Academic Program Description Form

University Name: Al-Muthanna

Faculty/Institute: .Science of collage

Scientific Department: Biology

Academic or Professional Program Name: .BSc

Final Certificate Name: .BSc in Biology

Academic System: .....

Description Preparation Date: 26\5\2024

File Completion Date:26\5\2024

Signature:

Head of Department Name:

Dr. Hanaa Ali Aziz

Date:26/5/2024

Signature:

Scientific Associate Name:

أ.م. ميثم عباس مكي

Date: 26/5/2024

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date:

Signature:

Approval of the Dean

MODULE DESCRIPTION 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	**SCI1102**				
ECTS Credits	**7**				
SWL (hr/sem)	**175**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	BIO		**College**	COS	
Module Leader	Duha Majed		**e-mail**	E-mail	
Module Leader's Acad. Title	Assist lecturer		**Module Leader's Qualification**	master	
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**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1. Provide the student with sufficient information to gain experience in dealing with analytical chemistry. 2. Gaining experience in knowing all laboratory equipment and modern technologies. 3. Providing him with sufficient information to keep up with and study modern sciences, including analytical chemistry. 4. Having experience in knowing and operating laboratory test equipment. 5. Possessing scientific knowledge to keep abreast of recent developments in analytical chemistry with regard to classical analyses.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Recognize how electricity works in electrical circuits. 2. List the various terms associated with electrical circuits. 3. Summarize what is meant by a basic electric circuit. 4. Discuss the reaction and involvement of atoms in electric circuits. 5. Describe electrical power, charge, and current. 6. Define Ohm's law. 7. Identify the basic circuit elements and their applications. 8. Discuss the operations of sinusoid and phasors in an electric circuit. 9. Discuss the various properties of resistors, capacitors, and inductors. 10. Explain the two Kirchoff's laws used in circuit analysis. 11. Identify the capacitor and inductor phasor relationship with respect to voltage and current.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. <u>Part A - Circuit Theory</u> DC circuits – Current and voltage definitions, Passive sign convention and circuit elements, Combining resistive elements in series and parallel. Kirchhoff's laws and Ohm's law. Anatomy of a circuit, Network reduction, Introduction to mesh and nodal analysis. [15 hrs] AC circuits I – Time dependent signals, average and RMS values. Capacitance and inductance, energy storage elements, simple AC steady-state sinusoidal analysis. [15 hrs] AC Circuits II - Phasor diagrams, definition of complex impedance, AC circuit analysis with complex numbers. [10 hrs]

	RL, RC and RLC circuits - Frequency response of RLC circuits, simple filter and band-pass circuits, resonance and Q-factor, use of Bode plots, use of differential equations and their solutions. Time response (natural and step responses). Introduction to second order circuits. [15 hrs] Revision problem classes [6 hrs] <u>Part B - Analogue Electronics</u> Fundamentals Resistive networks, voltage and current sources, Thevenin and Norton equivalent circuits, current and voltage division, input resistance, output resistance, coupling and decoupling capacitors, maximum power transfer, RMS and power dissipation, current limiting and over voltage protection. [15 hrs] Components and active devices – Components vs elements and circuit modeling, real and ideal elements. Introduction to sensors and actuators, self-generating vs modulating type sensors, simple circuit interfacing. [7 hrs] Diodes and Diode circuits – Diode characteristics and equations, ideal vs real. Signal conditioning, clamping and clipping, rectification and peak detection, photodiodes, LEDs, Zener diodes, voltage stabilization, voltage reference, power supplies. [15 hrs]

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

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	94	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	81	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

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

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to analytical chemistry
Week 2	equivalent weight
Week 3	Volumetric analysis - solutions - calculations
Week 4	normal, weight and volume ratio)
Week 5	Methods for expressing concentration (molarity, molarity, molality)
Week 6	Volumetric analysis processes - types of titrations
Week 7	Acids and bases
Week 8	pH - degree of ionization

Week 9	Hydrolysis of salts
Week 10	Types of salts
Week 11	Buffered Solutions – Indicators
Week 12	Determine the equivalence point
Week 13	Oxidation and reduction titration
Week 14	Gravimetric analysis - gravimetric coefficient
Week 15	Precipitated reagents - post-precipitation
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	مقدمة في التحليل الحجمي
Week 2	تصنيف المعيارات الحجمية تحضير تقريبا من حامض الهيدروكلوريك 0.1N
Week 3	تقريبا من كاربونات الصوديوم Nتحضير 0.1
Week 4	معايرات الاحماض والقواعد معايرات حامض الهيدروكلوريك مع كاربونات الصوديوم
Week 5	معايرة هيدروكسيد الصوديوم مع حامض الهيدروكلوريك
Week 6	تسحيح مزيج من بيكاربونات الصوديوم وهيدروكسيد الصوديوم مع حامض الهيدروكلوريك
Week 7	معايرة الاكسدة والاختزال
Week 8	عايرة الترسيب
Week 9	تقدير عسرة الماء
Week 10	تقدير الكلوريد في عينة الماء

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	**أسس الكيمياء التحليلية مؤيد قاسم العبايجي و ثابت سعيد الغبشة** **اساسيات الكيمياء التحليلية الجزء الاول مترجم للمؤلف سكوج**	Yes

Recommended Texts	**Fundamental of Analytical Chemistry, Skoog 2000**	No
Websites		

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

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Botany**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lab** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**Bio 1202**				
ECTS Credits	**7**				
SWL (hr/sem)	**175**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	BIO		**College**	COS	
Module Leader	**Ibtehal Aqeel Abdulmuneem**		**e-mail**	**ibtihalaqq@mu.edu.iq**	
Module Leader's Acad. Title	**Assist. Professor**		**Module Leader's Qualification**	Ph.D	
Module Tutor	Name (if available) (التدريسي المساعد)		**e-mail**	E-mail	
Peer Reviewer Name	Name (اللجنة العلمية)		**e-mail**	E-mail	
Scientific Committee Approval Date	01/06/2023		**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	**Plant physiology, Plant anatomy**	**Semester**	3,4
Co-requisites module	**None**	**Semester**	7

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims **أهداف المادة الدراسية**	**1.The aim of the module is to develop understanding of plant by exploring characteristics ,definition,** **2. Preparing and qualifying students for preparing glass slides** **3. Develop and encourage the field of scientific research.** **4. To provide all students with a broad education in the basic aspects in the first year and to provide them with a higher level of knowledge and understanding of the subject chosen in their second year.** **5. Understand laboratory diagnosis,**
Module Learning Outcomes **مخرجات التعلم للمادة الدراسية**	**By the end of the course students will be able to:** **1- Differentiate between protoplasmic content and non protoplasmic content** **2-Deferentiate between prokaryotic cell and eukaryotic cell** **3-Describe, plant cell content** **4- Describe physiological process occur in plant**
Indicative Content **المحتويات الارشادية**	**1- Chemistry of life(10 hr)** **2- Prokaryotic and eukaryotic cell(10 hr)** **3- Cell wall and cell membrane(10 hr)** **4- Cell organelles(10 hr)** **5- Classification of organism(10 hr)** **6- Mid exam(1 hr)** **7- Plant cell structure(10 hr)** **8- Water absorption and transpiration (10 hr)** **9- Diffusion and osmosis(10 hr)** **10- Light ,fitness of light(10 hr)** **11- Photosynthesis(7 hr)** **12- Respiration(8 hr)** **13- Cell division(10 hr)**

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	**1 - The student interacts during the lecture.** **2 - The student listens attentively to an explanation.** **3 - The student interacts and participates in extra-curricular activities.** **4 - The student learns to behave professionally.** **5- General and Transferable Skills (other skills relevant to employability and personal development)** **6 - Enabling the student to pass interviews and succeed in the labor market .** **7 - Enabling the student to develop himself after graduation**

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) **الحمل الدراسي المنتظم للطالب خلال الفصل**	**79**	**Structured SWL (h/w)** **الحمل الدراسي المنتظم للطالب أسبوعيا**	**5**
Unstructured SWL (h/sem) **الحمل الدراسي غير المنتظم للطالب خلال الفصل**	**96**	**Unstructured SWL (h/w)** **الحمل الدراسي غير المنتظم للطالب أسبوعيا**	**6**
Total SWL (h/sem) **الحمل الدراسي الكلي للطالب خلال الفصل**	**175**		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due** الاسبوع المستحق	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	**2**	**10% (10)**	**5, 10**	**LO #1, 2,**
	Assignments	**2**	**10% (10)**	**2, 12**	**LO # 3,**
	Projects / Lab.	**1**	**10% (10)**	**Continuous**	
	Report	**1**	**10% (10)**	**13**	**LO # 1,2**
Summative assessment	**Midterm Exam**	**1 hr**	**10% (10)**	**7**	**LO # 1**
	Final Exam	**4hr**	**50% (50)**	**16**	**All**
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Chemistry of life
Week 2	Prokaryotic and eukaryotic cell
Week 3	Cell wall and cell membrane
Week 4	Cell organelles
Week 5	Classification of organism
Week 6	Mid exam
Week 7	Plant cell structure
Week 8	Water absorption and transpiration
Week 9	Water absorption and transpiration
Week 10	Diffusion and osmosis
Week 11	Light ,fitness of light
Week 12	photosynthesis
Week 13	respiration
Week 14	Cell division
Week 15	Cell division

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	**المجهر واجزائه**
Week 2	**المملكة النباتية**
Week 3	**الخلية النباتية**
Week 4	**الخلايا بدائية النواةوحقيقية النواة**
Week 5	**تكوين الجدار الخلوي**
Week 6	**امتحان**
Week 7	**بعض التراكيب الخاصة بالجدار الخلوي**

Week 8	**الجدار الابتدائي**
Week 9	**مكونات الخلية الحية**
Week 10	**المكونات الحية**
Week 11	**المكونات غير الحية**
Week 12	**البناء الضوئي**
Week 13	**الانقسام الخلوي**
Week 14	**الانقسام الخلوي**
Week 15	**بعض تراكيب الجدار الخلوي**

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	**General biology**	**نعم**
Recommended Texts		
Websites		

Grading Scheme
مخطط الدرجات

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

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Computer Science I**			**Module Delivery**	
Module Type	**Basic**			☒**Theory** ☒**Lecture** ☐**Lab** ☐**Tutorial** ☐**Practical** ☐**Seminar**	
Module Code	**UNI 1204**				
ECTS Credits	**3**				
SWL (hr/sem)	**75**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Type Dept. Code		**College**	Type College Code	
Module Leader	Ayad Raheem jalfan		**e-mail**	ayad.raheem@mu.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	Ms.C.	
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**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1. Encouraging students to keep up with computer devices, their accessories, operating systems, and advancements in technology and stay updated with technological advancements of the era. 2. Enabling the student to use application programs on the computer. 3. Allowing the student to benefit from all the latest advancements and updates in the field of computer science.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Introducing the student to the basics and fundamental information of computers and applying their use in their specialized field. 2. Teaching first-stage students how to operate and control computer devices along with all their operating applications. 3. Familiarizing the student with computer devices, their types, features, and fields of use. 4. Instructing students on how to interact with computer devices and utilize both their hardware and software components.
Indicative Contents المحتويات الإرشادية	Fundamental - Introduction to Computers: definitions, Classifications and Applications, History of Computers, Computer components: Hardware and Software, Classifying Computers based on: Usage, size, performance, data Ethical usage of digital computer. [10 hrs] Windows 10 - Introduction about Operating System, Desktop components, task bar, star menu, control panel, install applications. [15 hrs] Microsoft Word 2010- Introduction about Microsoft Word 2010, Open the program, Main interfaces- ribbons (Home, Insert, Page Layout), ribbons (References, Design), prepare the file to write the thesis. [15 hrs] Microsoft Excel 2010 - Introduction about Microsoft Excel 2010, ribbons (Home, Insert, Page Layout), Main functions in Excel, build simple accounting program. Microsoft PowerPoint 2010 - Introduction about Microsoft PowerPoint 2010, main ribbons, Create presentation show (text, picture, videos). [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	**48**	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	**3**
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	**27**	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	**2**
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**	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**	1 hr	10% (10)	7	LO # 1-7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to Computers: definitions, Classifications and applications
Week 2	History of Computers
Week 3	Computer components: Hardware and Software
Week 4	Classifying Computers based on: Usage, size, performance, data
Week 5	Ethical usage of digital computer
Week 6	Introduction about Operating System (Windows 10)
Week 7	Mid-term Exam
Week 8	Introduction about Microsoft Word 2010
Week 9	Open the program, Main interfaces- ribbons (Home, Insert, Page Layout)
Week 10	ribbons (References, Design)

Week 11	Introduction about Microsoft Excel 2010
Week 12	ribbons (Home, Insert, Page Layout)
Week 13	Main functions in Excel
Week 14	Introduction about Microsoft PowerPoint 2010
Week 15	Create presentation show (text, picture, videos)
Week 16	**Preparatory week before the final Exam**

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

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	The official textbook of the Ministry of Higher Education, Part 1 and Part 2, for the first stage.	Yes
Recommended Texts	"Yusr Al-Mustafa Series for Computer Basics and Internet, Office 2010" by Dr. Ziyad Muhammad Aboud, 2013.	No
Websites	www.microsoft.com	

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 I**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☒ **Lecture** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UNI1202**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Type Dept. Code		**College**	College of sciences	
Module Leader	Yasir Adil Jabbar Alabdali		**e-mail**	Yasir.alabdali@mu.edu.iq	
Module Leader's Acad. Title	Asst. Prof. Dr.		**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**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1. Develop students' English language proficiency across the four language skills: speaking, listening, reading, and writing. 2. Enhance students' understanding and usage of grammar and vocabulary. 3. Foster students' confidence in using English in various everyday contexts.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Demonstrate improved proficiency in speaking, listening, reading, and writing in English. 2. Apply grammatical structures and vocabulary accurately and appropriately. 3. Comprehend and engage with a range of texts in English. 4. Communicate effectively in various everyday situations.
Indicative Contents المحتويات الإرشادية	1. Introduction to basic greetings and expressions. 2. Vocabulary expansion related to various topics (e.g., personal information, daily routines, family and relationships, food and eating). 3. Grammar instruction and practice covering essential structures (e.g., present simple tense, past tense, present perfect tense, conditionals). 4. Speaking activities promoting interaction and communication (e.g., role plays, discussions, presentations). 5. Listening exercises for comprehension and listening skills development. 6. Reading comprehension activities involving a variety of text types and genres. 7. Writing tasks focusing on different text types (e.g., emails, letters, short essays). 8. Grammar and vocabulary consolidation and revision.
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1. Interactive group and pair work activities to encourage student participation and collaboration. 2. Guided discussions and debates to develop speaking and critical thinking skills. 3. Listening exercises with audio materials to enhance listening comprehension. 4. Reading tasks with comprehension questions and discussions to improve reading skills. 5. Writing assignments with feedback and revision opportunities to strengthen writing abilities. 6. Error correction and grammar drills to reinforce accurate language usage. 7. Role plays and simulations to provide real-life language practice.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	Week 5, Week 10	2
	Assignments	2	10% (10)	Week 2, Week 12	2
	Report	1	10% (10)	Continuous	1
		1	10% (10)	Week 13	1
Summative assessment	**Midterm Exam**	1 hr	10% (10)	Week 7	2 hr
	Final Exam	3 hr	50% (50)	Week 16	2 hr
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Questions with question words Possessive adjectives and pronouns Reading, Speaking, writing and listening skills
Week 2	Possessive adjectives Questions with question words Reading, Speaking, writing and listening skills
Week 3	Verb to be questions and short answers

	Reading, Speaking, writing and listening skills
Week 4	Possessive adjectives Plural nouns Have/has Reading, Speaking, writing and listening skills
Week 5	Present Simple Questions with question words Article a and an Reading, Speaking, writing and listening skills
Week 6	Present Simple Adverbs of frequency Adjective + noun Reading, Speaking, writing and listening skills
Week 7	Question words Pronouns this/that Reading, Speaking, writing and listening skills
Week 8	There is/ There are uses some and any quantity Reading, Speaking, writing and listening skills
Week 9	Was / were Past simple Questions in past simple Reading, Speaking, writing and listening skills
Week 10	Past Simple positive Past Simple questions and negatives Questions with question words Reading, Speaking, writing and listening skills
Week 11	Can (Modal verbs) Questions with question words Adverbs Reading, Speaking, writing and listening skills
Week 12	would like like and would like Reading, Speaking, writing and listening skills
Week 13	Present Continuous Questions with question words Present Simple and Present Continuous Reading, Speaking, writing and listening skills
Week 14	Future plans Reading, Speaking, writing and listening skills
Week 15	Phrasal verbs Modal verbs Reading, Speaking, writing and listening skills
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Headway English Course textbooks and workbooks	Yes
Recommended Texts	1. Authentic texts: You can find authentic texts such as articles, stories, and dialogues from various sources like news websites, literary works, and English language learning websites. Examples include BBC Learning English, The New York Times Learning Network, and TED Talks. 2. Writing guides and sample texts: There are numerous writing guides available online and in bookstores that provide guidance on different types of writing tasks. Websites like Purdue Online Writing Lab (OWL) and Cambridge English Write & Improve offer writing resources and practice exercises.	No
Websites	Online resources and interactive platforms: Many English language learning websites and platforms offer supplementary materials and practice exercises. Some popular platforms include Duolingo, Cambridge English Online, and British Council LearnEnglish.	

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	**Organic chemistry**	**Module Delivery**	
Module Type	**Basic**	☒ **Theory** ☒ **Lecture** ☒ **Lab** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**SCI1204**		
ECTS Credits	**7**		
SWL (hr/sem)	**175**		
Module Level	1	**Semester of Delivery**	2
Administering Department	Bio	**College**	COS
Module Leader	Haider Shanshool	**e-mail**	E-mail
Module Leader's Acad. Title	lecturer	**Module Leader's Qualification**	Ph.D.
Module Tutor	Name (if available)	**e-mail**	E-mail
Peer Reviewer Name	Name	**e-mail**	E-mail
Scientific Committee Approval Date	01/06/2023	**Version Number**	1.0

Relation with other Modules
العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1. Provide the student with sufficient information to gain experience in dealing with Organic chemistry. 2. Naming most organic compounds, to determine the necessary reaction conditions for the preparation of organic compounds, and also to understanding the chemical and physical properties as well as to represent the state of matter (solid, liquid, gas), boiling point and melting point. 3. Gaining experience in knowing all laboratory equipment and modern technologies. 4. Providing him with sufficient information to keep up with and study modern sciences, including Organic chemistry. 5. Having experience in knowing and operating laboratory test equipment. 6. Possessing scientific knowledge to keep abreast of recent developments in Organic chemistry.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Recognize how electricity works in electrical circuits. 2. List the various terms associated with electrical circuits. 3. Summarize what is meant by a basic electric circuit. 4. Discuss the reaction and involvement of atoms in electric circuits. 5. Describe electrical power, charge, and current. 6. Define Ohm's law. 7. Identify the basic circuit elements and their applications. 8. Discuss the operations of sinusoid and phasors in an electric circuit. 9. Discuss the various properties of resistors, capacitors, and inductors. 10. Explain the two Kirchoff's laws used in circuit analysis. 11. Identify the capacitor and inductor phasor relationship with respect to voltage and current.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. <u>Part A - Circuit Theory</u> DC circuits – Current and voltage definitions, Passive sign convention and circuit elements, Combining resistive elements in series and parallel. Kirchhoff's laws and Ohm's law. Anatomy of a circuit, Network reduction, Introduction to mesh and nodal analysis. [15 hrs] AC circuits I – Time dependent signals, average and RMS values. Capacitance and inductance, energy storage elements, simple AC steady-state sinusoidal analysis. [15 hrs]

	AC Circuits II - Phasor diagrams, definition of complex impedance, AC circuit analysis with complex numbers. [10 hrs] RL, RC and RLC circuits - Frequency response of RLC circuits, simple filter and band-pass circuits, resonance and Q-factor, use of Bode plots, use of differential equations and their solutions. Time response (natural and step responses). Introduction to second order circuits. [15 hrs] Revision problem classes [6 hrs] <u>Part B - Analogue Electronics</u> Fundamentals Resistive networks, voltage and current sources, Thevenin and Norton equivalent circuits, current and voltage division, input resistance, output resistance, coupling and decoupling capacitors, maximum power transfer, RMS and power dissipation, current limiting and over voltage protection. [15 hrs] Components and active devices – Components vs elements and circuit modeling, real and ideal elements. Introduction to sensors and actuators, self-generating vs modulating type sensors, simple circuit interfacing. [7 hrs] Diodes and Diode circuits – Diode characteristics and equations, ideal vs real. Signal conditioning, clamping and clipping, rectification and peak detection, photodiodes, LEDs, Zener diodes, voltage stabilization, voltage reference, power supplies. [15 hrs]

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

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	94	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	81	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

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

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	General introduction
Week 2	Alkanes and Cycloalkanes
Week 3	Alkenes and Alkynes
Week 4	Aromatic Hydrocarbons
Week 5	Alkyl Halides
Week 6	Aryl Halides
Week 7	Alcohols

Week 8	Phenols
Week 9	Ethers
Week 10	Aldehydes
Week 11	Ketones
Week 12	Carboxylic Acids
Week 13	CarboxylicAcids dreivatives
Week 14	Esters and Anhydrides
Week 15	Amines
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Melting Point
Week 2	Boiling Point
Week 3	Recrystallization
Week 4	Sublimation
Week 5	Simple Distillation
Week 6	Practical exam the first month
Week 7	Fractional Distillation
Week 8	Steam Distillation
Week 9	Vacuum Distillation
Week 10	Extraction
Week 11	Chromatography
Week 12	Solubility in water and acid HCl, H2SO4
Week 13	Solubility in solution NaOH, NaHCO3

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

		Library?
Required Texts	Organic Chemistry Dr. Fahad Ali Hussein Organic Chemistry Morrison and Boyd	Yes
Recommended Texts	Fundamentals of Organic Chemistry Dr. Omar Abdullah Alhzazi	No
Websites		

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

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**General Biology(Zoology)**			**Module Delivery**	
Module Type	**Core**			☒ Theory ☒ Lecture ☒ Lab ☒ Tutorial ☐ Practical ☐ Seminar	
Module Code	**BIO1101**				
ECTS Credits	7				
SWL (hr/sem)	**175**				
Module Level	**1**		**Semester of Delivery**	**1**	
Administering Department	**BIO**		**College**	**COS**	
Module Leader	**Hanaa Ali Aziz**		**e-mail**	**hanabio-1983@mu.edu.iq**	
Module Leader's Acad. Title	**Assist. 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**	**1.0**	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims **أهداف المادة الدراسية**	**1. This course is designed to cover aims of General biology course make the students able to understand the basic principles and concept of the living organism learn how linking the aspects of life and to increase the student's applied skills through didactic activities improve students' ability to learn concrete concepts about Biology, such as the composition of living beings, growth, and characterization.** **2. This course give an overview Cell , Chemistry of the Cell, tissue types , Structures and Functions of Cell organelles and their functions, Essential bio reactions in the cell, Evolution.** **3. Develop and encourage the field of scientific research.** **4. To provide all students with a broad education in the basic aspects in the first year and to provide them with a higher level of knowledge and understanding of the subject chosen in their second year.**
Module Learning Outcomes **مخرجات التعلم للمادة الدراسية**	**1- Understand the basic principles of Zoology** **2- Studying the internal physiology to cell and knowing the most important vital processes affecting the state of equilibrium of the organism's body.** **3- Finding functional and structural similarities and differences between neighborhoods** **4- Studying the link between the different branches, such as studying the relationship between comparative anatomy, physiology, and histology**
Indicative Content **المحتويات الارشادية**	**Introduction of Biology (10h)** **Characteristic of living organism(10h)** **Structure and function of Cell(10h)** **Structure and function of Cell(10h)** **Respiration and glycolysis(15h)** **Cell energy(15h)** **Mid-term Exam + Unit-Step Forcing, Forced Response, the RLC Circuit(1h)** **Respiration and glycolysis(10h)** **Oxidative phosphorylation cycle(10h)** **Animal nutrition(10h)** **Animal circulation(10h)** **Neurons(15h)** **Cell Energy(10h)** **Animal hormones(15h)** **Animal hormones(15h)** **Preparatory week before the final Exam(10h)**

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	**1 - The student interacts during the lecture.** **2 - The student listens attentively to an explanation.** **3 - The student interacts and participates in extra-curricular activities.** **4 - The student learns to behave professionally.** **5 - General and Transferable Skills (other skills relevant to employability and personal development)** **6. Enabling the student to pass interviews and succeed in the labor market** **7 - Enabling the student to develop himself after graduation** **8 - The assessment include one mid examinations and final examination in addition to assignment and quiz also a home works and reports.**

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) **الحمل الدراسي المنتظم للطالب خلال الفصل**	**94**	**Structured SWL (h/w)** **الحمل الدراسي المنتظم للطالب أسبوعيا**	**6**
Unstructured SWL (h/sem) **الحمل الدراسي غير المنتظم للطالب خلال الفصل**	**81**	**Unstructured SWL (h/w)** **الحمل الدراسي غير المنتظم للطالب أسبوعيا**	**5**
Total SWL (h/sem) **الحمل الدراسي الكلي للطالب خلال الفصل**	**175**		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due** الاسبوع المستحق	**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**	**1 hr**	**10% (10)**	**7**	**LO # 1-7**
	Final Exam	**4hr**	**50% (50)**	**16**	**All**
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	**Introduction of Biology**
Week 2	**Characteristic of living organism**
Week 3	**Structure and function of Cell**
Week 4	**Structure and function of Cell**
Week 5	**Respiration and glycolysis**
Week 6	**Cell energy**
Week 7	**Mid-term Exam + Unit-Step Forcing, Forced Response, the RLC Circuit**
Week 8	**Respiration and glycolysis**
Week 9	**Oxidative phosphorylation cycle**
Week 10	**Animal nutrition**
Week 11	**Animal circulation**
Week 12	**Neurons**
Week 13	**Cell Energy**
Week 14	**Animal hormones**
Week 15	**Animal hormones**
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	**Light Microscope**
Week 2	**Animal Cell Wall**
Week 3	**Animal tissue**
Week 4	**Connective Tissue**
Week 5	**Epithelial Cell**
Week 6	**Muscular Tissue**
Week 7	**Mid-term Exam + Unit-Step Forcing, Forced Response, the RLC Circuit**

Week 8	**Flat worms**
Week 9	**Filamentous Worms**
Week 10	**Arthropoda**
Week 11	**Evolution**
Week 12	**Endocrine system**
Week 13	**Sedimentation co efficient**
Week 14	**Animal Kingdom**
Week 15	**Animal Kingdom**
Week 16	**Preparatory week before the final Exam**

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	**MBV Roberts (1982)Biology: A functional approach .2th edition. Wlton. thmoas. NewYork, USA.**	**Yes**
Recommended Texts	**Bruce Alberts, Dennis Bray, Karen Hopkin, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts and Peter Walter (2010) Essential Cell Biology 3th ed, Garland Science, NY, USA.**	**Yes**
Websites		

Grading Scheme
مخطط الدرجات

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

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Biostatistics**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**SCI 1206**				
ECTS Credits	**5**				
SWL (hr/sem)	**125**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Type Dept. Code		**College**	Type College Code	
Module Leader	Majed Kamil Qetheth		**e-mail**	Majed_kamil@mu.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	M.Sc.	
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	03/06/2023		**Version Number**		

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	
Module Aims أهداف المادة الدراسية	1. Introducing students to the concept of statistics 2. Provide the student with sufficient information about the science of life statistics 3. Through it, the student is introduced to the concept and development of life statistics 4. Familiarize students with the most recent developments in statistics
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. The student obtains sufficient information about statistical sciences 2. Providing sufficient information that is included in other sciences such as mathematics and the mechanism of its physiological application 3 . Full knowledge of statistics. 4. Giving a broad scope to students in the field of using statistics to improve productive traits in Animal 5. The study of statistics contributes to the improvement of animal economic returns
Indicative Contents المحتويات الإرشادية	Introduction to statistics, definition of statistics, sections of statistics, definition of biostatistics, the most important terms of statistics, nature of data, variable, types of variable, population, population types, sample, sample types, statistical symbols. Tabular presentation, simple table, compound table, frequency distribution table, definition of some important terms, steps to create a frequency distribution table, relative frequency distribution table, clustered distributions, ascending aggregate frequency distribution table, descending aggregate frequency distribution table, graphic representation of the frequency distribution table, Histogram, frequency polygon, frequency curve. Measures of central tendency, arithmetic median or mean, median, mode, measures of dispersion or variation, measures of absolute dispersion, range, mean deviation, variance, standard deviation, standard error, measures of relative dispersion, coefficient of variation, standard degree. Probability distributions, the general concept of probability, the traditional definition of probability, counting methods, statistical tests, statistical hypothesis, hypothesis testing steps, preferred expression when rejecting or accepting a hypothesis, statistical testing methods, chi-square distribution, analysis of variance, experiment, design, experimental unit.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1. Giving students specialized, theoretical and practical scientific skills. 2 . Giving students the skills of thinking and analysis in both the theoretical and practical aspects. 3 . Enable students to obtain theoretical experiences and develop learning skills in Biostatistics. 4. Training students on the skills of arithmetic operations for calculating some Biostatistics coefficients and parameters.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	**74**	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	**5**
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	**51**	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	**3**
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**125**		

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

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to biostatistics.
Week 2	The most important terms of statistics subject.
Week 3	The nature of the statistical data.
Week 4	Statistical symbols.
Week 5	Statistical tabular display.
Week 6	aggregate distributions.
Week 7	Statistical representation.
Week 8	measures of central tendency.
Week 9	measures of absolute dispersion.
Week 10	Measures of relative dispersion.
Week 11	probability distributions.
Week 12	The general concept of possibilities.
Week 13	Statistical tests.
Week 14	chi-square distribution.
Week 15	Variance analysis.
Week 16	**Preparatory week before the final Exam**

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

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	1- Principles of Statistics - Ahmed Abdel Samie tubia, 2008	No
Recommended Texts	2- Principles of Statistics - Dr. Taha Hussein Al-Zubaidi, 2012	No
Websites		

Grading Scheme
مخطط الدرجات

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

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**General Mathematics**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**SCI1101**				
ECTS Credits	**7**				
SWL (hr/sem)	**175**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Type Dept. Code		**College**	Type College Code	
Module Leader	Salah.A.H.AlMurshidee		**e-mail**	Salah.almurshidee@mu.edu.iq	
Module Leader's Acad. Title	Lecture		**Module Leader's Qualification**		
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	01/06/2023		**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	Teach students the most important basic concepts, principles . laws. And scientific theories of the limits and continuous . The students has the scientific skills that enable him to perform their professional and business functions and others.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. To understand the applications of differentiations such as area and volume. 2. Enabling the student to obtain and understanding of modern and advanced scientific topics in this area. 3. Linking theoretical concepts with applied material through applied examples.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. Part 1: Basics of functions (types of functions) with graph; Limits (definition with examples); continuity. Part 2: Derivatives (definition with examples) ; Rules of derivatives; Chain rule with examples ; Implicit Differentiation ; Higher Order Derivatives Part 3; Differentiation Differentiation of Exponential and Logarithmic functions ; on of Trigonometric functions

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1. Giving students specialized theoretical and practical scientific skills , skills of thinking and analysis in both the theoretical and practical aspects. 2. Enable students to obtain theoretical experiences and develop learning skills in this area.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	**78**	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	**5**
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	**97**	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	**6**
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**175**		

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

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction
Week 2	Basics of functions (types of functions)
Week 3	Graph of functions
Week 4	Limits (definition with examples)
Week 5	Limits (theorems)
Week 6	Derivatives (definition with examples)
Week 7	Rules of derivatives
Week 8	Chain rule with examples

Week 9	Implicit Differentiation
Week 10	Higher Order Derivatives (Exampels)
Week 11	Differentiation of Exponential and Logarithmic functions
Week 12	Differentiation of Trigonometric functions and basic identities
Week 13	The Hyperbolic Functions
Week 14	The inverse of trigonometric and Hyperbolic Functions
Week 15	Increasing and decreasing functions and elementary curve sketching
Week 16	Increasing and decreasing functions and elementary curve sketching(examples)

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	Calculus and Analytics Geometry; Thomas and Finney , ADDISON – WESLEY PUBLISHING COMP.	Yes
Recommended Texts	Calculus ; STANLEY I .GROSSMAN; ACADEMIC PRESS	No
Websites		

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

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Biological security and safety**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**SCI1103**				
ECTS Credits	**5**				
SWL (hr/sem)	**100**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Type Dept. Code		**College**	Type College Code	
Module Leader	Haider Salman Awaid		**e-mail**		
Module Leader's Acad. Title	lecture		**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**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1-تهدف السلامة والصحة المهنية كمنهج علمي تثبيت الآمان والطمأنينة في قلوب العاملين أثناء قيامهم بأعمالهم والحد من نوبات القلق والفزع الذي ينتابهم وهم يتعايشون بحكم ضروريات الحياة مع أدوات ومواد وآلالات يكمن بين ثناياها الخطر الذي يتهدد حياتهم وتحت ظروف غير مأمونة تعرض حياتهم بين وقت وآخر لأخطار فادحة 2-حماية العنصر البشري من الإصابات الناجمة عن مخاطر بيئة العمل وذلك بمنع تعرضهم للحوادث والإصابات والأمراض المهنية 3-الحفاظ على مقومات العنصر المادي المتمثل في المنشآت وما تحتويه من اجهزة ومعدات معرضة للتلف او الضياع
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	-المعرفة بجوانب الامان المختبري -معرفة ادوات الحماية الشخصية في المختبرات، -معرفة انواع المخاطر والاصابات في المختبر -معرفة نماذج الملصقات للمخاطر الكيميائية والبايولوجية للامن المختبري -التصرف في حالة حصول حادث في المختبر، - معرفة الحرائق وانواعها والطرق والاجراءات المتبعة للوقاية
Indicative Contents المحتويات الإرشادية	1.Biosafety: History , General objectives of the Occupational Safety and Health (10hr) Biosafety: Biological safety objectives , A brief history the development of biosafety, 2.Biosafety in Microbiological laboratory (10hr) 3.What are biological hazards , :Common diseases caused by biological factors(10hr) 4.Methods of control biological hazards(10hr) 5.Methods of control biological hazards(10hr) 6.Hazardous waste (10hr) 7.Exam (1hr) 8.Decontamination in the laboratories of Microbiology(10hr) 9.Procedures and methods of trading and dealing with laboratory waste(10hr) 10.Fires: causeses , ignition theory(10hr) 11.Biosecurity(10hr) 12.Principle of Laboratory Biosecurity(8hr) 13.Risk Management Methodology(8hr) 14.A Biosecurity Risk Assessment and Management Process(8hr) 15.Controlling biorisks(8hr)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	ارفاق بعض اعمال الطالب من اوراق عمل اعداد الجيد بجميع الموضوعات بالوسائل الحديثه تنمية المهارات الشخصيه

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	62	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

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

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	**السلامة والامن البيولوجي** مقدمة وتعاريف للسلامة البيولوجية والامن البيولوجي المكونات الأساسية لنظام إدارة المخاطر البيولوجية

Week 2	**السلامة والامن البيولوجي** مكونات نظام السلامة في جميع المختبرات احتياطات السلامة الموحدة او العالمية
Week 3	**حواجز السلامة البيولوجية في المختبرات** معدات السلامة الشخصية تصميم المؤسسة او البناية
Week 4	**مستويات السلامة البيولوجية** استراتيجية تقييم المخاطر المخاطر ومستويات السلامة
Week 5	**العوامل البيولوجية** طرق العدوى قواعد قياس السيطرة على العدوى
Week 6	**العوامل البيولوجية** نظام تصنيف مجاميع الخطورة خزانة (كابينة) السلامة البيولوجية
Week 7	**المخاطر البيولوجية** السيطرة على الماد الضارة صحيا تقييم المخاطر البيولوجية عند العمل باستخدام الدم والانسجة البشرية مقاييس السيطرة البيولوجية عند العمل باستخدام الدم والانسجة البشرية
Week 8	**امتحان**
Week 9	**مستويات احتواء المخاطر البيولوجية**
Week 10	**المخلفات البيولوجية** أصناف المخلفات البيولوجية إزالة التلوث بالمخلفات البيولوجية
Week 11	**نقل المواد البيولوجية** أنظمة وتشريعات نقل المواد البيولوجية عالميا نظام التغليف الثلاثي لنقل المادة البيولوجية
Week 12	**الاستجابة للحوادث** اجراءات تنظيف انسكاب المادة البيولوجية التحقيق في الحوادث البيولوجية
Week 13	**معدات السلامة والامن البيولوجي**

Week 14	**الامن البيولوجي** توصيف مخاطر الامن البيولوجي تقييم نقاط الضعف مكونات نظام الامن البيولوجي
Week 15	**تدريب حول السلامة والامن البيولوجي**
Week 16	مراجعة

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	- - -	
Recommended Texts	منهاج مادة السلامة والامن الحيوي اعداد اللجنة الجامعية المركزية للسلامة والامن الكيمياوي والاشعاعي والنووي ومنع الانتشارCBRN	Yes
Websites	محاظرات عن الامن والسلامة البايولوجية على موقع الكوكل	

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	**Biophysics**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**SCI 1205**				
ECTS Credits	**6**				
SWL (hr/sem)	**150**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Type Dept. Code		**College**	Type College Code	
Module Leader	Majed Kamil Qetheth		**e-mail**	Majed_kamil@mu.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	M.Sc.	
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	03/06/2023		**Version Number**		

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	
Module Aims أهداف المادة الدراسية	1. To comprehend the concept of material elasticity and comprehend the profound impact exerted by external forces upon matter. 2. To gain a comprehensive understanding of fluid dynamics, encompassing an acquaintance with the governing laws and equations dictating the intricate patterns of fluid motion. 3. To grasp the intricacies of simple harmonic motion and acquire a profound familiarity with the fundamental laws and equations governing this oscillatory phenomenon. 4. To unravel the mysteries of linear object motion and cultivate an adeptness in comprehending the underlying laws and equations governing this linear kinematic behavior. 5. To delve into the intricacies of object free fall and projectile motion, while mastering the laws and equations that dictate the trajectories and dynamics of these captivating phenomena.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Attain a comprehensive comprehension of material elasticity and discern the profound implications engendered by external forces acting upon matter. 2. Gain an intricate understanding of fluid dynamics, encompassing a profound knowledge of the governing laws and equations that intricately govern the intricate nuances of fluidic motion. 3. Cultivate a profound understanding of simple harmonic motion, while acquainting oneself with the fundamental laws and equations that dictate the dynamics of this oscillatory phenomenon. 4. Develop an astute understanding of the linear motion exhibited by objects, while attaining expertise in the laws and equations that meticulously govern their kinematic behavior. 5. Acquire an in-depth understanding of object free fall and the captivating dynamics of projectile motion, while meticulously comprehending the laws and equations that meticulously govern their intricate trajectories and movement patterns.
Indicative Contents المحتويات الإرشادية	Introduction to elasticity, definition of elastic material, stress, types of stress, longitudinal stress, shear stress, volumetric stress, strain, strain types, longitudinal strain, shear strain, volumetric strain, Hooke's law, modulus of elasticity, types of modulus of elasticity, Young's modulus, modulus Shear elasticity, volume modulus of elasticity, Pascal's law, Archimedes's law, continuity equation, Bernoulli's equation, applications to Bernoulli's equation (Torricelli's equation), flow, viscosity, Stokes' theorem, simple harmonic motion and its equation, speed and acceleration of a simple harmonic oscillator, amplitude of simple harmonic motion , mass attached to

	a spring, energy of the simple harmonic oscillator, simple pendulum, linear motion, displacement, velocity and acceleration, special types of motion, motion with uniform velocity in a straight line, motion with uniform acceleration in a straight line, free fall, motion of projectiles.

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 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	**79**	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	**5**
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	**71**	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	**4**
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	1 hr	10% (10)	7	LO # 1-7
	Final Exam	4hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Elasticity, stress.
Week 2	Strain, Hooke's law, modulus of elasticity.
Week 3	Pascal's law, Archimedes's law.
Week 4	Continuity equation, Bernoulli equation.
Week 5	Torricelli's equation, flux.
Week 6	Viscosity, Stokes's theory.
Week 7	Simple harmonic motion and its equation.
Week 8	Velocity and acceleration of a simple harmonic oscillator.
Week 9	Simple harmonic amplitude.
Week 10	The block attached to a spring.
Week 11	The energy of the simple harmonic oscillator.
Week 12	Simple pendulum.
Week 13	Linear motion, displacement, velocity and acceleration.
Week 14	Special movement types.
Week 15	Free fall, projectile motion.
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Ohm's law
Week 2	Lab 2: Measure the density of a liquid using a weighted tube
Week 3	Lab 3: electrical resonance
Week 4	Lab 4: Simple pendulum
Week 5	Lab 5: Hooke's Law, Part One
Week 6	Lab 6: Hooke's Law, Part Two
Week 7	Lab 7: Preparatory week before the final Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Fundamentals of Elasticity and Plasticity, Osama Ali Mohammed et.al , 2017	No
Recommended Texts	Principles of undergraduate physics, mechanics and properties of matter, Muhammad Qaisrun Mirza	No
Websites		

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

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Module

Code	Course/Module Title	ECTS	Semester
	Academic English		
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
Description			
Life physics, also known as biophysics, is a multidisciplinary field that applies principles of physics to understand and analyze biological systems. It aims to elucidate the fundamental physical processes underlying various biological phenomena. Life physics encompasses a broad range of topics, including the mechanical properties of cells and tissues, the transport of molecules across cellular membranes, the dynamics of biological macromolecules, and the behavior of biological systems at different scales. Through the application of mathematical models, experimental techniques, and theoretical frameworks, life physics seeks to unravel the intricate mechanisms that govern life processes. It employs principles from thermodynamics, statistical mechanics, fluid dynamics, and electromagnetism to explore biological phenomena such as cellular signaling, enzyme kinetics, neural networks, and biomechanics. By integrating physics and biology, life physics not only provides insights into the inner workings of living organisms but also contributes to advancements in medicine, biotechnology, and bioengineering. Its scientific rigor and quantitative approach enable researchers to unravel the complexities of life and contribute to our understanding of the fundamental principles that underpin biological systems.			

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**اللغة العربية العامة**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UNI1101**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Type Dept. Code		**College**	Type College Code	
Module Leader	Ali Jawad Obada		**e-mail**	ali.jawad.sci@edu.iq	
Module Leader's Acad. Title			**Module Leader's Qualification**	Ph.D.	
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	01/06/2023		**Version Number**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1. إعانة الطلاب على التعبير الصحيح، وضبط الأساليب وتفهم القرآن الكريم والوقوف على أسراره . 2. تعويد الطلاب على دقة الملاحظة والتمييز بين الخطأ والصواب فيما يسمعون ويقرؤون مما يساعدهم على فهم معاني الجمل والأساليب . 3. تمرين الطلاب على دقة التفكير والبحث العقلي الدقيق . 4. إكساب الطلاب قدرات نحوية تمكنهم من تقويم ألسنتهم عند القراءة . 5. تنمية الثروة اللغوية للطلاب وتزويدهم بكثير من الألفاظ والتراكيب بفضل ما يعرض عليهم من أمثلة وأساليب . 6. مساعدة الطلاب على فهم التراكيب المعقدة والأساليب الغامضة والتعرف على أسباب تعقيدها أو غموضها .
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	مخرجات تعلم اللغة العربية العامة: 1. التعرف إلى مستويات نظام اللغة العربية. 2. معرفة القواعد النحوية والصرفية. 3. وصف المناهج النقدية والظواهر الأدبية. 4. التعريف بأبرز المصنفات اللغوية والأدبية.
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	• **استراتيجية** الحوار... • إستراتيجية السرد القصصي... • التدريس باستخدام التكنولوجيا... • إستراتيجية إعداد المشاريع... • **استراتيجية** تبادل الأدوار

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

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

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	نشأة اللغة
Week 2	قضايا قرآنية
Week 3	الاخطاء الشائعة
Week 4	عصور الأدب العربي
Week 5	الخط والإملاء
Week 6	امتحان شهر اول
Week 7	همزة الوصل والقطع
Week 8	الظاء والضاد
Week 9	تحليل نص شعري حديث

Week 10	قواعد كتابة الهمزة وسط الكلمة
Week 11	الألف المقصورة والممدودة
Week 12	امتحان شهر ثاني
Week 13	البلاغة العربية وعلومها
Week 14	علامات الترقيم
Week 15	مناقشة تقارير الطلبة
Week 16	الامتحان النهائي

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	الوجيز في قواعد الاملاء والانشاء /د.عبد الله أنس الطباع	Yes
Recommended Texts	جامع الدروس العربية/ مصطفى الغلاييني	No
Websites	الموسوعة الحرة ويكيبيديا	

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	**حقوق الانسان والديمقراطية**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UNI1103**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level		1	**Semester of Delivery**		1
Administering Department		Type Dept. Code	**College**	Type College Code	
Module Leader	Samar abdullah		**e-mail**	samar.abdullah@mu.edu.iq	
Module Leader's Acad. Title			**Module Leader's Qualification**		
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name		Name	**e-mail**	E-mail	
Scientific Committee Approval Date		01/06/2023	**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	**1- تعريف الطالب بالديمقراطية وحقوق الانسان والاسس الصحيحة لهما من اجل تشكيل وعي مناسب لهذا النظام السياسي المتطور** **2- دراسة مفهوم الديمقراطية وحقوق الانسان من خلال معرفة اسسها واشكالها وعناصرها ومقوماتها مع دراسة اهم التجارب الديمقراطية في دول العالم**
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	-1ان يكون الطالب ملما بمعرفة اسس النظام الديمقراطي - 2- أن يكون يمتلك الثقافة الجيدة للتمييز بين انواع الديمقراطيات 3- أن يمتلك معلومات جيدة حول الية الانتخابات في الدول الديمقراطية - 4- ان يكون الطالب على اطلاع بحقوق الانسان وحرياته الاساسية
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	ب –الأهداف المهاراتية الخاصة بالمادة تقارير حول النظام الديمقراطية -1 ب مناقشات اثناء المحاضرة حول النظام الديمقراطي -2ب ب – 3- شرح اهم حقوق الانسان التي ينبغي ان يتمتع بها

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

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

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	**مفهوم حقوق الانسان** **تعريف الحق**
Week 2	**حقوق الانسان في الاديان والشرائع السماوية** **حقوق الانسان في الاسلام**
Week 3	**الاعتراف الدولي بحقوق الانسان**
Week 4	**نشوء المنظمات غير الحكومية ودورها في ميادين حقوق الانسان** **اللجنة الدولية للصليب الاحمر** **منظمة العفو الدولية**

	منظمة مراقبة حقوق الانسان المنظمة العربية لحقوق الانسان
Week 5	ديمقراطية الاحزاب – التداول السلمي والشرعي للسلطة
Week 6	المساواة السياسية – احترام مبدأ الاغلبية وجود دولة القان
Week 7	انماط الديمقراطية – الديمقراطية المباشرة – الديمقراطية شبه المباشرة
Week 8	الديمقراطية النيابية – الديمقراطية التشاركية – الديمقراطية الليبرالية
Week 9	الديمقراطية التوافقية – ديمقراطية الاغلبية ديمقراطية الكثرة
Week 10	الديمقراطية التفويضية – الديمقراطية الاجتماعية الديمقراطية الصناعية – الديمقراطية التداولية
Week 11	فصل السلطات – السلطة التنفيذية
Week 12	السلطة التشريعية – السلطة القضائية
Week 13	–– النظام الحزبي
Week 14	الديمقراطية في العراق – النظام الحزبي في العهد الملكي
Week 15	تطور الحياة النيابية – الملك
Week 16	–– تأسيس الجمهورية وتوالي الانقلابات

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	**كتاب الديمقراطية مفاهيم وتجارب للدكتور حسن لطيف الزبيدي والاستاذ نعمة محمد العبادي**	Yes
Recommended Texts		No
Websites		

Grading Scheme مخطط الدرجات				
Group	**Grade**	التقدير	**Marks (%)**	**Definition**
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