

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Biophysics		Module Delivery
Module Type	Core		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☒ Seminar
Module Code	ENV109		
ECTS Credits	7		
SWL (hr/sem)	175		
Module Level	First level	Semester of Delivery	
Administering Department	Environmental health	College	Environmental sciences
Module Leader	Assistant professor Suha Abdullah Dr. Omar Kareem	e-mail	suhaabdullah@uomosul.edu.iq omar.abboosh@uomosul.edu.iq
Module Leader's Acad. Title	Assistant Prof. / Lecture	Module Leader's Qualification	Master/PhD.
Module Tutor		e-mail	
Peer Reviewer Name	Omar Kareem Hameed Barham Mohamad Tahseen	e-mail	
Scientific Committee Approval Date		Version Number	2.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1. To understand the fundamentals of physics in general and medical physics in particular. 2. To provide an overview of the importance of studying medical physics. 3. To study the fundamental branches of medical physics. 4. To become familiar with the sciences related to medical physics. 5. To identify the most important applications and uses of medical physics. 6. To learn how to apply the principles of proper handling of medical physical effects. 7. To demonstrate the ability of medical physics to provide effective protection for humans from the effects of radioactive materials. 8. To rank the physical effects with significant implications in medical physics.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Understanding the principles and foundations of physics in general. 2. Understanding the principles and foundations of medical physics in particular. 3. Understanding the main branches of medical physics. 4. Studying the precise scientific concept of stimulated radiation. 5. The most important applications of lasers in medical science. 6. Understanding the mechanisms for employing these indicators according to their degree of risk in beneficial applications. 7. Understanding the applications of physics in the field of health. 8. Understanding the most important devices in the field of health.
Indicative Contents المحتويات الإرشادية	1. Introduction to Medical Physics (5 hours) Branches of Medical Physics according to approved academic classifications 2- Understanding the scientific meaning of laser beams Types of lasers Semiconductor lasers Solid-state lasers Liquid-state lasers CO₂ lasers 3- Understanding methods of working with sound waves Laboratory applications Practical applications Working with noisy environments 4- Understanding thermal therapy 5- Understanding electrocardiogram (ECG) and electroencephalogram (EEG) devices

Learning and Teaching Strategies	
استراتيجيات التعلم والتعليم	
Strategies	1. Introduction to Medical Physics (5 hours) Branches of Medical Physics according to approved academic classifications 2- Understanding the scientific meaning of laser beams Types of lasers Semiconductor lasers Solid-state lasers Liquid-state lasers CO₂ lasers 3- Understanding methods of working with sound waves Laboratory applications

Practical applications Working with noisy environments
4- Understanding thermal therapy 5- Understanding electrocardiogram (ECG) and electroencephalogram (EEG) devices

Student Workload (SWL)

الحمل الدراسي للطلاب محسوب ١٥ أسبوعاً

Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	93	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعياً	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	82	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعياً	4
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	175		

Module Evaluation

تقييم المادة الدراسية

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

Delivery Plan (Weekly Syllabus)

المناهج الأسبوعي النظري

	Material Covered
Week 1	Introduction to Medical Physics in Medicine
Week 2	Coordinates
Week 3	Vectors and their Applications
Week 4	Heat and Life
Week 5	Applications of Heat Waves
Week 6	Lasers and their Applications
Week 7	Laser Applications in Medicine
Week 8	Electromagnetic Waves
Week 9	Applications of Electromagnetic Waves and their Types
Week 10	Sound Waves and their Applications
Week 11	Applications of Ultrasound in Medicine
Week 12	The Eye and Lenses
Week 13	Blood Pressure and its Role in Life
Week 14	Description of EEG devices
Week 15	Review
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus)

الأسبوع الأسبوعي للمختبر

	Material Covered
Week 1	Simple Pendulum
Week 2	Proof of Hooke's Law
Week 3	Coefficient of Legal Friction
Week 4	Refractive Index of a Prism
Week 5	Refractive Index of Glass (Mass of Glass)
Week 6	Focal Length of a Convex Lens
Week 7	Speed of Sound Using a Resonant Tube Closed at One End
Week 8	Ohm's Law
Week 9	Finding the Viscosity Coefficient of Liquids
Week 10	Archimedes' Principle

Week 11	Specific Heat of Steel
Week 12	Thermal-Mechanical Equivalent (Joule Equivalent)
Week 13	Measuring the Focal Length of a Concave Mirror
Week 14	Determining the Frequency of a Resonant Fork Using an Ultrasonic Meter
Week 15	Final Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	كتاب الفيزياء الطبية D.W. Preston and J.R. Dietz, The Art of Experimental Physics. Wiley, 1991	Yes
Recommended Texts	A.C. Melissinos, Experiments in Modern Physics. Academic Press, 1973.	
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	مقبول	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	Theoretical Ecology		Module Delivery
Module Type	Core		☒ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	ENV103		
ECTS Credits	6.00		
SWL (hr/sem)			
Module Level	First	Semester of Delivery	First
Administering Department	Environmental health	College	College of Environmental Sciences
Module Leader	Shaymaa Khaleel Abdullah	e-mail	shaymaakhaleel@uomossul.edu.iq
Module Leader	Ashraf Saddik Alias	e-mail	ashraf.saddik@uomossul.edu.iq
Module Leader's Acad. Title	Assistant Professor	Module Leader's Qualification	PhD
Module Leader's Acad. Title	Assistant Professor	Module Leader's Qualification	Master
Module Tutor	Ashraf Saddik Alias	e-mail	ashraf.saddik@uomossul.edu.iq
Module Tutor	Salim Rabeca Khalaf Hussain Ziad	e-mail	salim.znadi@uomossul.edu.iq
Scientific Committee Approval Date	2025/9/18	Version Number	3.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	Environmental Health Occupational Health and Safety	Semester	First and third

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	Enabling the student to understand the basic concepts of the environment and environmental pollution. The practical course includes a set of scientific exercises to consolidate and apply the theoretical concepts of the course. At the end of the course, the student will be able to apply the school in the service of the Environmental Health Unit.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Historical overview 2- Ecology 3- Branches of environmental science 4- Ecosystem 5-Ecosystem Characteristic 6-Ecosystem Components 7- Biotic Components. 8- Consumers, 9-Physico-chemical Environmental Parameters. 10-Energy Flow In Ecosystem
Indicative Contents المحتويات الإرشادية	1- Historical overview(2 hours) 2- Ecology (2 hours) *Scientists' definition of ecology *The difference between the two terms: Environment, Ecology 3- Branches of environmental science(4 hours) * Autecology * Synecology *Animal Ecology *Plant Ecology *Microbial Ecology *Paleoecology * Aquatic Ecology * Terrestrial Ecology * Organismal Ecology 4-Ecosystem (4 hours) * System Concept *Open Systems * Closed Systems * Simple Systems * Complex Systems * Natural Systems * Artificial Systems *Ecosystem 5- Ecosystem Characteristics (4 hours) * Continuity * Dynamics * Balance 6 -Ecosystem Components (2 hours) *Abiotic Components

	* Atmosphere * Hydrosphere * Lithosphere 7- Biotic Components (2 hours) * Autotrophic Components * Heterotrophic Components 1- Producers 2- Consumers 3- Decomposers 8- Physico-chemical Environmental Parameters (6 hours) * Temperature * Light * Wind * Atmospheric Pressure * Humidity * Precipitation * Fires * Gases * Water * Soil * Salinity * pH 9- Hydrologic & Biogeochemical Cycles (2 hours) * Hydrologic Cycle 10- Biogeochemical Cycles (2 hours) * Gaseous Cycle * Sedimentary Cycle 11- Energy Flow in Ecosystem (2 hours) * Ultraviolet * Visible Light * Infra Red
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Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1. Enabling students to understand the basic concepts of the environment and environmental pollution in a scientific manner. 2. A set of scientific exercises to consolidate and apply the course's theoretical concepts. 3. Teaching students teamwork. Using visual aids to convey information, including: 1. Data show 2. Classroom discussion 3. Holding discussion groups among students and highlighting their points of view to encourage learning. 4. Using scientific films

	5. Homework 6. Learning scientific research writing skills by organizing concepts, analyzing the results, and discussing them according to the theoretical concepts studied during the course. 7. Field visits
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Student Workload (SWL)			
العمل الدراسي للطلاب محسوب لـ ١٥ أسبوعاً			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعياً	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	72	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعياً	4
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	150		

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

Delivery Plan (Weekly Syllabus)	
المناهج الامتحان النظري	
	Material Covered
Week 1	Historical overview
Week 2	Ecology
Week 3	Branches of environmental science
Week 4	Ecosystems
Week 5	Ecosystem
Week 6	Ecosystem Characteristic
Week 7	Ecosystem Components
Week 8	Biotic Components.
Week 9	Biotic Components.
Week 10	Consumers.
Week 11	Physico-chemical Environmental Parameters.
Week 12	Physico-chemical Environmental Parameters.
Week 13	Energy Flow in Ecosystem
Week 14	Energy Flow in Ecosystem
Week 15	Productivity
Week 16	Final exam

Delivery Plan (Weekly Lab. Syllabus)	
المناهج الامتحان المختبر	
	Material Covered
Week 1	التعرف على أنواع المختبر
Week 2	التعرف على أنواع المختبر
Week 3	الرموز الدولية للمخاطر البيئية والعلامات التحذيرية للمواد الكيميائية
Week 4	الرموز الدولية للمخاطر البيئية والعلامات التحذيرية للمواد الكيميائية
Week 5	تحديد أنواع ومصادر التلوث (1).
Week 6	تحديد أنواع ومصادر التلوث (2).
Week 7	معايير جودة الهواء ووحدات القياس.

Week 8	معايير جودة الهواء ووحدات القياس
Week 9	قياس تركيز ثاني أكسيد الكبريت
Week 10	قياس تركيز ثاني أكسيد الكبريت
Week 11	قياس أول أكسيد الكبريت
Week 12	قياس أول أكسيد الكبريت
Week 13	قياس التلوث الضوئي
Week 14	قياس التلوث الضوئي
Week 15	زيارة لاحتى الجهات المسؤولة عن التلوث البيئي

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	كتاب علم البيئة ومن البحوث الحديثة	نعم
Recommended Texts	محاضرات من الجامعات المشابهة	
Websites	المواقع الإلكترونية من النت	

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جداً	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	راسبي (قيد المعالجة)	(45 - 49)	More work required but credit awarded
	F - Fail	راسبي	(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	Practical Ecology		Module Delivery
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	ENV103		
ECTS Credits	6.00		
SAL (hr/sem)			
Module Level	First	Semester of Delivery	First
Administering Department	Environmental health	College	College of Environmental Sciences
Module Leader	Shaymaa Khaleel Abdullah	e-mail	drshaymaakhaleel@uomosul.edu.iq
Module Leader	Ashraf Saddik Alias	e-mail	ashraf.saddik@uomosul.edu.iq
Module leader's Acad. Title	Assistant Professor	Module Leader's Qualification	PhD
Module Leader's Acad. Title	Assistant Professor	Module Leader's Qualification	Master
Module Tutor	Ashraf Saddik Alias	e-mail	ashraf.saddik@uomosul.edu.iq
Module Tutor	Salim Raheem Khalaf Hussien Zaid	e-mail	salim.zaid@uomosul.edu.iq
Scientific Committee Approval Date	2025/9/17	Version Number	3.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	Environmental Health Occupational Health and Safety	Semester	First and third

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	Enabling the student to understand the basic concepts of the environment and environmental pollution. The practical course includes a set of scientific exercises to consolidate and apply the theoretical concepts of the course. At the end of the course, the student will be able to apply the school in the service of the Environmental Health Unit.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Familiarisation with laboratory equipment 2- International symbols for environmental hazards and warning signs for chemicals 3- Identifying types and sources of pollution.(1) 4- Identifying types and sources of pollution.(2) 5- Air quality standards and units of measurement. 6- Measuring carbon dioxide concentration. 7- Measuring carbon monoxide. 8- Measuring noise pollution. 9- Visiting an agency responsible for environmental pollution.
Indicative Contents المحتويات الإرشادية	1- Familiarisation with laboratory equipment (2 hours) 2- International symbols for environmental hazards and warning signs for chemicals (2 hours) 3- Identifying types and sources of pollution (1) (2 hours) 4- Identifying types and sources of pollution (2) (2 hours) 5- Air quality standards and units of measurement (2 hours) 6- Measuring carbon dioxide concentration (2 hours) 7- Measuring carbon monoxide (2 hours) 8- Measuring noise pollution (2 hours) 9- Visiting an agency responsible for environmental pollution (4)

Learning and Teaching Strategies	
أساليب التعليم والتعلم	
Strategies	1. Enabling students to understand the basic concepts of the environment and environmental pollution in a scientific manner. 2. A set of scientific exercises to consolidate and apply the course's theoretical concepts. 3. Teaching students teamwork. Using visual aids to convey information, including: 1. Data show 2. Classroom discussion 3. Holding discussion groups among students and highlighting their points of view to encourage learning

	4. Using scientific films 5. Homework 6. Learning scientific research writing skills by organising concepts, analysing the results, and discussing them according to the theoretical concepts studied during the course. 7. Field visits
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Student Workload (SWL)			
الحمل التدريسي للطلاب محسوب له ١٥ أسبوعا			
Structured SWL (h/sem) الحمل التدريسي المنتظم للطلاب خلال الفصل	78	Structured SWL (h/w) الحمل التدريسي المنتظم للطلاب أسبوعيا	5
Unstructured SWL (h/sem) الحمل التدريسي غير المنتظم للطلاب خلال الفصل	72	Unstructured SWL (h/w) الحمل التدريسي غير المنتظم للطلاب أسبوعيا	4
Total SWL (h/sem) الحمل التدريسي الكلي للطلاب خلال الفصل	150		

Module Evaluation					
تقييم الوحدة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5,10	5,6 and 7
	Assignments	2	10% (10)	2,12	8
	Projects / Lab.	1	10% (10)	continuous	All
	Report	1	10% (10)	13	2
Summative assessment	Midterm Exam	2hr	30% (30)	7	1-5
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المناهج الأسبوعي النظري	
	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	
Week 16	الامتحان النهائي

Delivery Plan (Weekly Lab. Syllabus)	
المناهج الأسبوعي المختبر	
	Material Covered
Week 1	Familiarisation with Laboratory Tools
Week 2	Familiarisation with Laboratory Tools
Week 3	International Environmental Hazard Symbols and Warning Signs for Chemicals
Week 4	International Environmental Hazard Symbols and Warning Signs for Chemicals
Week 5	Identifying Types and Sources of Pollution (1).
Week 6	Identifying Types and Sources of Pollution (2).
Week 7	Air Quality Standards and Units of Measurement.

Week 8	Air Quality Standards and Units of Measurement.
Week 9	Measuring Carbon Dioxide Concentration.
Week 10	Measuring Carbon Dioxide Concentration.
Week 11	Measuring Carbon Monoxide.
Week 12	Measuring Carbon Monoxide.
Week 13	Measuring Noise Pollution.
Week 14	Measuring Noise Pollution.
Week 15	Visit to an Agency Responsible for Environmental Pollution

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Environmental science books and recent research.	Yes.
Recommended Texts	Lectures from similar universities.	
Websites	Websites from the internet.	

Grading Scheme مخطط التدرجات				
Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدًا	80 - 89	Above average with some errors
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	F - Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية			
Module Title	English Language		Module Delivery
Module Type	Basic		☒ Theory ☒ Lecture ☐ Practical ☐ Seminar
Module Code			
ECTS Credits			
SWL (hr/sem)			
Module Level	1	Semester of Delivery	1
Administering Department	Environmental Health	College	Environmental Sciences
Module Leader	Nada Bashar Abdulhadi	e-mail	nada.abdabadi@uomosul.edu.iq
Module Leader's Acad. Title	Assist. Lec.	Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	English Language	Semester	Second Class Semester One
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1- To support the highest degree of academic achievement by students who are not native speakers of English. 2- To improve basic English skills. 3- To determine how words function in a sentence. 4- To encourage students to express themselves in English. 5- To understand negatives and questions in English. 6- This course introduces the principles of academic writing.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Develop the four language skills: listening, speaking, reading, and writing in English. 2- Use appropriate English vocabulary and grammar in different contexts. 3- Communicate effectively in academic, social, and professional situations. 4- Demonstrate correct pronunciation and fluency in spoken English. 5- Read and understand various English texts critically and analytically. 6- Write clear, organized, and coherent paragraphs and essays in English.
Indicative Contents المحتويات الإرشادية	This course covers the English language in general, including an introduction to parts of speech and sentence structure, as well as the types of sentences and how they are formed. The course also introduces tenses, along with various exercises and practical applications. In addition, it includes the most important terminology related to the field of Environmental Health.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	Some effective strategies will be adopted in delivering this module such as, focusing on academic language, vocabulary exercises. Students will be given an opportunity to produce language through reading and speaking with receiving direct feedback to increase their comprehension and improve their language skills. This will be achieved through classes, group discussion, solving exercises, participation in conversations, interactive learning and writing activities that are interesting to the students.
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Student Workload (SWL)			
الحمل الدراسي للطلاب بحسب كرسى ١٥ : ١٥			
Structured SWL (h/sem)	45	Structured SWL (h/w)	3
الحمل الدراسي المنتظم للطلاب خلال الفصل		الحمل الدراسي المنتظم للطلاب أسبوعيا	
Unstructured SWL (h/sem)	30	Unstructured SWL (h/w)	1
الحمل الدراسي غير المنتظم للطلاب خلال الفصل		الحمل الدراسي غير المنتظم للطلاب أسبوعيا	
Total SWL (h/sem)	75		
الحمل الدراسي الكلي للطلاب خلال الفصل			

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

Delivery Plan (Weekly Syllabus)

المناهج الأبتدائية النظرية

	الموضوعات المعطاة
Week 1	Identify the main parts of speech in English.
Week 2	Explain English pronouns and prepositions.
Week 3	Illustrate English adjectives.
Week 4	Illustrate English adverbs.
Week 5	Discuss conversation skills and encouraging students to participate in a dialogue.
Week 6	Improve the pronunciation skills of students.
Week 7	Mid-term Exam
Week 8	Introduce the main functions of English grammar.
Week 9	Describe verb to be
Week 10	Illustrate English present simple tense.
Week 11	Discuss regular and irregular verbs.
Week 12	Describe English past simple tense.
Week 13	Identify Negative and Question words.
Week 14	Environmental Terminology
Week 15	Review

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الأسبوعي للمختبر

	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	

Week 14	
Week 15	

Learning and Teaching Resources		
مصادر التعلم والتعليم		
	Text	Available in the Library?
Required Texts	Liz and John Soars, 2010, Headway, Oxford University Press.	No
Recommended Texts	English Grammar in Use, Raymond Murphy , 2nd edition, Cambridge University Press.	No
Websites		

Grading Scheme

مخطط الدرجات

Group	Grade	التصنيف	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	95 - 100	Outstanding Performance
	B - Very Good	جيد جداً	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with variable errors
	D - Satisfactory	موسم	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX - Fail	راسب (لقد أحتاج)	(45-49)	More work required but credit awarded
	F - Fail	راسب	(0-44)	Considerable amount of work required

Notes: 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 I		Module Delivery
Module Type	Basic		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	Uom103		
ECTS Credits	3		
SWL (hr/sem)	75		
Module Level	1	Semester of Delivery	2
Administering Department	Environmental Health	College	Environmental Sciences
Module Leader	RAGHEED DURAIID AL-DABBAGH	e-mail	ragheed2019@uomosul.edu.iq
Module Leader's Acad. Title	Assistant Teacher	Module Leader's Qualification	M.S.C.
Module Tutor	DAFAR THAMER	e-mail	dafar.thamer@uomosul.edu.iq
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	1/11/2024	Version Number	1.0

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

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	enhancing the student's knowledge of computers, their various applications, their software, which is used in a variety of industries, and the most recent technological advancements. The fundamentals of computers, common programs, viruses, and how to get rid of them are covered in this course. How to set up and operate office software and service packages. how to use email and the internet. The promotion of self-education, which enables the teacher to account for individual differences and ultimately improves the quality of learning and teaching, is one of the goals of using technology in the classroom. the capacity to fulfill educational objectives involving skills, such as learning, computer, and problem-solving Students are drawn to it because it is an interesting topic. because it is a fun way to break the student's monotonous memorization and work routine. It frees the teacher from spending time and effort on routine educational tasks, allowing him or her to devote more time and energy to designing learning situations and experiences that support the intellectual and social growth of students' personalities. creating programs that are simple to adapt to student needs presenting the scientific material, identifying students' areas of weakness, and providing corrective exercises that are appropriate for their needs accelerating learning and improving performance They aid in representing the difficult to provide real world
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- a thorough explanation of computer fundamentals, including a breakdown of hardware, software, and storage media. 2- An overview of Windows 0.8, including its features and windows, main screen elements, taskbar, mouse, and how to work with different programs and files. 3- An overview of Windows 0.8, including its features and windows, main screen elements and the taskbar, as well as the mouse, keyboard, numerical systems, and how to interact with various applications and files. 4- An overview of the main and submenus, features, and system of Microsoft Word 2016. 1- Overview of Microsoft Excel 2016, including a look at its features and

	Instructions for adding worksheets.
Indicative Contents المحتويات الإرشادية	The course covers the following topics over the course of: an introduction to computers, their types, and the evolution of their generations; setting up a calculator and explaining its fundamental components; defining the hardware and software components of computers; types of storage media; and viruses, their types, and how to avoid them (15 hours) Introduction to Windows 0.8 and its features, windows, taskbar, mouse, and keyboard, as well as instructions on how to work with various programs and files - (5 hours) The Microsoft Word 2016 system and its features are introduced, along with the main and submenus (file, home page, insert), main menus (page layout, references, correspondence, review), and main menus (view, introduction to the Microsoft Excel 2016 system, its features, worksheets, and methods for inserting them (15 hours). Introduction to the Microsoft Excel 2016 system, its features, worksheets, and methods for inserting them (15 hours) . Discussion of the different types of data used in the program and methods for dealing with cells Using mathematical and engineering equations and functions, using the most popular statistical functions, dealing with various graphs and graphs, and -representing data (15 hours) .Use of logical functions and conditional functions (5 hours) The Internet, including the World Wide Web and its elements, as well as e-mail, its features and settings. Gmail, Yahoo, and college emails took (5 hours)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The development of the computer and the Internet has had a significant impact on educational systems around the world because they are practical tools that can be used to enhance the educational process by continuously diversifying information and its modernity, diversifying the possibilities, developing communication skills in teams, fostering a climate of freedom in the classroom, and utilizing open education in universities, the ability to obtain current research from universities and research centers, the use of the Internet to publicize conferences and educational activities.

Student Workload (SWL) الحمل الدراسي للطالب محسوب له = 1 أسبوعياً			
Structured SWL (h/sem)	45	Structured SWL (h/w)	3
الحمل الدراسي المنتظم للطالب خلال الفصل		الحمل الدراسي المنتظم للطالب أسبوعياً	
Unstructured SWL (h/sem)	30	Unstructured SWL (h/w)	1
الحمل الدراسي غير المنتظم للطالب خلال الفصل		الحمل الدراسي غير المنتظم للطالب أسبوعياً	
Total SWL (h/sem)	75		
الحمل الدراسي الكلي للطالب خلال الفصل			

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	2, 3	LO # 1 and 4
	Assignments	2	20% (20)	4, 7, 12	LO # 2, 4 and 5
	Project / Lab	1	10% (10)	Continuous	All
	Report	0	0	0	0
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO # 1-4
	Final Exam	3hr	90% (90)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المناهج الأسبوعي النظري

	المخرجات المتوقعة
Week 1	Introduction to Computer: Concepts of Hardware and Software with their components, Concept of Computing, Data and Information, Application of Information Electronics and Communication Technology (IET) Connecting input/output devices, and peripherals to CPU
Week 2	Computer components: Computer Portions, Hardware Parts, I/o Units, memory Types , basic CPU Components, Computer Ports, personal Computer, (Features and Types)
Week 3	Computer components: Computer Portions, Hardware Parts, I/o Units, memory Types , basic CPU Components, Computer Ports, personal Computer, (Features and Types)
Week 4	Operating System and Graphical User Interface GUI : Operating System, Basics of Common Operating Systems, The User Interface, Using Mouse Techniques, Use of common icons, status

	Bar, Using Menu and Menu-selection, concept of Folders and Directories, Opening and closing of different Windows ,Creating Short cuts
Week 5	Operating System and Graphical User Interface GUI : Operating System, Basics of Common Operating Systems, The User Interface, Using Mouse Techniques, Use of common icons, status Bar, Using Menu and Menu-selection, concept of Folders and Directories, Opening and closing of different Windows ,Creating Short cuts
Week 6	Word Processing : Word processing Basics opening and Closing of documents, Text creation and Manipulation, Formatting of text, Table handling , spell check, language setting and thesaurus, Printing of word document.
Week 7	Word Processing : Word processing Basics opening and Closing of documents, Text creation and Manipulation, Formatting of text, Table handling , spell check, language setting and thesaurus, Printing of word document.
Week 8	Spread sheet: Basics of Spreadsheet ; Manipulation of cells; Formulas and Functions; Editing of Spread Sheet, printing of Spread Sheet.
Week 9	Spread sheet: Basics of Spreadsheet ; Manipulation of cells; Formulas and Functions; Editing of Spread Sheet, printing of Spread Sheet.
Week 10	Presentation Software: Basics of presentation software; Creating Presentation; Presentation and Presentation of Slides; Slide Show; Taking Printouts of Presentation/ handouts.
Week 11	Presentation Software: Basics of presentation software; Creating Presentation; Presentation and Presentation of Slides; Slide Show; Taking Printouts of Presentation/ handouts.
Week 12	Introduction to Internet and Web browsers: Computer networks Basic; LAN , WAN; Concept of Internet and its Applications; connecting to Internet; World Wide Web; Browsing software's, Search Engines; Understanding URL ; Domain name; IP Address.

Week 13	Communicating and Emails: Basics of Electronic mail; Getting on email account Sending and receiving emails; Accessing text emails; Using Emails ; Document Collaboration
Week 14	Computer Troubleshooting : Identifying and solving common hardware and software problems that computer users encounter , Basic troubleshooting techniques and tools for diagnosing and resolving issues.
Week 15	Preparatory week before the final exam

Delivery Plan (Weekly Lab. Syllabus)	
المحتاج المتنوع في المختبر	
	Material Covered
Week 1	An introduction to computers, their generations, types, and their basic parts.
Week 2	How to install and use office packages and service software, mouse, keyboard
Week 3	Windows 10 system, its features and windows, the components of the home screen and the taskbar, and how to deal with various programs and files
Week 4	Microsoft word 2016 system and its main and sub menus in detail

Week 3	Microsoft word 2016 How to print different files and insert tables
Week 6	Microsoft Excel 2016 system, its windows and worksheets, how to insert graphs, data types, and how to use them.
Week 7	Microsoft Excel 2016 system and arithmetic, engineering and statistical functions.

Learning and Teaching Resources		
مصادر التعلم والتعليم		
	Text	Available in the Library?
Required Texts	لا يوجد	Yes
Recommended Texts	1- تعلم تطبيقات الحاسوب الأساسية / للدكتور محمد عبد الحليم 2- نورث في كلمة الحاسوب / مركز الحسية الالكترونية - جامعة الزقازيق	No
Websites	1- تعلم استخدام الحاسوب / مكتبة مانيش للدراسات والاستشارات العلمية on line 2- أساسيات الحاسوب / مكتبة نور / للدكتور احمد محمد ابراهيم online http:// Courses-lectures.com	

Grading Scheme

مخطط الدرجات

Group	Grade	التصنيف	Marks (M)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جداً	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	مقبول	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	EF - Fail	فشل (تليد المعالجة)	(45-49)	More work required but credit awarded
	F - Fail	فشل	(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 السبل وديمقراطية		Module Delivery
Module Type	ثقوي		☐ Theory ☐ Lecture ☐ Lab ☒ Tutorial ☐ Practical ☐ Seminar
Module Code	UCOM20150		
ECTS Credits	4		
SWL (hr/sem)	60		
Module Level	2	Semester of Delivery	
Administering Department		College	كلية العلوم البنية
Module Leader	مست زيان نافع عبد الله	e-mail	hindzeyad.nafca92@uomass.edu.iq
Module Leader's Acad. Title	مدرس مساعد	Module Leader's Qualification	ماجستير
Module Tutor	لا يوجد	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	10/09/2024	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	الذي قبله	Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ومخرجات التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	مقدمة في موضوع تاريخ وتطور العلاقات الدولية من العصور الوسطى إلى نهاية القرن العشرين، بالإضافة إلى توضيح وتفسير أبرز المشكلات والقضايا الدولية المعاصرة التي تؤثر وتتأثر بالعلاقات الدولية، بهدف رفع مستوى الوعي السياسي والفكري والتاريخي لدى الطالب لتحليل الأحداث والتطورات التي تحدث في العالم في هذا العصر الحديث والمعاصر ومحاولة الحكم عليها بشكل موضوعي.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	عند الانتهاء من هذه الدورة، سيكون الطالب قادرين على: 1. المعرفة وفهم القدرة على فهم ما هو صحيح وحقوق الإنسان 2. القدرة على التمييز بين حقوق الإنسان بطريقة تتماشى مع الواقع 3. القدرة على فهم العلاقة بين حقوق الإنسان وعلم السياسة 4. القدرة على تقييم النتائج المعاصرة 5. القدرة على تحديد وحل المشكلات - مهارات محللة في الموضوع 6. القدرة على معرفة آلية المشاركة السياسية 7 - القدرة على ربط الدراسة النظرية بالواقع العملي
Indicative Contents المحتويات الإرشادية	سيُفهم الطلاب ويستخرجون الطريقة العلمية للاستفسار لاستنتاج استنتاجات مستندة إلى أدلة يمكن التحقق منها. سيُفسر الطلاب تأثير النظريات العلمية والاكتشافات أو التغييرات التكنولوجية على المجتمع. سيظهر الطلاب مهارات التفكير النقدي في تحليل البيانات العلمية. سيُفهمون أن البيانات الحقيقية قد تكون غير مؤكدة وأنه يتعين عليهم استخدام الحس السليم ولتفهم من أجل التحول على إجابات جيدة لمشكلات لتفسير.
Learning and Teaching Strategies	
استراتيجيات التعلم والتعليم	
Strategies	استراتيجيات التعليم / التعلم تشمل: 1- التعليم التقليدي في الفصل الدراسي، 3 ساعات في الأسبوع + 1 ساعة في الأسبوع للتدريس الشخصية. 2- مناقشات في الفصل الدراسي. 3- امتحانات اختيارية، مشاركة في الفصل، مشاريع، واجبات منزلية، عروض تقديمية، طرق التقييم للطلاب. 4- تمارين إرشادية. 5- استمارات ربيع سنوية. 6- مناقشات وواجبات للمشروع. *التقييم العام لهذه الدورة هو كما يلي: مني سنوي للحدود على 50 نقطة من المجموع الكلي، والذي يشمل الواجبات، الامتحانات الشفهية والورقية سنوية بالإضافة إلى العروض التقديمية. 50* علامة للامتحان النهائي.

Student Workload (SWL)			
الحمل الدراسي للطلاب مصوب لـ ١٥ أسبوعاً			
Structured SWL (h/sem)	63	Structured SWL (h/w)	4
العمل الدراسي المنتظم للطلاب خلال الفصل		العمل الدراسي المنتظم للطلاب أسبوعياً	
Unstructured SWL (h/sem)	37	Unstructured SWL (h/w)	
العمل الدراسي غير المنتظم للطلاب خلال الفصل		العمل الدراسي غير المنتظم للطلاب أسبوعياً	
Total SWL (h/sem)	100		
العمل الدراسي الكلي للطلاب خلال الفصل			

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	None	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المتنـاج الاسبوعي النظري	
	Material Covered
Week 1	مفهوم وتاريخ الديمقراطية - ميزات ومكونات النظام الديمقراطي - الدستور والديمقراطية - الانتخابات
Week 2,3	- منظمات المجتمع المدني والديمقراطية - العلاقة بين حقوق الإنسان والديمقراطية - جرائم الإبادة الجماعية - ضمانات الحريات والحقوق العامة
Week 4,5	- شروط الديمقراطية - إمكانية الجيدة - المشاركة السياسية - الانتخابات وخصائصها - التعددية السياسية
Week 6,7	للمواطنة ومكوناتها - المفاهيم العامة للديمقراطية - مقدمة عامة حول مفهوم حقوق الإنسان - جذور حقوق الإنسان وتطورها في التاريخ المعاصر
Week 8, 9, 10, 11	تطور فكرة حماية حقوق الإنسان في العصر الحديث - المجتمع الدولي وحقوق الإنسان المعاصرة - حقوق الإنسان على المستوى الإقليمي - حقوق الإنسان على المستوى الأممي المتحدة لحماية حقوق الإنسان - الواجبات البشرية والقيود على ممارسة حقوق الإنسان
Week 12, 13,14	المنظمات الدولية والهيئات المعنية والدفاع عن حقوق الإنسان - أخلاقيات العمل - قانون الميثاق الطلاب في مؤسسات التعليم العالي - مفاهيم حقوق الإنسان
Week 15	أسبوع التحضير قبل الامتحان النهائي

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the library?
Required Texts	الكتب الدراسية المطلوبة (الكتب المتوجبة إن وجدت)	Yes
	المراجع الرئيسية (المصادر)	

Recommended Tests	الكتب والمراجع الموصى بها (المجلات العلمية، لتقارير...)	نعم
Websites	المراجع الإلكترونية، المواقع الإلكترونية	

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	لداء ممتاز
	B - Very Good	جيد جدا	80 - 89	فوق المتوسط مع بعض الأخطاء
	C - Good	جيد	70 - 79	عمل جيد مع أخطاء ملحوظة
	D - Satisfactory	متوسط	60 - 69	قابل ولكن مع نقص كبير
	E - Sufficient	مقبول	50 - 59	العمل يلبي الحد الأدنى بالمعيار
Fail Group (0 - 49)	FX - Fail	راسب (إحد المعالجة)	(45-49)	مطلوب المزيد من العمل ولكن تم منح الامتحان
	F - Fail	راسب	(0-44)	كمية العمل المطلوبة كبيرة
Note: ستقرر الدرجات للأماكن المشوية فوق أو تحت 0.5 إلى علامة كاملة أعلى أو أدنى (على سبيل المثال: سيتم تقريب درجة 54.5 إلى 55، بينما سيتم تقريب درجة 54.4 إلى 54. لدى الجلسة سبعة عشر التهاون في "الرسوب القريب من النجاح"، لذا فإن التمهيد الوحيد الذي متعرض له الدرجات الممنوحة من قبل المقيمين الأصليين هو لتقريب لتقاني الموضح أعلاه				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Human cytology		Module Delivery
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	ENV 107		
ECTS Credits	7.00		
SWL (hr/sem)			
Module Level	Second	Semester of Delivery	Second
Administering Department	Human cytology	College	كلية العلوم الصحية
Module Leader	أ.م.د. احسان منري احمد	e-mail	ihsanahmad@uomosul.edu.iq
Module Leader	أ.م. أشرف صديق الياس	e-mail	ashraf.saddik@uomosul.edu.iq
Module Leader's Acad. Title	أستاذ مساعد	Module Leader's Qualification	دكتوراه
Module Leader's Acad. Title	أستاذ مساعد	Module Leader's Qualification	ماجستير
Module Tutor	م.م. بسمة بشار حسيب	e-mail	basma.bashar1988@uomosul.edu.iq
Module Tutor	م.م. عمر حماد جمعة	e-mail	Omarhammad.92@uomosul.edu.iq
Scientific Committee Approval Date	2025/2/28	Version Number	2.0

Relation with other Modules

البلقمة مع المواد الدراسية الأخرى

Prerequisite module	Biology	Semester	First
Co-requisites module	physiology +Immunology	Semester	four

Module Aims, Learning Outcomes and Indicative Contents أهداف

المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	تعريف الطالب بلخاليا لختفه عضيتة لختفه وتكيبه لك يومئى ولوظوف لجوي للخي ه 1- تعريف لطلب على أج هز قاج سم لختفه 2 3-توعية لطلب لى الأمراض لتسبب خلل في وظوف لخي ه 4- اعطاء لطلب فكره وسع عن لغيية لمخلظة على صحة لخالها وحياتة من لمؤثرات لاضاره 5-اعتداد اسلوب لمشاركة لعل ولقب اعشخصية لطلب 6-عني ه لطلب لكون ق ادرا على اعداد لان ماذج لختبيو ه ولح صياست خدام لم جهر لالكيتروني
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	أ- الهداف لمغويية 1 - م ادي لخي ه وكونات لخي ه 2 - فاعات لجسم لمخفف قض دطرار التي ممكن أن تؤثر على لانظام لجوي 3- لمخلظة على جملان س الالهيبت ع اد عن كل لمؤثر لبتوليقي قبل سبب لالامراض 4- معفة أنواع لخي لاجسمية ووظوف لاجوي ه .

Indicative المحتويات الإرشادية	1- الخلية ووظيفتها (Cells and How They Work) 2(2 Discuss the functions of organelles of a human cell work من اقش وظائف العضيات في الخلية البشرية. 4(3 (Sensory Systems)-الحواس ازال حسي 2 4- الهازعصبي (The Nervous System) 4(5- التعرف على لمكونات الجهاز الدوران (Circulation-The Heart and Blood Vessels) 4(6 (Blood)- لمكونات الدم 2 7- الامراض والمناعة (Immunity and Disease) 6(8- الهاز التنفسي (The Respiratory System) 2(9- الهاز البولي (The Urinary System) 2(10 مللغذية والضم (Digestion and Nutrition) 2(
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Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	للمهام التي تلحقها بالقرر 1- تلميز الطالب من تطبيق المادة النظرية في الحياة. 2- ان يكون التخرج قادرا على التفكير في علمي والعملي 3- ان يكون من حل المشكلات والتفكير بطرق مبدعة 4- ان يكون قادرا على العمل بروح الفريق. استخدام الوسائل التعليمية في تعليم العلوم ومنها 1-الاناشيد 2-أسلوب المناقشة داخل الصف 3- غم حلقات اشري في نل طلبة وإبراز وجهات نظرهم في عي على التليم 4- استخدام الملل على علية 5- اللولبات الةلية الى سفرات وللقاير 6- تليم م دار انكسب قلة حلل على من خال لتري بلفه يمت حلل للفتلج الم ستصله مناقشة ابطول لفه يمت النظر في اتي درسها خال للكورس.

Student Workload (SWL)

أسبوع 15 حمل ال دراس ليل طالب م موبل-

Structured SWL يس المنتظم الحمل الدرا (h/sem) للطالب خلال الفصل	78	Structured SWL (h/w) يس المنتظم للطالب الحمل الدرا أسبوعيا	5
Unstructured SWL (h/sem) يس غري المنتظم للطالب خلال الحمل الدرا الفصل	72	Unstructured SWL (h/w) يس غري المنتظم للطالب الحمل الدرا أسبوعيا	4
Total SWL (h/sem) يس الك ي ل للطالب خلال الحمل الدرا الفصل	150		

Module

Evaluation

المادة الاسرية

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

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Cells and How They Work لخلية والهيوية عملها

Week 2	Discuss the functions of organelles of a human cell work ناقش وظائف العضيات في الخلية البشرية .
Week 3	Discuss the functions of organelles of a human cell work ناقش وظائف العضيات في الخلية البشرية .
Week 4	Sensory Systems الجهاز الحسي
Week 5	The Nervous System الجهاز العصبي
Week 6	The Nervous System الجهاز العصبي
Week 7	Circulation-The Heart and Blood Vessels التعرف على مكونات جهاز الدوران
Week 8	Circulation-The Heart and Blood Vessels التعرف على مكونات جهاز الدوران
Week 9	Blood الدم
Week 10	Immunity and Disease الأمراض والمناعة
Week 11	Immunity and Disease الأمراض والمناعة
Week 12	Immunity and Disease الأمراض والمناعة
Week 13	The Respiratory System الجهاز التنفسي
Week 14	The Urinary System الجهاز البولي
Week 15	Digestion and Nutrition التغذية والضم
Week 16	الامتحان النهائي

Delivery Plan (Weekly Lab. Syllabus)	
المنهج الأسبوعي المختبر	
	Material Covered
Week 1	تركيب الخلية ووظائفها
Week 2	وظائف العضيات الخلوية
Week 3	انواع خلايا الإنسان
Week 4	الخلايا العصبية
Week 5	خلايا الدم

Week 6	خلايا الدم
Week 7	الخلايا الجذعية
Week 8	خلايا العظم
Week 9	الخلايا الغ لصفوية
Week 10	خلايا الجلد
Week 11	الخلايا الجنسية
Week 12	الخلايا العضلية
Week 13	الخلايا الحسية
Week 14	الخلايا المناعية
Week 15	تركيب الكلية

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	كتاب علم الخلية وعلم الخلية المر لى ومن البحوث الحديثة	نعم
Recommended Texts	محا لصات من الجامعات المشابهة	
Websites	المواقع الالك لونية من النت	

Grading Scheme				
مخطط ال درجات				
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	QUALITY CONTROL		Module Delivery
Module Type	C		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	ENV111		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	Yusra Majeed shihab	Semester of Delivery	
Administering Department	قسم الصحة البيئية	College	كلية العلوم البيئية
Module Leader		e-mail	
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	
Module Tutor	Muhammad Tahseen yusuf	e-mail	Muhammad.tahseen@utoronto.ca
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	٦-٢٧-٢٠٢١	Version Number	١.٠

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

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	This course aims to introduce students to the basic concepts of quality control and its importance in laboratories and health and environmental institutions. It also develops students' ability to apply quality assurance procedures, analyze problems, and improve performance.

Module Learning Outcomes مخرجات التعلم للمادة الدراسية	After completing this course, students will be able to: 1. Understand the principles of quality control. 2. Use basic quality tools. 3. Interpret laboratory test results. 4. Apply quality assurance principles in laboratory work. 5. Analyze quality-related problems and propose appropriate solutions.
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Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Lectures Interactive discussions Visual Learning: Using of diagrams, charts, and multimedia presentations to explain immune system structure and function Group work

Student Workload (SWL) العمل الدراسي للطلاب مصوب لـ ١٥ أسبوعاً			
Structured SWL (h/sem) العمل الدراسي المنتظم للطلاب خلال الفصل	٦٣	Structural SWL (h/w) العمل الدراسي المنتظم للطلاب أسبوعياً	1
Unstructured SWL (h/sem) العمل الدراسي غير المنتظم للطلاب خلال الفصل	٩٢	Unstructured SWL (h/w) العمل الدراسي غير المنتظم للطلاب أسبوعياً	14
Total SWL (h/sem) العمل الدراسي الكلي للطلاب خلال الفصل	1٥٥		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10%(10)	4,9	3,7,10
	Assignments	2	10%(10)	2,12	8
	Seminar	1	10%(10)	Continuous	All
	Lab	1	10%(10)	11	2
Summative	Midterm Exam	2h	10%(10)	7	1-4

assessment	Final Exam	2h	50%(50)	16	All
Total assessment			100% (100 Marks)	All	

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to Quality Control - Concept, Objectives, and Importance of Quality Control
Week 2	Quality Concepts and Key Factors Affecting Quality
Week 3	Quality Assurance in Laboratories
Week 4	Quality Control Tools (Quality Control Charts)
Week 5	Simple Statistical Analysis of Quality Control Charts
Week 6	Modern Concepts of Standard Specifications in Quality Control Systems
Week 7	Introduction to Measuring International Systems: 1/ HACCP System
Week 8	Introduction to Measuring International Systems: 2/ ISO System
Week 9	The Basic Concept of Total Quality Management
Week 10	The Difference Between Quality Assurance and Quality Management
Week 11	Mid coarse exam
Week 12	The Seven Quality Tools Concept
Week 13	Case Study (A scientific visit to the Mosul Dam)
Week 14	Troubleshooting Based on Quality Assurance Results
Week 15	End exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
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Required Texts	"Quality control" / Dale H. Bester Field (2009)	NO
Recommended Texts	Cembrowski, G.S.; Carey, R.N. <i>Laboratory Quality Management: QC & QA</i> . ASCP Press (1989). المتحج الموحد لمادة السيطرة النوعية المعملية لطلبة المرحلة الرابعة الانبار ، التوفيق ، الموسى ، البصرة بغداد ، تكريت دليل الجودة لمتابعة السيطرة النوعية وفق متطلبات المواصفة القياسية الدولية ISO 9001:2008	NO No
Websites		

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	استوار	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	متموسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX - Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F - Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				



MODULE DESCRIPTION FORM

Module Information			
Module Title	Arabic language		Module Delivery
Module Type	Theory		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	UDM101		
ECTS Credits	hours per week (2)		
SWL (hr/sem)	hours (60)		
Module Level	First	Semester of Delivery	First
Administering Department	Environmental Health	College	Environmental Sciences
Module Leader	Husam Mishaal Mohammed	e-mail	husam.mishaal.m@uomosul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	PhD
Module Tutor	Husam Mishaal Mohammed	e-mail	husam.mishaal.m@uomosul.edu.iq
Poor Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	1/10/2025

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

Module Aims	❑ The course aims to enable the student to be familiar with the concepts of the Arabic language and its literature and to become familiar with the basic principles of speech, sentence structure and poetry. ❑ Providing a balanced scientific understanding of the foundations of the Arabic language in a simplified and understandable manner, covering most of the vocabulary and topics of interest to the student and which fall within the specializations of the undergraduate university stage in the humanities, striving to better understand and comprehend the basic components and principles of human studies. ❑ Bringing theoretical studies closer to current reality.
Module Learning Outcomes	The student should be familiar with the concepts and terminology of the humanities and thus be able to analyze the vocabulary of the humanities using specialized linguistic methods.
Indicative Contents	Work as a team and interact with the team to accomplish the required tasks. Employing what the student has learned in various fields of work. Using contemporary illustrative applied examples to link linguistic theory and its application in sustainable scientific research.

Learning and Teaching Strategies

Strategies	1. Conducting oral tests (daily - weekly). 2. Conducting written tests (monthly, semi-annual, annual). 3. Assign learners to conduct in-person and integrated reports and other electronic activities. 4. Classroom participation and creating motivation for participation within the classroom through enrichment questions. 5. Providing model answers to the science department regarding periodic examination questions.
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Student Workload (SWL)

الحمل التدريسي للطلاب محسوب كـ ١٥ اسيو ما

Structured SWL (hr./sem.)		Structured SWL (hr./w)	
Unstructured SWL (hr./sem.)		Unstructured SWL (hr./w)	

Total SWL (hr./sem.)

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes				
	Assignments				
	Projects / Lab.				
	Report				
Summative assessment	Midterm Exam				
	Final Exam				
Total assessment					

Delivery Plan (Weekly Syllabus)

للمناهج الأسبوعي النظري

	Material Covered
Week 1	الاسم الكلام العربي
Week 2	علامات الإعراب الأصلية والفرعية
Week 3	زمن الأفعال في العربية
Week 4	الفاعل
Week 5	نائب الفاعل
Week 6	قواعد العدد والمفعول في العربية
Week 7	المثلاث التوكيدية
Week 8	المشارك التثني
Week 9	الألفاظ المترادفة
Week 10	قواعد كتابة الهمزة
Week 11	الثناء المربوطة والثناء المفتوحة
Week 12	أغلاط شائعة
Week 13	نص شعري قديم
Week 14	نص شعري حديث
Week 15	تحليل نص قرآني
Week 16	

Delivery Plan (Weekly Lab. Syllabus)

المناهج الأسبوعي المختبر

	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	There is a specific curriculum book, which is: The Arabic Language Book for Non-Specialization Departments, authored by (Dr. Hassan Abdel Qader Amin and Dr. Rashid Abdel Rahman Al-Abidi)	Yes, it is available
Recommended Texts	The Basic Rules of the Arabic Language, Ahmed Al-Hashami, 2009, Dar Al-Kotub Al-Ilmiyah, 289 pp.	Yes, it is available
Websites	https://www.noor-book.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 جدًا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	مقبول	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX - Fail	راسب (أقيد المعالجة)	(45-49)	More work required but credit awarded
	F - Fail	راسب	(0-44)	Considerable amount of work required

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



MODULE DESCRIPTION FORM

Module Information			
Module Title	General Biology		Module Delivery
Module Type	Basic		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☒ Seminar
Module Code	ENV101		
ECTS Credits	8		
SWL (hr/sem)	200		
Module Level	UGL	Semester of Delivery	1
Administering Department	Department of Environmental Health	College	College of Environmental Science and Technologies
Module Leader	د. رباب محمد الجبار د. ميادة احمد	e-mail	Sehsho19@uomosul.edu.iq mayhio55@uomosul.edu.iq
Module Leader's Acad. Title	أستاذ مساعد	Module Leader's Qualification	Ph.D. Microbiology
Module Tutor	بسمة بشار	e-mail	Basma.bashar1988@uomosul.edu.iq
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	

Relation with other Modules			
Prerequisite module	None	Semester	---
Co-requisites module	None	Semester	---

Module Aims, Learning Outcomes and Indicative Contents

Module Aims	1- The study of general biology aims to introduce the student to the groups of living organisms and the nature of their structural parts. 2- Studying the cellular structures according to the type of organism. 3- Knowing how they spread and distribute in the surrounding environment and their interaction with it.
Module Learning Outcomes	1- Learn about biology, its branches, and its importance to humans and the environment. 2- Knowing the basics of classification and scientific naming of eukaryotic organisms. 3- Studying the Characteristics of Living Organisms , Growth , Movement and Reproduction. 4- Understanding the difference between eukaryotic and prokaryotic organisms 5- Understanding the cell theory, different cell shapes and their diversity according to the type of organism. 6- Clarifying all types of organelles in the cells and its functions. 7- Studying the process of cell division. 8- Studying the types and structure of the Plant and Animal Tissues. 9- Understanding the mechanisms of Hormonal coordination In Plant and Animal. 10- Explain the Cellular activities like Nutrition , Respiration and Photosynthesis.
Indicative Contents	Indicative content includes the following: Introduction - to biology, its branches and importance. - General instructions (7h) The cell: its discovery and structure - non-living cellular components - the nucleus and cellular organelles - the microscope and its components - estimation of the dimensions of cells and organelles - plant cells - animal cells (21h). Forms of living cells - animal and plant - cell types, plant and animal - meristematic tissues + parenchyma + sclerenchyma - epidermis + wood + bark + vascular tissues - practical exam (9h) Cell Division - Mitosis and Reduction - Mitosis Lab (7h) midterm exam (1h) Reproduction and growth In animals - Reproduction and growth in plants (10h) Classification and Scientific Nomenclature - the Plant Kingdom - the Animal

	Kingdom - Protozoa (Amoebae + Paramecium) - Sponges and Hydra - Worms and Insects - Animal Tissues (25h) Nutrition and photosynthesis in plants - for feeding, digestion and metabolism in animals (10h) , final exam(3h)
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Learning and Teaching Strategies	
Strategies	The main strategy that will be adopted in presenting this course is to encourage students to read and discuss, and to provide the student with the skill of scientific observation and description of the phenomenon, while improving their critical thinking skills at the same time. This will be achieved through examinations, daily discussions, and through hands-on observations in laboratory experiments that include some sampling activities and examination of specimens and microscopic slides of the subject.

Student Workload (SWL) العمل الذي ينبغي للطلاب معسوبه في ١٥ اسبوعا			
Structured SWL (hr./sem.)	108	Structured SWL (hr./w)	7
Unstructured SWL (hr./sem.)	92	Unstructured SWL (hr./w)	6
Total SWL (hr./sem.)	200		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	1	10% (10)		LO #
	Online assignments	1 lec.	5 % (5)		LO #
	Onsite assignments	1 lab.	10% (10)		
	Lab.	1	10% (10)		All
	Seminar (lec.)	1	5% (5)		
Summative assessment	Midterm Exam	1 hr.	10% (10)	8	LO #
	Final Exam	3 hr.	90% (90)	15	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المناهج الأسبوعي النظري

	Material Covered
Week 1	Introduction to biology : its Branches , Development and Importance
Week 2	The living Organisms Kingdoms, Classification and nomenclature
Week 3	Characteristics of Living Organisms , Growth , Movement and Reproduction
Week 4	Prokaryotic, eukaryotic microorganisms : Bacteria , Fungi and viruses
Week 5	The cell theory : the Shape and Description of Cells
Week 6	The Cell Organelles 1
Week 7	The Cell Organelles 2
Week 8	The Cell Division: Mitosis , and Mid exam
Week 9	The Cell Division: Meiosis
Week 10	The Plant Tissues
Week 11	The Animal Tissues
Week 12	Hormonal Coordination (In Plants)
Week 13	Hormonal Coordination (In Animals)
Week 14	The Cellular Nutrition , Respiration and Excretion
Week 15	Photosynthesis
Week 16	The final Exam

Delivery Plan (Weekly Lab. Syllabus)

المناهج الأسبوعي المختبر

	Material Covered
Week 1	General Instructions about occupational safety and laboratory work.
Week 2	Microscope and its components
Week 3	Temporary and Fixed Cells Slides
Week 4	Estimating the dimensions of cells and organelles
Week 5	Models of Plant Kingdom
Week 6	Models of Animal Kingdom
Week 7	Cells : plant and animal types
Week 8	Cellular Organelles
Week 9	Plasma membrane

Week 10	Cell division
Week 11	Meristemic tissue + parenchyma + sclerenchyma
Week 12	Epidermis + xylem + phloem + vascular tissue
Week 13	Animal tissue : Epithelial Tissue
Week 14	Connective Tissue : The Blood Cells
Week 15	Experiments on Photosynthesis
Week 16	The Final Exam

Learning and Teaching Resources مصادر التعلم والتعليم		
	Text	Available in the Library?
Required Texts	علم الأحياء ج 1 + ج 2، تضاف من وزارة التعليم العالي والبحث العلمي	
Recommended Texts		
Websites	https://docs.google.com/document/d/1jgdyP-jt/pwO3biology.pdf	

Grading Scheme مخطط الدرجات				
Group	Grade	تقدير	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	مقبول	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX - Fail	راغب (إلى المعالجة)	[45-49]	More work required but credit awarded
	F - Fail	راغب	[0-44]	Considerable amount of work required

Notes: 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.

مرحلة أولى كورس ثاني

Module Information			
Module Title	Environmental Health Science	Module Delivery	
Module Type	Core	☒ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☒ Practical ☐ Seminar	
Module Code	ENV110		
ECTS Credits	5.00		
SWL (hr/sem)			
Module Level	UGx Second	Semester of Delivery	Second
Administering Department	Environmental Health	College	Environmental Sciences
Module Leader	Liqaa Saad Abdullah	e-mail	liqaasaaad@uomusul.edu.iq
Module Leader	Salim Raheem Khalaf	e-mail	salim.mad@uomusul.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Doctorate
Module Leader's Acad. Title	Assistant Lecturer	Module Leader's Qualification	Master
Module Tutor		e-mail	
Scientific Committee Approval Date	2025/2/11	Version Number	2.0

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	Environmental Science, Public Health.	Semester	First Semester

Module Aims, Learning Outcomes and Indicative Contents	
Module Aims	1- Providing the student with basic information about the concept of environmental health science and the most important scientific terms related to public health and the environment 2- Studying the most important local and global environmental problems, such as air pollution and climate change, and explaining their causes and the role of environmental health in addressing them. 3- Learn the term environmental policy and which local and international bodies issue environmental instructions and laws.
Module Learning Outcomes	Building a foundation for the student on the concept of environmental health and the most important scientific terms related to public health, the environment, local and global environmental problems, how to identify them, and the role of environmental health

Delivery Plan (Weekly Syllabus)	
Indicative Contents	1- The concept of environmental health 2- Environmental challenges 3- The most serious global environmental challenges 4- Air pollution 5- Methods of eliminating and preventing air pollution 6- German pollution Water Pollution and noise pollution 7- Solid waste management 8- Climate change and global warming 9- Solutions to stop climate change and global warming 10- Environmental policies and their sponsors

Student Workload (SWL)			
Structured SWL (h/sem)	78	Structured SWL (h/w)	5
Unstructured SWL (h/sem)	72	Unstructured SWL (h/w)	4
Total SWL (h/sem)	150		
Strategies	Using illustrative means to convey information, including: 1- Data Show 2- Discussion style within the class 3- Conducting discussion groups among students and highlighting their points of view to encourage learning 4- Use of scientific films 5- Homework, seminars and reports 6- Learn the skills of writing scientific research by arranging concepts, analyzing the results obtained, and discussing them according to the theoretical concepts he studied during the course. 7- Field visits		

Week	Material Covered
Week 1	Introduction to Environmental Health
Week 2	Environmental Health and Public Health
Week 3	Environmental Epidemiology Basics
Week 4	Air Pollution and Health
Week 5	Climate Change and Health
Week 6	Midterm Review + Exam
Week 7	Waste Management and Health
Week 8	Food Safety and Environmental Health
Week 9	Chemical Hazards and Toxicology Basics
Week 10	Occupational and Environmental Health
Week 11	Radiation and Environmental Noise
Week 12	Urban Health and Built Environment
Week 13	Emerging Issues in Environmental Health
Week 14	Environmental Health Policies & Future Directions
Week 15	
Week 16	Final Exam

Learning and Teaching Resources

	Test	Available in the Library?
Required Tests	Environmental health book and modern research	yes
Recommended Tests	Lectures from similar universities	
Websites	Website from set	

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

MODULE DESCRIPTION FORM

Module Information			
Module Title	Analytical chemistry		Module Delivery
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	ENVH102		
ECTS Credits	6		
SWL (hrs/sem)	150		
Module Level	One	Semester of Delivery	
Administering Department	Environmental Health	College	College of Environmental Sciences
Module Leader	Assist Prof Doctor: Yasra Majed AlShaker		e-mail: Yasra.majed@uomusul.edu.iq
Module Leader's Acad. Title	The scientific title: Assist prof	Module Leader's Qualification	Certificate: Doctor of Philosophy in Chemistry/ Analytical chemistry
Module Tutor	Assist Prof Doctor: Yasra Majed AlShaker		e-mail: Yasra.majed@uomusul.edu.iq
Peer Reviewer Name	Dr. Omar Idres saleh Gharwan Thamer Isam Wasan Jasim	e-mail	omarsaleh@uomusul.edu.iq Gharwan.kasim@uomusul.edu.iq Wasan.Jasim@uomusul.edu.iq
Scientific Committee Approval Date	16/9/2025	Version Number	1.0

Relation with other Modules			
Prerequisite module	Nothing	Semester	
Co-requisite module	Organic chemistry	Semester	1 st

Module Aims, Learning Outcomes and Indicative Contents

Module Aims	1. Students learn about the subject of analytical chemistry and its role in understanding the analysis of chemical elements and compounds and the preparation of chemicals. 2. For the purpose of use in chemical analysis processes. 3. Identify the basic concepts of analytical chemistry and how to benefit from them and link them to daily phenomena. 4. It makes students feel the value and importance of the subject of analytical chemistry and its role in daily life through qualitative assessment water and its role in quality control processes. 5. Utilizing the student's scientific knowledge in a way that helps him face life problems. 6. Utilizing the student's scientific knowledge and preparing him to be a leading teacher in his field of work through understanding the academic material.
Module Learning Outcomes	A. Definition of the course a. Knowledge and understanding Learn about the subject of analytical chemistry, its sections, and how this science has developed to become one of the most important branches of chemistry and a basic pillar due to its direct connection to modern scientific applications. B - Subject-specific skills a. Identifying the basic concepts of analytical chemistry and how to benefit from them and link them to daily phenomena. b. Providing the student with the necessary skill in employing the acquired knowledge to be a pillar in the understanding process for the purpose of applying it in the practical aspect and communicating it correctly to the students. c. Providing the student with knowledge in the field of chemistry, as it is possible for the student to transform this knowledge into action when the situation requires a specific response to solve a problem.

Indicative Contents	Introduction to analytical chemistry and its importance Chemical analysis steps Types of chemical solutions and calculating their concentrations Methods for measuring pH Titrations and their types - equivalence and end points Mathematical calculations of the effectiveness factor and the effect of ions Calculations of the acid function for weak acids and bases Classification of acids and bases and the relationship between dissociation constants Calculations of the acid function for various weak acids Calculations of the acid function of salt solutions Calculations of the acid function for buffered solutions
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Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Teaching and learning methods: lecture, dialogue, discussion, giving examples, exams and tests, writing and discussing reports, practical laboratory, and information available online. Evaluation methods: monthly exams, homework assignments, students' daily activity, writing reports, quizzes, daily preparation, and recording participation for each male and female student. Thinking skills 1. Asking questions during the lecture, for the purpose of attracting students to the ability to answer them 2. Linking analytical chemistry topics to what is happening in the environment in which students live, and the possibility of benefiting from them to facilitate life and enjoy scientific and technological achievements. 3. Ask questions and researching the latest developments in chemistry, especially with regard to medical science.

Student Workload (SWL) الحمل التدريسي للطلاب محسوب لـ ١٥ أسبوعاً			
Structured SWL (h/sem) الحمل التدريسي المنتظم للطلاب خلال الفصل	93	Structured SWL (h/w) الحمل التدريسي المنتظم للطلاب أسبوعياً	5
Unstructured SWL (h/sem) الحمل التدريسي غير المنتظم للطلاب خلال الفصل	57	Unstructured SWL (h/w) الحمل التدريسي غير المنتظم للطلاب أسبوعياً	4
Total SWL (h/sem) الحمل التدريسي الكلي للطلاب خلال الفصل	150		

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

Delivery Plan (Weekly Syllabus) البرنامج الأسبوعي النظري	
Week	Material Covered
Week 1	Introduction to analytical chemistry and its importance
Week 2	Chemical analysis steps
Week 3	Methods of Expressing Concentration
Week 4	Methods of Expressing Concentration
Week 5	Methods of Expressing Concentration
Week 6	Types of Chemical Solutions and Calculating Their Concentrations
Week 7	Methods of Measuring pH
Week 8	Calculations in Analytical Chemistry
Week 9	Titration and their types - equivalence and end points
Week 10	Calculations of the pH of weak acids and bases
Week 11	Classification of acids and bases and the relationship between dissociation constants

Week 12	Calculations of the acid function for buffered solutions
Week 13	Arithmetic questions and methods for finding the concentration of chemical materials
Week 14	Review the academic subject with arithmetic questions.
Week 15	Comprehensive examination of the subject.

Delivery Plan (Weekly Lab. Syllabus)	
المناهج الأسبوعية للمختبر	
Week	Material Covered
Week 1	General directions and instructions for the analytical chemistry laboratory
Week 2	Introduction to qualitative, quantitative and volumetric analysis
Week 3	Devices and tools used in the laboratory
Week 4	Volumetric analysis (titration, calibration, equalization titrations)
Week 5	Experiment with mixture titrations (A, B, C)
Week 6	Precipitation titrations. Mohr and Volhard experiment
Week 7	Exam in the above subject
Week 8	Redox titrations Complex formation titrations
Week 9	Experiment to measure the total hardness of water
Week 10	Introduction to spectroscopy and experiment with phosphate estimation using the spectrophotometric method
Week 11	Visible molecular spectrometry, nitrite ion determination experiment
Week 12	Flame spectrometry and an experiment to estimate the proportion of some alkaline and alkaline earth elements.
Week 13	Nephelometric. Sulfate estimation experiment.
Week 14	Comprehensive practical exam
Week 15	A comprehensive discussion of the course material.

Learning and Teaching Resources		
مصادر التعلم والتعليم		
	Text	Available in the Library?
Required Texts	(نص التكملة التحليلية) ثابت النشرة من يد لعم الجاهلي	Yes

Recommended Texts	Fundamentals of Analytical Chemistry, Sixth edition, 2017, (Skoog, Douglas A.; West, Donald M.; Hollar, James F.)	
Websites	Modern sources were adopted, in addition to the basic sources described above, for the purpose of preparing the prescribed material according to the vocabulary of the sectoral committee approved by the Ministry of Higher Education and Scientific Research, including sources taken from the Internet.	

Grading Scheme مخطط التدرجات				
Group	Grade	التصنيف	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	مقبول	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX - Fail	راسب (فقد المعدلة)	(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 in 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	B		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☒ Practical ☐ Seminar
Module Code	Env108		
ECTS Credits	5		
SWL (hr/sem)	150		
Module Level	One	Semester of Delivery	
Administering Department	Environmental Health	College	College of Environmental Sciences
Module Leader	Doctor: Dr. Liqa'a Saeed Abdullah	e-mail	liqaasaeed@uomusul.edu.iq
Module Leader's Acad. Title	The scientific title: Doctor Lecturer	Module Leader's Qualification	Certificate: Doctor of Philosophy in Chemistry/ Biochemistry
Module Tutor	Doctor Lecturer: Dr. Liqa'a Saeed Abdullah	e-mail	liqaasaeed@uomusul.edu.iq
Peer Reviewer Name	د.م. خزوان كاظم د.م. وسن جاسم	e-mail	khazwan.kazim@uomusul.edu.iq wasen.jassas@uomusul.edu.iq
Scientific Committee Approval Date	٢٠٢٢/٢/٢	Version Number	١.٠

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	لا يوجد	Semester	
Co-requisites module	كيمياء تحليلية	Semester	1 st

Module Aims, Learning Outcomes and Indicative Contents أهداف المائدة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المائدة الدراسية	1- Know the classes of organic compounds based on the active and substituted groups in the compound. 2- Knowing how to write the molecular, structural and stereo formulas of organic compounds. 3- The student will master how to distinguish between aliphatic compounds such as alkanes, alkenes, and alkynes. 4- The student will know how to distinguish between cyclic and non-cyclic compounds. 5- Know how to distinguish between aliphatic and aromatic compounds.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- That the student learn how to write organic compounds, since most of the environmental pollutants are organic chemicals. 2- That the student learn to name organic compounds using the common and regular nomenclature. 3- That the student learn to write equations for the reactions of organic compounds. 4- The student learns how to identify these organic compounds. 5- Know how to purify organic compounds.
Indicative Contents المحتويات الإرشادية	Aliphatic hydrocarbons. Alkanes. Naming the alkanes. Alkane reactions. Methods for preparing alkanes. Cycloalkanes, naming cycloalkanes Alkenes, the name of alkenes Physical properties of alkenes Alkene reactions Preparation of alkenes Cycloalkenes, name cycloalkenes Alkynes, naming alkynes Physical properties of alkynes, preparation of alkynes Cycloalkenes and dienes, naming cycloalkenes and dienes Aromatic hydrocarbons, benzene and its derivatives Compensation reactions on the benzene ring

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1- Giving an overview of organic chemistry and some of the classes of these compounds and their importance in various sciences. 2- Clarifying the relationship of organic chemistry with other chemistry sciences. 3- Adopting group work inside the laboratory by dividing the students into groups, assigning each group to carry out laboratory tasks according to the nature of the lecture given inside the laboratory. 4- The theoretical lectures given correspond to what is given inside the laboratory of scientific material.

Student Workload (SWL)			
الحمل الدراسي للطلاب مصوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	93	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب اسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	57	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب اسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	150		

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

Delivery Plan (Weekly Syllabus)	
المناهج الاسبوعي للنظري	
	Material Covered
Week 1	Aliphatic Hydrocarbons: Alkanes and Active Groups (Substituted)
Week 2	Nomenclature of alkanes, physical properties of alkanes
Week 3	Chemical reactions of alkanes
Week 4	Preparation of alkanes
Week 5	Cycloalkanes, naming cycloalkanes
Week 6	Alkenes, the name of alkenes, Physical properties of alkenes,
Week 7	Alkene reactions, Preparation of alkenes
Week 8	Cycloalkenes, name cycloalkenes
Week 9	Alkynes, naming alkynes
Week 10	Physical properties of alkynes, preparation of alkynes

Week 11	Exam
Week 12	Cycloalkynes and dienes, naming cycloalkynes and dienes
Week 13	Aromatic hydrocarbons, benzene and its derivatives
Week 14	Compensation reactions on the benzene ring
Week 15	Exam

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الأسبوعي للمختبر	
	Material Covered
Week 1	Introduction and presentations in vsm
Week 2	Glassware used in the laboratory
Week 3	Melting point experiment
Week 4	Boiling point experiment
Week 5	simple distillation
Week 6	simple distillation
Week 7	Fractional distillation
Week 8	Fractional distillation
Week 9	Exam
Week 10	steam distillation
Week 11	Recrystallization
Week 12	Recrystallization
Week 13	Sublimation
Week 14	Solvent extraction
Week 15	Exam

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Fundamentals of organic chemistry	
Recommended Texts	Texts: Textbook of Organic Chemistry, by Morrison and Boyd	
Websites	Modern sources were adopted, in addition to the basic sources described above, for the purpose of preparing the prescribed material according to the vocabulary of the sectoral committee approved by the Ministry of Higher Education and Scientific Research, including sources taken from the Internet.	

Grading Scheme مخطط التدرجات				
Group	Grade	التصنيف	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 (تد المصالحة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				



MODULE DESCRIPTION FORM

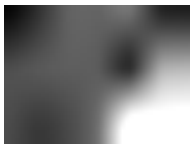
Module Information					
Module Title	Biotechnology		Module Delivery		
Module Type			OTheory OLecture OTutorial OPractical OSeminar		
Module Code					
Credits					
Hours/sem					
Module Level	Undergraduate 3	Semester of Delivery			
Administering Department	Environmental Health	College	Environmental sciences		
Module Leader	Shymaa khaleel Abdulla		e-mail		
Module Leader's Acad. Title	Assistant .prof	Module Leader's Qualification			
Module Tutor			e-mail	drshaymaakhleel@uomosul.edu.iq	
Reviewer Name			e-mail		
Scientific Committee Approval			Version Number		
Relation with other Modules					
Prerequisite module	None		Semester		
Co-requisites module	None		Semester		

Module Aims, Learning Outcomes and Indicative Contents



Module Aims	Introduce basic concepts of biotechnology • Explain major branches of biotechnology • Link theoretical knowledge with practical applications • Develop basic laboratory skills • Highlight biosafety and bioethics principles
Learning Outcomes	Upon successful completion, students will be able to: • Define biotechnology and its scope • Describe main biotechnology techniques • Explain applications in medicine, agriculture, and industry • Perform basic biotechnology laboratory techniques • Analyze experimental data • Write scientific laboratory reports • Understand biosafety and ethical issues
Indicative Contents	• Introduction to Biotechnology • History and development of biotechnology • Recombinant DNA technology • Polymerase Chain Reaction (PCR) • Medical biotechnology applications • Agricultural biotechnology • Industrial biotechnology • Environmental biotechnology • Biosafety • Bioethics
Learning and Teaching Strategies	
Strategies	• Lectures • PowerPoint presentations • Laboratory practical sessions • Group discussions • Case studies • Problem-based learning

Student Workload (SWL)



Y.x..4			
Structured SWL (hr./sem.)		Structured SWL (hr./w)	
Unstructured SWL (hr./sem.)		Unstructured SWL (hr./w)	
Total SWL (hr./sem.)			

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative Assessment	Quizzes	2	9610	4 10	
	Assignments	2	9610		2,4
	Projects / Lab.	1	9610	13	3,4,5
	Report	1	9610		
Summative Assessment	Midterm Exam	1	9620	8	
	Final Exam	1	9640	16	
Assessment					
Delivery Plan (Weekly Syllabus)					
	المناهج الأسبوعية النظرية				
	Material Covered				
Week 1	Introduction of Biotechnology				
Week 2	History and scope of biotechnology				
Week 3	Important Definitions				
Week 4	Types of Biotechnology				