learn about the most important rights granted to them in accordance with international norms and laws.</p> <p>10 - Enhancing citizenship among students.</p>
<p>Indicative Contents المحتويات الإرشادية</p>	<p>Indicative content includes the following.</p> <p>Teaching human rights requires learning to be based on participatory practice in an atmosphere of mutual respect so that everyone is aware of their shared responsibility to make human rights a reality.</p> <p>On the other hand, “human rights education” was defined in a practical and detailed manner for the purpose of the contract, as: “training, publishing and media efforts aimed at creating a global culture in the field of human rights by sharing knowledge and skills and shaping behavior in order to:</p> <ol style="list-style-type: none"> 1. Promote respect for human rights and fundamental freedoms. 2. The full development of the human personality and its sense of dignity. 3. To promote understanding, tolerance, gender equality, and friendship among all nations, indigenous peoples, and racial, national, ethnic, religious, and linguistic groups. 4. Enabling all individuals to participate effectively in a free society. 5. Advance the activities of the United Nations in order to maintain peace.
<p>Learning and Teaching Strategies استراتيجيات التعلم والتعليم</p>	
<p>Strategies</p>	<ul style="list-style-type: none"> -Relying on concrete and realistic evidence and examples of human rights and the concept of democracy that reflects the nature of society and the environment that fosters the individual. -Teaching students the mechanism of scientific thinking, analysis and deduction. -Motivate students to find realistic problems and solve them in a scientific way. - Brainstorming, which gave the students an opportunity to present and discuss their ideas. -Lectures. -Intellectual questions and discussions.

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 أسبوعياً	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	1.13
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% (15)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	15% (15)	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	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	The concept of human rights (definition of human rights - their characteristics).
Week 2	Human rights in ancient civilizations, human rights in the Christian and Jewish religions, and human rights in Islam.
Week 3	Human rights sources - international sources - the Universal Declaration of Human Rights - the two international covenants on human rights
Week 4	National Sources - Declaration of the Rights of Man and the French Citizen - French Constitutions and Declarations - Constitution of the Republic of Iraq for the year 2005
Week 5	Human rights guarantees - Human rights guarantees at the internal level - Constitutional guarantees - Judicial guarantees
Week 6	Human rights in Islam - Adoption of the principle of dual responsibility in Islamic society - The religious character of Islamic law - Human trafficking
Week 7	Mid-term Exam
Week 8	The concept of democracy (development - definition - dimensions)
Week 9	Forms of democracy (direct democracy - its applications - an assessment of its system)

Week 10	Semi-direct democracy (concept - manifestations - appreciation)
Week 11	Representative democracy (concept - pillars - forms)
Week 12	The Representative Council - the single-parliamentary system and the two-chamber system - the internal organization of the Representative Council
Week 13	The mechanism of the representative system (parliamentary) - the concept of election and its legal adaptation - the electorate (its concept - the formation of the electorate)
Week 14	Organizing the election process - Election systems
Week 15	Preparatory Week
Week 16	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	Human rights, children and democracy, Dr. Maher Saleh Allawi Al-Jubouri, Dr. Raad Naji Al-Jeddah, Dr. Riyadh Aziz Hadi, d. Cackle Abdel-Ankoud, d. Ali Abdul Razzaq Muhammad, d. Hassan Muhammad Shafiq, Dar Ibn Al-Atheer for Printing and Publishing, 2009.	Yes
Recommended Texts	Hadi, Riyadh Azaz. (2005). Human rights (development - contents - protection) (Baghdad). Al-Dulaimi, Hafez Alwan. (2009). Contemporary reading of the issue of human rights.	No
Websites	"Methods, education and culture of human rights", published on the International Information Network (Internet) on the website http://ghrorg-learning.blogspot.com	

APPENDIX:

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	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note:

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.



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MODULE DESCRIPTOR FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	PRINCIPLE OF BIOTECHNOLOGY		Module Delivery
Module Type	CORE		✓ Theory Lecture ✓ Lab ✓ Tutorial Practical Seminar
Module Code	PRBI112		
ECTS Credits	8		
SWL (hr/sem)	200		
Module Level	1	Semester of Delivery	1
Administering Department	BIOT005	College	APSC008
Module Leader	Dr. Nehia Neama Hussein	e-mail	100103@uotechnology.edu.iq
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor	None	e-mail	None
Peer Reviewer Name	-	e-mail	-
Review Committee Approval	-	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	11. The main objective is to offer a broad view of biotechnology, integrating historical, global current and future applications.		
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p>17. Demonstrate knowledge of essential facts of the history of biotechnology and description of key scientific events in the development of biotechnology</p> <p>18. Demonstrate knowledge of the definitions and principles of ancient, classical, and modern biotechnologies.</p> <p>19. Describe the theory, practice and potential of current and future biotechnology.</p> <p>20. Describe and begin to evaluate aspects of current and future research and applications in biotechnology.</p>		
Indicative Contents المحتويات الإرشادية	<p>Indicative content includes the following.</p> <p>1- Biotechnology is technology that utilizes biological systems, living organisms or parts of this to develop or create different products. Brewing and baking bread are examples of processes that fall within the concept of biotechnology (use of yeast (= living organism) to produce the desired product).</p> <p>2- MBiotechnology has applications in four major industrial areas, including health care (medical), crop production and agriculture, nonfood (industrial) uses of crops and other products (e.g. biodegradable plastics, vegetable oil, biofuels), and environmental uses.</p> <p>3- Biotechnology provides farmers with tools that can make production cheaper and more manageable. For example, some biotechnology crops can be engineered to tolerate specific herbicides, which make weed control simpler and more efficient.</p>		

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	108	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	92	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	6.13
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	Introduction : PRINCIPLES OF BIOTECHNOLOGY
Week 2	CHEMICAL STRUCTURE OF NUCLEIC ACIDS
Week 3	ELECTROPHORESIS SEPARATES DNA FRAGMENTS BY SIZE
Week 4	ENVIRONMENTAL BIOTECHNOLOGY
Week 5	GRAM STAIN
Week 6	Section H Cloning Vectors
Week 7	Medical Biotechnology
Week 8	Cell Cycle, Mitosis and Meiosis
Week 9	<u>DNA Replication</u>
Week 10	DNA Extraction
Week 11	HPLC
Week 12	Plant Tissue Culture & Applications
Week 13	Scope of Biotechnology and Industrial Microbiology
Week 14	Concepts definition
Week 15	Preparatory Week
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Laboratory equipments: Instruments or apparatus
Week 2	Lab 2: Laboratory equipments: Tools used in Lab
Week 3	Lab 3: Microorganisms growth requirements and culture media
Week 4	Lab 4: Preparation of culture media
Week 5	Lab 5: Preparation of laboratory solutions
Week 6	Lab 6: Preparation of diluted solution from concentrated solution
Week 7	Lab 7: Maintaining and preserving of pure cultures
Week 8	Lab8: Fermenter

Week 9	Lab9: Investigation of Plastids types in microscope
Week 10	Lab10: Detection of amylase Enzyme from Saliva
Week 11	Lab 11: Filters

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	An introduction of Biotechnology	No
Recommended Texts	A Textbook of Biotechnology	No
Websites	https://bagitds.files.wordpress.com/2017/01/agr-203_an_introduction_to_biotechnology.pdf	

APPENDIX:

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	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note:

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	English language		Module Delivery
Module Type	Support		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab. <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	ENLA123		
ECTS Credits	2.00		
SWL (hr/sem)	50		
Module Level	1	Semester of Delivery	
Administering Department	BIOT005	College	APSC008
Module Leader	Hassan Hamed Abd	e-mail	
Module Leader's Acad. Title	Lecture	Module Leader's Qualification	Master
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	1.0

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

Co-requisites module	None	Semester	
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Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	<p>1- English (1) is a first-class comprehensive course that provides the students the fundamental principles of English.</p> <p>2- Some of the principles are illustrated with a nature.</p> <p>3- It is focused on effective teaching and learning English</p> <p>4- It is specially adapted for the Middle East and North Africa.</p> <p>5- This course combines the best of English language teaching methodologies to help students use English accurately and fluently.</p>
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p>The objective of the course is for undergraduate students:</p> <ol style="list-style-type: none"> 1. It will develop an understanding and appreciation of English language. 2. Students will acquire basic concepts of English, which are reading, writing, listening and speaking. 3. Students will focused on efficient instructions in studying English. 4. Students will be able to apply what they learn in their everyday life or in their study. 5. Provide students the best methodologies for Learning English language. 6. Help students to use English rightly and smoothly. 7. Discuss the various properties of materials in English. 8. Identify the basic elements and their applications in English.
Indicative Contents المحتويات الإرشادية	<p>Indicative content includes the following.</p> <p>English (1) is a course for first-class students depending on theoretical</p>

	lectures. It is a comprehensive course that provides the students the fundamental principles of English. , some of the principles are illustrated with a nature. In addition, it is focused on effective teaching and learning. English course is specially adapted for the Middle East and North Africa. This course combines the best of English language teaching methodologies to help students use English accurately and fluently. It is provides Basic Concepts materials and its applications. (15 hr.)
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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 English activities, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials, and by considering types of simple analysis involving some enjoyable activities for the students to solve problems that related in materials analysis.

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
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.13
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% (15)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	15% (15)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	There is no lab.			
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	1.5 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	<ul style="list-style-type: none"> - Introduction: Definition of course, course outline, and self introduce. - Placement test. - Course discussion and class plans.
Week 2	<ul style="list-style-type: none"> - General grammars: Present simple tense, past simple tense, and Future. - Vocabulary and pronunciation. - Audio-listening. - Group conversation.
Week 3	<ul style="list-style-type: none"> - Grammars reviews and prepositions: in, at, on, etc. - Reading and pronunciation. - Homework discussion.

Week 4	<ul style="list-style-type: none"> - Improve your spelling. - Vocabulary: Opposite verbs and positive and negative adjectives. - Class activities: Puzzle. - Homework discussion.
Week 5	<ul style="list-style-type: none"> - Intermediate grammars: Continuous tenses- present and past. - Practice your handwriting. - Writing a short speech. - Homework discussion.
Week 6	<ul style="list-style-type: none"> - Has and have: What is the difference? - Write and punctuate sentences. - Group work. - Homework discussion.
Week 7	<ul style="list-style-type: none"> - Negatives tense and modals- can and can't. - Improve your reading. - Solving exercises in class. - Homework discussion.
Week 8	<ul style="list-style-type: none"> - Speaking: Interviews. - What is dislike vs. like? - Writing a short speech.
Week 9	Exam and course review
Week 10	<ul style="list-style-type: none"> - Who, that, and where: What is the difference? - Vocabulary and Pronunciation. - Class activities: Write sentence, short talk "question and answer", and reading.
Week 11	<ul style="list-style-type: none"> - Adverb and preposition: during, in, ago, from, to, for, and since. - Audio-Listening. - Strategies and self- improvement. - Homework discussion.

Week 12	<ul style="list-style-type: none"> - Reading an article and complete a chart. - Crossword puzzle. - Writing a letter.
Week 13	<ul style="list-style-type: none"> - Speaking: Talk about things you need to have done. - Class activities: Match the verbs with nouns. - Improve your spelling. - Homework discussion.
Week 14	<ul style="list-style-type: none"> - Midterm Exam.

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
	There is no lab.

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	<p>The course is:</p> <ol style="list-style-type: none"> 1. First course textbook: Headway academic Skills Reading, Writing and study skills. Student's book, Sarah Philpot and Lesley Curnick, Series Editors Liz and John Soars, Oxford, University Press. 2011 2. First course textbook: Headway academic Skills listening, Speaking and study skills. Student's book, Sarah Philpot and Lesley Curnick, Series Editors Liz and John Soars, Oxford, University Press. 	No
Recommended	There is no reference book but students can use any English textbook to help themselves for quick learning.	No

Texts		
Websites	Any videos about learning English Language	

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
<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 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>				



Ministry of Higher Education and
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MODULE DESCRIPTOR FORM

نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	BIOPHYSICS		Module Delivery	
Module Type	BASIC		✓ Theory ✓ Lecture ✓ Lab ✓ Tutorial Practical Seminar	
Module Code	BIOP121			
ECTS Credits	8			
SWL (hr/sem)	200			
Module Level	1	Semester of Delivery	2	
Administering Department	BIOT005	College	APSC008	
Module Leader	Dr. Ali A. Taha		e-mail	Ali.A.Taha@uotechnology.edu.iq
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.	
Module Tutor	None		e-mail	None
Peer Reviewer Name			e-mail	
Review Committee Approval			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	12. To understand the principles of biophysics. 13. Describe the source and transfer of energy in biological systems. 14. Explain the roles of physical laws in different organism's functions. 15. Summarize the biophysics applications.		
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	21. Recognize how applied the physical laws in different organisms. 22. List the various terms associated with biophysics . 23. Explain the response of organisms to physical stimuli . 24. Discuss the biophysics roles in diagnosis and treatment of some diseases . 25. Describe the monitoring of medicines in patients . 26. Identify the biophysics applications.		
Indicative Contents المحتويات الإرشادية	Indicative content includes the following : <u>Part A - Biophysics in organisms functions :</u> Movement (swarming bacteria + human) , pressure (appressorium in fungi , marine bacteria , human blood pressure), sensitivity to stimuli (light) , regulatory (Cooling the body) , homeostasis (hot , aeration) , cells communication [20 hrs] . <u>Part B – Biophysics applications:</u> -Diagnosis and treatment (theranostics , CT Scan , MRI ...), detection (biosensors) , replacement and implantation , monitoring [20 hrs].		
Learning and Teaching Strategies استراتيجيات التعلم والتعليم			
Strategies	Type something like: The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises. This will be achieved through classes, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.		

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Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	108	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	92	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	6.13
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	Introduction to Biophysics
Week 2	Properties of life
Week 3	Source of energy
Week 4	Biological molecules and types of bonds
Week 5	Chemical groups and carbon atom
	Biophysics in organisms functions
Week 6	Movement in human and swarming bacteria.
Week 7	Pressure in human blood , appressorium in fungi and marine bacteria.

Week 8	Regulatory (cooling the body in organisms)
Week 9	Homeostasis (hot and aeration in organisms)
Week 10	Sensitivity to stimuli (light)
Week 11	Cells communication
	Biophysics applications
Week 12	Diagnosis and treatment (theranostics)
Week 13	Biosensors and monitoring
Week 14	Replacement and implantation.
Week 15	Preparatory Week
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Movement of bacteria in culture media
Week 2	Lab1:
Week 3	Lab 2: Physical treatment of cancer cell line
Week 4	Lab 2:
Week 5	Lab 3: Preparation of bioprobe
Week 6	Lab 3:
Week 7	Lab 4: Antimicrobial activity of some physical agents
Week 8	Lab 4

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	FOUNDATIONS OF BIOCHEMISTRY AND BIOPHYSICS SERIES (2018) Second Edition by Taylor & Francis Group, LLC.	No
Recommended Texts	The Physics of the Human Body Companion Manual(2002) Richard J. Ingebretsen, M.D., Ph.D.	No

Websites	https://www.coursera.org/browse/physical-science-and-engineering/electrical-engineering
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APPENDIX:

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	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				
<p>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.</p>				



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MODULE DESCRIPTOR FORM

نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	GENERAL BIOLOGY (PLANT)		Module Delivery	
Module Type	CORE		✓ Theory ✓ Lecture ✓ Lab ✓ Tutorial Practical Seminar	
Module Code	GEBI125			
ECTS Credits	8			
SWL (hr/sem)	200			
Module Level	1	Semester of Delivery	2	
Administering Department	BIOT005	College	APSC008	
Module Leader	Dr. Entesar H. Ali		e-mail	Entesar.H.Almosawi@uotechnology.edu.iq
Module Leader's Acad. Title	Professor		Module Leader's Qualification	Ph.D.
Module Tutor	None		e-mail	None
Peer Reviewer Name			e-mail	
Review Committee Approval			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. To develop information about biology plant . 17. To understand how living organism divided. 18. This course deals with living organism plant and microorganism. 19. This is the basic subject for all living organism.		
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	27. Recognize plant . 28. List the various plant . 29. Summarize what is meant plant . 30. Discuss the reaction and involvement that effect in plant. 31. Describe plantl.		
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. <u>Part A – what the plant</u> Type of plant . How name organism and how can classification plant. [15 hrs] The plant cell . [15 hrs] The type of plant tissue. [10 hrs] The fungi . [15 hrs] Revision problem classes [6 hrs] <u>Part B – how can classification animal</u> The scientific name of organism and class of organism . [15 hrs] The phylum , order , species , genius . [15 hrs]		

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

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	108	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	92	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	6.13
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	Introduction -plant .
Week 2	Plant living inclusion
Week 3	Plant nonliving inclusion
Week 4	Plant tissues
Week 5	Parasites
Week 6	Type of parasite.
Week 7	Plant phsiology.
Week 8	Root modification .
Week 9	Leaf modification.
Week 10	Steam modification.
Week 11	Plant modification.
Week 12	Plant modification.
Week 13	Plant modification.
Week 14	Plant modification.
Week 15	Preparatory Week
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Introduction -plant .
Week 2	Plant living inclusion
Week 3	Plant nonliving inclusion
Week 4	Plant tissues
Week 5	Parasites
Week 6	Type of parasite.
Week 7	Plant phsiology.
Week 8	Root modification .
Week 9	Leaf modification.

Week 10	Steam modification.
Week 11	Plant modification.
Week 12	Plant modification.
Week 13	Plant modification.
Week 14	Plant modification.

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts		Yes
Recommended Texts		No
Websites		

APPENDIX:

GRADING SCHEME مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
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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	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note:

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MODULE DESCRIPTOR FORM

نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	ORGANIC CHEMISTRY		Module Delivery	
Module Type	BASIC		✓ Theory ✓ Lecture ✓ Lab ✓ Tutorial Practical Seminar	
Module Code	ORCH122			
ECTS Credits	6			
SWL (hr/sem)	150			
Module Level	1	Semester of Delivery	2	
Administering Department	BIOT005	College	APSC008	
Module Leader	Iman Ismael		e-mail	Iman.I.Alsaedi@uotechnology.edu.iq
Module Leader's Acad. Title	Assistant Professor	Module Leader's Qualification	MSC.	
Module Tutor	None		e-mail	None
Peer Reviewer Name			e-mail	
Review Committee Approval	11/06/2023	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	<p>Course Main Objective The purpose from this course is to relate the fundamental concepts of general chemistry to the world around us, and in this way illustrate how chemistry explains many aspects of everyday life. * In this course we will follow two guiding principles • use relevant and interesting applications for all basic chemical concepts. • present the material in a student friendly fashion using bulleted lists, extensive illustrations, and step-by-step problem solving. * Keep abreast of developments in scientific research through a review of the latest research in the field of chemistry and linking of information theory in practical side through research published in this area in the form of scientific research useful.</p>		
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p>Course Objectives and Learning Outcomes:</p> <p>1. Course Description: This course is an introductory chemistry course designed to prepare students for college level chemistry courses. The course introduces: - concepts of basic chemistry - Explain interested examples of how chemistry applies to life - Describe the matter and its classification, states, physical and chemical properties - Study the measurements and dimensional analysis in solving problems - Study atoms, molecules and ions - Describe the mass relationships in chemical reactions - Study the chemical bonding - Study acids and bases This Course is designed for students who have an interest in nursing, nutrition, environmental science, food science, and a wide variety of other health-related professions. The content of this book is designed for an introductory chemistry course with no chemistry prerequisite, and is suitable for either a two-semester sequence or a one-semester course.</p> <p>1 Knowledge:</p> <p>8.1 Identify the main concepts in the course: like: 8.2 Hydrocarbon alkanes, alkenes, alkynes. 8.3 Carbonyl groups (aldehydes, ketones, carboxylic acid) 8.4 Amines groups 8.5 Ester preparation 8.6 Amide preparation.</p> <p>.2 Write the chemical compound</p> <p>3 knowledge and Naming of hydrocarbons groups, carbonyl, amine</p> <p>2 Skills :</p>		

	<p>2.1 Skill of introduce a lecture and face the people without distraction.</p> <p>2.2 Brainstorm by group work without strict or mind close opinion</p> <p>2.3 The communication skills acceptance,</p> <p>2.4 Acquisition student skill to take responsibility for himself and his group and teamwork, and to improve Self-confidence in solving problems</p> <p>3 Competence:</p> <p>3.1 search, collect, organize and interpret Chemical information from different databases and sources</p> <p>3.2 use information and communication technology to complete assigned tasks</p> <p>3.3 Development of student skills of statistically analyzing of data and make comparisons and understand application and limitations of information technology</p>
<p>Indicative Contents المحتويات الإرشادية</p>	<p>1 Introduction</p> <p>8.7 Identify the main concepts in the course: like:</p> <p>8.8 Hydrocarbon alkanes,alkenes,alkynes.</p> <p>8.9 Carbonyl groups (aldehydes,ketones,carboxylic acid)</p> <p>8.10 Amines groups</p> <p>8.11 Ester preparation</p> <p>8.12 Amide preparation.</p> <p>Teaching and Assessment</p> <p>1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods</p> <p>Code Course Learning Outcomes Teaching Strategies Assessment Methods</p> <p>1.0 Knowledge</p> <p>1.1</p> <p>8.13 Identify the main concepts in the course: like:</p> <p>8.14 Hydrocarbon alkanes,alkenes,alkynes.</p> <p>8.15 Carbonyl groups (aldehydes,ketones,carboxylic acid)</p> <p>8.16 Amines groups</p> <p>8.17 Ester preparation</p> <p>8.18 Amide preparation.</p> <p>Direct teaching through lecture - Presentation skills and</p>

	<p>diction through activities and duties to be presented as discussions</p> <ul style="list-style-type: none"> - Teamwork through a related research work between a group of students - The application of problem-solving skills and decision-making - Open discussions <p>Performance-based assessment</p> <ol style="list-style-type: none"> 1- Presentation 2- Demonstration 3- Performance 4- Speech <p>Pencil & Paper Test/quiz/Exam</p> <p>Test item types:</p> <ol style="list-style-type: none"> 1-short-term questions <ul style="list-style-type: none"> *Multiple choice items 2-Open-ended answer items *Short answer *Essay and problem solving <p>Observation</p> <ul style="list-style-type: none"> • Random observation <p>Systematic observation</p>
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Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

Strategies	<p>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.</p>
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Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	108	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	42	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2.8
Total SWL (h/sem) الحمل الدراسي الكلي للطالب 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	
	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
Week 2	Alkanes
Week 3	alkenes
Week 4	alkynes
Week 5	Carbonyl groups
Week 6	Carbonyl groups
Week7	amines
Week8	Preparatory Week

Week 9	Final Exam
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Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Laboratory instructions
Week 2	Lab 2: Laboratory instruments & glass ware
Week 3	Lab 3: Preparation of standard solutions , percentage solutions, molar solutions & dilution methods
Week 4	Lab 4: Identification of an organic solid by melting point determination
Week 5	Lab 5: Identification of boiling point
Week 6	Lab 6: esterfication
Week 7	Lab 7: test
Week8	Lab8: Separation & purification of organic compounds
Week9	Lab9: Unknown test

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Organic Chemistry by Robert T. Morrison and Robert N. Boyd . Organic Chemistry by McCurry; 5th ed. Thomason learning; CA,USA; 2000	Yes
Recommended Texts	-Organic Chemistry by Robert T. Morrison and Robert N. Boyd -Wilson and Gisvold Textbook of Organic -Spectrometric Identification of Organic Compounds by Silverstein, Bassler and Morrill; 2. Applications of absorption spectroscopy of	No

	organic compounds by Dyer JR.	
Websites		

APPENDIX:

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	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				
<p>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.</p>				