

Academic Program Description Form

Wasit University/ University name

College of Science/College/Institute

Department of Biology /Scientific Department

Name of the academic or professional program

Bachelor's degree in Biology or Biotechnology

Bachelor of Science in Biology & Bachelor of science in /Name of final degree
Biotechnology

semesters/Academic system: Bologna Grade 1 and Grade 2



Description Preparation Date: : 3 / 6 / 2025

File Completion Date:

Signature:

Head of Department Name:

Dr. Jawad Kadhum Issa

Date: 3\6\2025

Signature:

Scientific Associate Name:

Dr. Ali Jabbar Fraih

Date: 3\6\2025

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date : 6\6\2025

Signature/

ا.م.د حسين تقي جون

Approval of the Dean

ا.م.د. فائق جميل حسن



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Organic Chemistry		Module Delivery
Module Type	C		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	Bio-122		
ECTS Credits	7.00		
SWL (hr/sem)	175		
Module Level	1	Semester of Delivery	2
Administering Department		College	
Module Leader	Sadik Hameed	e-mail	sftaysa@uowasit.edu.iq
Module Leader's Acad. Title	Assist. Professor	Module Leader's Qualification	Master
Module Tutor	NA	e-mail	
Peer Reviewer Name	NA	e-mail	
Scientific Committee Approval Date		Version Number	

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 meaning of organic chemistry and other types of chemistry 2- Identify the meaning of an organic compound and the reason for the name, and is it correct or not? 3- To know the meaning of hybridization. 4- Identify the types of organic reactions. 5- Identify the groups of organic compounds
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. 1. Identification and classification of organic chemistry. 2. 2. Make a table classifying the types of organic reactions. 3. 3. Summarize what is meant by hybridization of organic compounds and what is its purpose. 4. 4. Discuss the meaning of saturated and unsaturated compounds and the difference between them. 6. 6. How to prepare saturated compounds. 7. 7. How to prepare an unsaturated compound 8. 8. Characteristics of aromatic compounds 9. Alkyl halides, their specifications and methods of preparation. 10. Explanation of carbonyl compounds
Indicative Contents المحتويات الإرشادية	Part A - Concept of Organic Chemistry- Hybridization of organic compounds - types of organic reactions, saturated compounds, unsaturated compounds , aromatic compounds, substituted hydrocarbons [15 h] Alkanes - Alkenes, Alkynes. [15 hours] Aromatic compounds - aldehydes and ketones. [10 hours] Carboxylic acids, esters, ethers Alkyl halides. ethers. [15 hours] Amines and amides [6 hours]

	<u>basics</u> <u>Organic chemistry, hybridization, types of chemical reactions, types of fission, electrophiles and nucleophiles, alkanes, alkenes, alkynes, cyclic hydrocarbons. [15 hours]</u> <u>Aromatic compounds - benzene, substituted hydrocarbons. [7 hours]</u> <u>Alkyl halides - phenols, ethers, alcohols, aldehydes and ketones, carboxylic acids, esters. [15 hours]</u>
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Learning and Teaching Strategies استراتيجيات التعلم والتعلي م	
Strategies	The main strategy that will be adopted in introducing this unit is to encourage students to participate in experiments, while improving and expanding their conducting skills at the same time. This will be achieved through classes and interactive tutorials and by thinking about the type of simple experiments that include some organic sampling activities that are of interest to the students.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوع			
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	79	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	96
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

Module تقييم المادة الدراسية

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

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction Organic Chemistry
Week 2	Hybridization
Week 3	Hydrocarbons
Week 4	Types of Organic Reactions
Week 5	Electrophiles and Nucleophiles
Week 6	Alkanes Alkenes Alkynes
Week 7	Cyclic Hydrocarbons
Week 8	Aromatic Hydrocarbons
Week 9	Alkyl Halides, Ethers
Week 10	Phenols
Week 11	, Alcohols
Week 12	Aldehydes and Ketones
Week 13	Carboxylic Acids
Week 14	Esters

Week 15	Amines Amides
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المناهج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Definition of laboratory tools
Week 2	Lab 2: Safety and security in the chemical laboratory
Week 3	Lab 3: Determine the melting point
Week 4	Lab 4: Determine the boiling point
Week 5	Lab 5: sublimation
Week 6	Lab 6: Purification by recrystallization
Week 7	Lab 7: Extraction
Week 8	Lab 8 : Distillation
Week 9	Lab 9 : simple distillation
Week 10	Lab 10 : Fractional distillation
Week 11	Lab 11 : steam distillation
Week 12	Lab 12 : Chromatography
Week 13	Lab 13 : Paper chromatography
Week 14	Lab 14 : Thin layer chromatography
Week 15	Lab 15 : Aspen preparation
Week 16	Lab 16 : Determination of sodium, potassium and calcium using the atomic emission Technique

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

Recommended Texts	textsMorrison & Boyd Organic Chemistry	Yes
Websites	https://learnchemistry12.com/2017/08/morrison.html	

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	Academic English 1		Module Delivery
Module Type	Basic		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	WU02		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	UGI	Semester of Delivery	Two
Administering Department	Mechanical	College	Engineering
Module Leader		e-mail	
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	PhD
Module Tutor	Ali Faraj Hammadi	e-mail	alifaraj@uowasit.edu.iq
Peer Reviewer Name	- Hala A.Naman AL Tae - Ismail Sharhan Hburi - Ahmed Adel Naji	e-mail	alaataeh@uowasit.edu.iq isharhan@uowasit.edu.iq ahmedadil@uowasit.edu.iq
Scientific Committee Approval Date	9-11-2023	Version Number	1.0

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

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

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	This module provides all the language and skills students need to improve their English, with grammar, vocabulary, and skills work in every unit. The aim is represented by the module's trusted methodology combines solid grammar and practice, vocabulary development, and integrated skills.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Demonstrate understanding of academic texts and summarize them orally and in writing. 2- Demonstrate an ability to write with a fair degree of accuracy in a variety of genres. 3- cope effectively with everyday situations everywhere in English 4- Demonstrate learner independence and be aware of their own linguistic strengths and weaknesses. 5- Participate in discussions/seminars on a variety of subject related, academic and general topics.
Indicative Contents المحتويات الإرشادية	12.5 hrs : Reading Skills 12.5 hrs : Writing Skills 12.5 hrs : Listening Skills 12.5 hrs : Speaking Skills

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	Reading a range of pre-intermediate level articles on selected general topics. Writing a topic (informal emails, e.g.,) to classmates to discuss group work. Writing and submitting an assignment to a lecturer, Writing slides for presentations. Listening to authentic material at the beginner level to develop listening skills and comprehension. For Speaking, students may self-select and discuss topics with classmates on a group project. Typical topics that could be used at this level in the teaching of vocabulary include The World Around Us (Countries, Nationality, Language, Physical world, Weather, etc.). It may be appropriate for students to select grammar points for discussion in class, or for the lecturer to select them as they arise in students' writing. Grammar points that typically arise at this level include present simple and past simple; present continuous; question forms and auxiliary verbs; comparison; word order; prepositions; basic phrasal verbs.
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Student Workload (SWL) الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (hr/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	17	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	1.3
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	50		

Module تقييم Evaluation المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20%(20)	6, 10	LO 1, LO2
	Home work (ONLINE+ ONSITE)	2	10%(10)	5,10	LO2
	Report	0	-	-	-
	Seminar	1	10%(10)	12	All
	Midterm Exam	2	10%	6,12	All

Summative assessment	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Unit.1 Hello!
Week 2	Unit.2 Your world
Week 3	Unit.3 All about you
Week 4	Unit.4 Family and friends
Week 5	Unit.5 The way I live
Week 6	Unit.6 Every day
Week 7	Unit.7 My favorites
Week 8	Unit.8 Where I live
Week 9	Unit.9 Times past
Week 10	Unit.10 We had a great time!
Week 11	Unit.11 I can do that!
Week 12	Unit.12 Please and thank you
Week 13	Unit.13 Here and now
Week 14	Unit.14 It's time to go!
Week 15	Presentation (seminars)
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1:

Week 2	Lab 2:
Week 3	Lab 3:
Week 4	Lab 4:
Week 5	Lab 5:
Week 6	Lab 6:
Week 7	Lab 7:

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	New headway beginner student book	Yes
Recommended Texts	Murphy R English Grammar in Use	No
Websites	https://apoyanblog.files.wordpress.com/2017/08/new_headway_beginner_-_student	

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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تفاصيل الساعات المجدولة في الإِسبوع الواحد

CL (hr/w)	Lect (hr/w)	Lab (hr/w)	Pr (hr/w)	Tut (hr/w)	Semn (hr/w)
2	0	0	0	0	0

CL تعني ساعة تدريس في الصف

Lec تعني ساعة تدريس اونلاين

Lab تعني ساعة مختبر

Pr تعني ساعة تطبيقية (عادة تخص المجموعات الطبية)

Tut تعني ساعة مساعدة توتوريال

Sem تعني ساعة سيمينار و ممكن ان يستضاف احد فيها لالقاء موضوع او يقدم فيها الطلبة

نموذج للنشاطات غير المجدولة

الانشطة المذكورة هي امثلة يجب

ان لا تتجاوز ساعاتك 17 ساعة

بالفصل

نوع النشاط	عدد الاسبوع	عدد الساعات لكل اسبوع
تحضير الدروس اليومية	12	1
التهيئة للعرض التقديمي (إن كان هناك عرض تقديمي)	0	0
التهيئة للامتحانات اليومية	2	1
التهيئة للامتحان النهائي	1	3
التهيئة للمشروع (إن كان هناك مشروع مطلوب من قبل استاذ المادة)	-	-
المجموع الكلي للساعات غير المجدولة		17

Code	Course/Module Title	ECTS	Semester
	Academic English 1	2	Two
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/sem)
2	2	33	17
Description			
The purpose of this module is to develop students' linguistic ability by focusing on the key skills of reading, writing, speaking and listening, to encourage students to become independent learners and to introduce them to strategies and skills to enable them to cope with the demands, both academic and cultural, of undergraduate study in an English-speaking environment.			

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Fundamentals of Computer Science		Module Delivery
Module Type	Basic		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	WUO3		
ECTS Credits	3		
SWL (hr/sem)	75		
Module Level	UGI	Semester of Delivery	One
Administering Department	WAR	College	College of Engineering
Module Leader	Nhad K. Frhan Al-Abboodi	e-mail	nkadhum@uowasit.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	PH.D
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	25-6-2023	Version Number	1.0

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

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة

الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	1. Giving the student a general idea of computer material at a study environment, library, and at home. 2. Understanding the basic rules for dealing with and managing computers (computer basics, computer components, computer and software licenses, operating systems,), With the aim of preparing the student to enter the programs he needs in the department. 3. Giving the student knowledge about the office applications as basic principles for students in the College of Engineering.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Knowing computer peripherals, their connections and Windows system. 2. Distinguish between the important tabs in the Word program. 3. The ability to write an entire paragraph with formatting. 4. Understand the basics of power point program. 5. Understand the excel sheet program.
Indicative Contents المحتويات الإرشادية	Part A (9 hr) Introduction to computer principles. Part B (12 hr) MS Word program. Part C (12 hr) MS Excel program. Part D (12 hr) MS Power Point program.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	1. Using computers and display screens to explain lectures to students to increase students' mental comprehension. 2. Practical applications in the computer lab of what was explained in the theoretical lecture. 3. Using direct questions in the classroom as brainstorming skills. 4. Encouraging students to solve class and homework assignments and to perform specialized reports.
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Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراي س المنتظم للطلاب خلال الفصل	48	Structured SWL (h/w) الحمل الدراي س المنتظم للطلاب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراي س غرت المنتظم للطلاب خلال الفصل	27	Unstructured SWL (h/w) الحمل الدراي س غرت المنتظم للطلاب أسبوعيا	2
Total SWL (h/sem) الحمل الدراي س الكلي للطلاب خلال الفصل	75		

Module Evaluation

تقييم المادة الدراسية

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

Formative assessment	Quizzes	3	15% (15)	4, 8, 12	All
	Assignments	1	5% (5)	10	All
	Lab.	15	15% (15)	Continuous	All
	Projects	1	5%	13	/
Summative assessment	Midterm Exam	2hr	10% (10)	9	All
	Final Exam	3hr	50% (50)	16	All
Total assessment			100		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوي ع النظري	
	Material Covered
Week 1	□ Part1: Chapter One: Computer Fundamentals, Computer Components.
Week 2	□ Part1: Chapter Two: Computer Safety and software Licenses.
Week 3	□ Part1: Chapter Three: Main operating systems
Week 4	□ Part2: Chapter One: Introduction to Microsoft word + Quizzes1
Week 5	□ Part2: Chapter Two: Insert Objects to Microsoft word, Editing Documents
Week 6	□ Part2: Chapter Three: writing the equations
Week 7	□ Part2: Chapter Four: Formatting Pages
Week 8	□ Part3: Chapter One: Introduction to Microsoft Excel+ Quizzes2
Week 9	□ Part3: Chapter Two: Additional Tasks in Microsoft word+ Midterm Exam
Week 10	□ Part3: Chapter Three: Additional Tasks in Microsoft word+ Assignments

Week 11	☐ Part3: Chapter Four: Additional Tasks in Microsoft word
Week 12	☐ Part4: Chapter One: Introduction to Power Point+ Quizzes3
Week 13	☐ Part4: Chapter Two: Insert Objects and Add Animations in Microsoft Power Point+ Project
Week 14	☐ Part4: Chapter Three: Additional Tasks in Microsoft Excel Cont.
Week 15	☐ Part4: Chapter Four: Additional Tasks in Microsoft Excel Cont.
Week 16	☐ Final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوي للمختات	
	Material Covered
Week 1	☐ Part1: Chapter One: Computer Fundamentals, Computer Components.
Week 2	☐ Part1: Chapter Two: Computer Safety and software Licenses.
Week 3	☐ Part1: Chapter Three: Main operating systems
Week 4	☐ Part2: Chapter One: Introduction to Microsoft word
Week 5	☐ Part2: Chapter Two: Insert Objects to Microsoft word, Editing Documents
Week 6	☐ Part2: Chapter Three: writing the equations
Week 7	☐ Part2: Chapter Four: Formatting Pages
Week 8	☐ Part3: Chapter One: Introduction to Microsoft Excel
Week 9	☐ Part3: Chapter Two: Additional Tasks in Microsoft word
Week 10	☐ Part3: Chapter Three: Additional Tasks in Microsoft word
Week 11	☐ Part3: Chapter Four: Additional Tasks in Microsoft word
Week 12	☐ Part4: Chapter One: Introduction to Power Point

Week 13	□ Part4: Chapter Two: Insert Objects and Add Animations in Microsoft Power Point
Week 14	□ Part4: Chapter Three: Additional Tasks in Microsoft Excel.
Week 15	□ Part4: Chapter Four: Additional Tasks in Microsoft Excel.
Week 16	□ Final Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	اساسات الحاسوب وتطبيقاته المكتبية	نعم
Recommended Texts		
Websites	https://www.tutorialspoint.com/word/word_move_text.htm	

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 – 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C - Good	جيد	70 – 79	Sound work with notable errors
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	F – Fail	راسب	(0-44)	Considerable amount of work required

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جدول الساعات المجدولة و غري المجدولة لمادة Computer Skills

نوع النشاط	الساعات المجدولة SSWL	الساعات غري المجدولة USSWL	عدد الأسابيع	ساعة لكل أسبوع	العبء الكلي للساعات
محاضرات	محاضرات في القاعات الدراسية		15	1	15
المختبر	دوام المختبرات		15	2	30
مناقشات	المناقشات		0	0	0
م مشروع عملي	م مشروع عملي		0	0	0
	التهيئة للمشروع		0	0	0
انجاز الواجب البيتي	تحضرت المشاريع البيتية		3	1	3
العروض التقديمية	لقاء العرض التقديري		0	0	0
	التهيئة للعرض التقديري		0	0	0
الامتحانات اليومية	التهيئة للامتحانات اليومية		3	2	6
امتحان نصف الفصل	الامتحان		0	0	0
	التهيئة للامتحان		1	6	6
امتحان نهاية الفصل	الامتحان		1	3	3
	التهيئة للامتحان		1	12	12
				العبء الكلي للمادة خلال الفصل :	75
				عدد الوحدات :	3
*لا توجد ساعات مجدولة لهذه النشاطات كون تم استيفائها ضمن الصفوف الدراسية .					

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسي ة

Module Information				
معلومات المادة الدراسية				
Module Title	Botany		Module Delivery	
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code				
ECTS Credits				
SWL (hr/sem)				
Module Level		Semester of Delivery		2
Administering Department		College		
Module Leader	Dr .ali kareem sarbout		e-mail	Aksarbout@uowasit.edu.iq
Module Leader's Acad. Title	Assist Professor		Module Leader's Qualification	Ph.D.
Module Tutor			e-mail	E-mail
Peer Reviewer Name	Name		e-mail	E-mail
Scientific Committee Approval Date	05/07/2023		Version Number	

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

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims

أهداف المادة الدراسية

Preparing specialists in plant sciences with the following capabilities

1. Botany is a science that studies the morphological structure, physiological function, growth and development rules of plants, the evolution and classification of plants and the utilisation of plant resources. The module aims to provide students with an opportunity to master the external form and internal structure of plants, growth and development rules by the study of this module. Students will develop a basic knowledge of plant classification and plant kinship.
2. Describe the field of Botany.
3. Interrelate other fields and sub-discipline of botany.
4. Trace the timeline of developments in botany.
5. Appreciate the achievements of some Filipino and foreign scientists in the development of botany and related technology.

Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- An ability to broadly identify, formulate, and solve specific technical or scientific problems by applying knowledge of mathematics, science, and technical topics in areas relevant to the major. 2- The ability to formulate or design a system, process, procedure or program to meet required needs. 3- The ability to develop and conduct experiments or test hypotheses, analyze and interpret data, and use scientific interpretation to draw conclusions 4- The ability to communicate effectively with a group of attendees. 5- The ability to understand ethical and professional responsibilities and the impact of technical and scientific solutions in global, economic, environmental and societal contexts 6- Ability to work effectively in a team that sets goals, plans tasks, meets deadlines and analyzes risk and uncertainty
Indicative Contents المحتويات الإرشادية	Outline the basic concepts, basic knowledge and basic principles of botany. Describe botany research methods with a strong ability to identify and use plant resources. Describe the principles and methods of plant morphological structure and phylogenetic development, and explain the relationship between various plants and agricultural production. Demonstrate the basic knowledge and skills of observation, anatomy, description,
	retrieval and identification of plants

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 محسوب لـ ١٥ اسبوع			
Structured SWL (h/sem) الحمل الدرايس المنتظم للطالب خلال الفصل	109	Structured SWL (h/w) الحمل الدرايس المنتظم للطالب أسبوعي	7
Unstructured SWL (h/sem) الحمل الدرايس غري المنتظم للطالب خلال الفصل	91	Unstructured SWL (h/w) الحمل الدرايس غري المنتظم للطالب أسبوعي	6
Total SWL (h/sem) الحمل الدرايس الكلي للطالب خلال الفصل	200		

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

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Chemistry of life
Week 2	<i>Elements of biochemistry.</i> The chemical components of the living organisms: water, inorganic substances, organic substances. Monomers, polymers, condensation, hydrolysis. Carbohydrates, lipids, proteins, nucleic acids. Difference between primary and secondary metabolites.

Week 3	<i>The cell.</i> The prokaryotic cell: structure and function of its components. Cyanobacteria, endosymbiotic theory and the genesis of eukaryotic cell. The eukaryotic cell: plasma membrane, cytoplasm, nucleus, ribosomes, mitochondria, Golgi complex, endoplasmic reticulum, cytoskeleton. Basic knowledge on cell division through mitosis and meiosis. The eukaryotic plant cell: cell wall (middle lamella, primary wall, secondary wall, cell wall modifications), vacuole (genesis and functions), the plastids (chloroplasts, leucoplasts, chromoplasts).
Week 4	<i>Degrees of plant structure and evolution.</i> Autotrophs and heterotrophs. The main functional and morphological characteristics of the plant organisms: algae, Briophytes, Pteridophytes and Spermatophytes (Angiosperms dicotyledons and monocotyledons, Gymnosperms).
Week 5	Classification of organism
Week 6	- <i>The plant tissues.</i> Meristematic tissues and differentiated tissues. Integumental tissues, parenchyma tissues, mechanical tissues, the secretory tissues, the vascular tissues and types of vascular bundles.
Week 7	<i>The anatomy of the Spermatophytes.</i> Leaf anatomy of Gymnosperms, Angiosperms dicotyledons and monocotyledons. The stem in primary and secondary structure. Anatomy of the stem of Gymnosperms, Angiosperms dicotyledons and monocotyledons. The root in primary and secondary structure. Anatomy of the root of Gymnosperms, Angiosperms dicotyledons and monocotyledons.
Week 8	<i>The anatomy of the Spermatophytes.</i> Leaf anatomy of Gymnosperms, Angiosperms dicotyledons and monocotyledons. The stem in primary and secondary structure. Anatomy of the stem of Gymnosperms, Angiosperms dicotyledons and monocotyledons. The root in primary and secondary structure. Anatomy of the root of Gymnosperms, Angiosperms dicotyledons and monocotyledons.
Week 9	- <i>Introductory plant physiology.</i> Photosynthesis (photosynthetic pigments, photosystems, the light phase, the dark phase or the Calvin cycle). Photosynthesis of plants C3, C4 and CAM. Photorespiration.
Week 10	- <i>Introductory plant physiology.</i> Photosynthesis (photosynthetic pigments, photosystems, the light phase, the dark phase or the Calvin cycle). Photosynthesis of plants C3, C4 and CAM. Photorespiration.
Week 11	photosynthesis
Week 12	Introduction on aerobic respiration and fermentations. The Carbon cycle.
Week 13	The main plant hormones and thier effects: auxins, gibberellins, cytokinins, abscisic acid, ethylene.
Week 14	The main plant hormones and thier effects: auxins, gibberellins, cytokinins, abscisic acid, ethylene.
Week 15	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Lab 1: Microscope and its parts
Week 2	Lab 2: plant kingdom
Week 3	Lab 3: Prokaryotic and eukaryotic cells Cell wall formation
Week 4	Lab 4: primary wall
Week 5	Lab 5: components of a living cell
Week 6	Lab 6: Cellular division
Week 7	Lab 7: Examinations
Week 8	Lab 8: Photosynthesis
Week9	Lab 9: Primary and secondary meristems. Parenchyma.
Week10	Lab 10: Epidermal tissues (stomata and trichomes
Week11	Lab 11: Mechanical tissues (collenchyma and schlerenchyma).
Week12	Lab 12: Transport tissues (xylem and phloem)
Week 13	Lab 13: Secretory cells and tissues
Week 14	Lab 14: Vascular bundles
Week15	Examinations

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Fundamentals of General biology	Yes
Recommended Texts	Botany. Mauseth J.D., 4th Ed., Idelson-Gnocchi	No
Websites	Atlas for recognition of plant structures: Struttura delle piante in immagini, by Speranza A., Calzoni G.L., Zanichelli, 1996 <u>Optional</u> to view videos of some laboratory experiences online:	
	Fondamenti di Botanica Generale - Teoria e pratica di laboratorio by Pancaldi, S. et al., 2nd Ed, McGraw-Hill	

Grading Scheme مخطط الدرجات				
Group	Grade	التقدي ر	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	جي د	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	الاحصاء الحياتي		Module Delivery
Module Type	Core		☒ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	Bio-S102		
ECTS Credits	2		
SWL (hr/sem)	45		
Module Level		Semester of Delivery	2
Administering Department	Biology	College	Science
Module Leader	Dr. Esam A. Ahmed Alnussairy	e-mail	eahmed@uowasit.edu.iq
Module Leader's Acad. Title	Assist. Prof.	Module Leader's Qualification	Ph.D.
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	1/6/2023	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	الدراسة الثانويّة	Semester	0
Co-requisites module	NONE	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	يهدف الى اكتساب الطلبة معرفة عامة عن الاحصاء وانواعه واهميته والتعرف على اهم المفاهيم الاساسية وبعض تطبيقاته الحياتية.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	- فهم المفاهيم الاساسية ومصطلحات إحصائية, مفهوم الإحصاء, الرموز الاحصائية, العينة العشوائية. - فهم التوزيعات, توزيع ذو الحدين, التوزيع الطبيعي. - فهم الاختبارات الاحصائية, اختبار Z, T, X^2, F. - تحليل التباين, التجربة, الوحدة التجريبية. - اختبار الفروق المعنوية بين المعاملات. - الانحدار, معامل الارتباط
Indicative Contents المحتويات الإرشادية	- الفهم - الابداع والتفكير العلمي - طريقة التحليل والتصميم والاستنتاج.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	ان يميل الطالب الى درس الاحصاء ويتعرف على اهميته في المجال الحيوي ان يتعلم الطالب كيفية جمع البيانات وتحليلها واستنتاجها
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Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوع

Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	30	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	15	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	45		

Module تقييم المادة الدراسية Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	2, 8	LO #1, 3, 9 and 11
	Assignments	3	10% (10)	3, 10, 12	LO # 1, 2, 3, 10, 11and 13
	Projects / Lab.	-			
	Report	1	10% (10)		
Summative assessment	Midterm Exam	2hr	30%(30)	4	LO # 1-3
	Final Exam	3hr	50%(50)		All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	مقدمة ومصطلحات أحصائية , مفهوم الأحصاء , الرموز الاحصائية , العينة العشوائية
Week 2	تعلم عرض البيانات , جدول التوزيع التكراري , الجدول التكراري , المنحني التكراري
Week 3	المقاييس ذات النزعة المركزية (مقياس التمرکز)
Week 4	تعلم كيفية حساب المعدل الحسابي , الوسيط , المنوال , المعدل التوافقي
Week 5	تعلم حساب مقاييس التباين المدى , التباين الانحراف القياسي ,
Week 6	تعلم حساب الخطأ القياسي
Week 7	تعلم إيجاد التوزيعات , توزيع ذو الحدين
Week 8	التوزيع الطبيعي
Week 9	تعلم كيفية إيجاد الاختبارات الاحصائية , اختبار F , X^2 , T , Z .
Week 10	الاختبارات الاحصائية , اختبار F , X^2 , T , Z .
Week 11	تعلم كيفية تحليل التباين , التجربة , الوحدة التجريبية , المعاملة , المكرر , درجة الموثوقية
Week 12	تعلم حساب المربعات , متوسط المربعات
Week 13	تعلم حساب اختبار الفروق المعنوية بين المعاملات

Week 14	تعلم كيفية ايجاد الانحدار , معامل الارتباط
Week 15	معامل الارتباط بيرسن ومعامل الارتباط سبيرمان
Week 16	مراجعة والتحضير قبل الامتحان

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. مبادئ علم الاحصاء التطبيقي لغير الاختصاص غازي عطية زراك-جامعة تكريت 2015	Available online as pdf
Recommended Texts	2. الاحصاء الوصفي والتطبيقي والحيوي محمد حسين محمد رشيد 2008	Available online as pdf
Websites	Any website especially www. google.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

نمذج وصف انماذج اندراسيخ

Module Information				
مكهمماخ انماذج اندراسيخ				
Module Title	انسلامت والامه انجي		Module Delivery	
Module Type	وظري		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code				
ECTS Credits				
SWL (hr/sem)				
Module Level	نظري	Semester of Delivery		2
Administering Department		College	كلية العلوم / جامعة واسط	
Module Leader	دكتورة زنب محمد عباس		e-mail	zmabbas@uowasit.edu.iq
Module Leader's Acad. Title	مدرس	Module Leader's Qualification	دكتوراه	
Module Tutor			e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail	
Scientific Committee Approval Date		Version Number		

Relation with other Modules			
انكلاخ مع انماد اندراسيخ الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف انماذج اندراسيخ ونتائج انتكهم وانمحتياخ الإرشاديخ	
Module Aims أهداف انماذج اندراسيخ	أهداف المقرر :هدف المقرر الى تعرف طلبة المرحلة الاولى بأهمية السلامة و الصحة المهنية وهو العلم الذي تهتم بالحفاظ على سلامة وصحة الإنسان، وذلك بتوفير بؤنات عمل آمنة خالصة من مسببات الحوادث أو الإصابات أو الأمراض المهنية أو بعبارة أخرى مجموعة من الإجراءات والقواعد والنظم في إطار تشريع تهدف إلى الحفاظ على الإنسان من خطر الإصابة والحفاظ على الممتلكات من خطر التلف والضياع
Module Learning Outcomes مخراخ انتكهم نهماذج اندراسيخ	1- المعرفة والفهم 2- اكتساب الخبرة في أهمية السلامة المهنية والقوانين والتشريعات الخاصة بها. 3- اكتساب الخبرة بجماعة العنصر البشري من الاصابات الناجمة عن مخاطر بيئة العمل وذلك بمنع تعرضهم للحوادث والاصابات والامراض المهنية. 4- المعرفة في كيفية الحفاظ على مقومات العنصر المادي المتمثل في المنشآت وماتحتوية من اجهزة ومعدات من التلف والصناع نتجة للحوادث . 5- فهم كيفية ادارة وتوفير وتنفيذ كافة اشتراطات السلامة والصحة المهنية التي تكفل توفير بيئة امنة تحقق الوقاية من المخاطر للعنصر البشري والمادي.
Indicative Contents انمحتياخ الإرشاديخ	التقارير العلمية ، أنشطة عملة اثناء المحاضرة ، مناقشة مسألة علمية وأيجاد الحلول بمشاركة الطلبة.

Learning and Teaching Strategies	
استراتيجيات اندراسيخ وانتكهم	
Strategies	- المشاركة في قاعة الدرس - تقديم الأنشطة والواجبات - اختبارات فصلية ونهاية

Student Workload (SWL)			
انحم اندراسي نهطانة محسب ن ٥١ اسنجا			
Structured SWL (h/sem) انحم اندراسي انمنتظم نهطانة خلال انفصم	109	Structured SWL (h/w) انحم اندراسي انمنتظم نهطانة أسنجا	7

Unstructured SWL (h/sem) انحم اندراسي غير امنتظم نهطانة خلال انفصم	91	Unstructured SWL (h/w) انحم اندراسي غير امنتظم نهطانة أسنڭيا	6
Total SWL (h/sem) انحم اندراسي انكهي نهطانة خلال انفصم	200		

Module Evaluation انماذج اندراسي					
		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
	seminar	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO # 1-7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) انمهاج الاسنڭي اننظري	
	مخرجات التعلم المطلوبة
الاسبوع الاول	مقدم في انسلا مح انحيبيح
الاسنڭ اثنائي	انسلا مت الاحيائين
الاسنڭ اثثانث	الاخطار انبأ هجـت
الاسنڭ اثراث	طرق انسـ طرة عهي انمخاطر انبأ هجـت
الاسنڭ انخامس	تعارف ومفاهم للسلامة الح وة
الاسنڭ انسلاس	انفآات انخطرة
الاسنڭ انساث	اجراءات وطرق انتداول وانتعام مع انمخفات انمختبرآت
الاسنڭ اثثامن	امتحان انشهر الاول
الاسنڭ اثناسغ	الامه انب بنجـ
الاسنڭ انكاشر	الاختـار انماسب نهعامهـه فـ انمختبرآت
الاسنڭ انحادي كشر	علامات انسلا مت فـ انمختبرآت

الاسئع انئاني كئشر	مكافحت انمخاطر انب بنسجـت
الاسئع انئانئ كئشر	الامه انمعهماء
الاسئع انراغ كئشر	مستقـاا الامه انئـسي
الاسئع انخامس كئشر	امئحان انشهر انئوانئـاؤ

Learning and Teaching Resources مصادر انئكهم وانئدرس	
	المصادر
المصادر الدراسة	منهاج مادة السلامة والامن الحـوي دلل اءارة المخاطر الحـوـة الصادرة عن الصءة الدولـة الدولة (انفتت) 2222 تم اصءارة بالتعاون مع وزارة الصءة العراءـة ووزارة التعلـم العالـ والبءء العلم العراءة
المصادر الموصى بها	مناقغ انمكئئـاخ في تكبض انءامكـاخ انكـانمـيـح
المواقع الالكئروئة	المراجع الالكئرونـة ومواقع الانئرنئ المكئبة الافئراضة

Grading Scheme مخطط انءرخاخ				
Group	Grade	انئقءبر	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امئـياز	90 - 100	Outstanding Performance
	B - Very Good	ءــذ ءءا	80 - 89	Above average with some errors
	C - Good	ءــذ	70 - 79	Sound work with notable errors
	D - Satisfactory	مئـسـط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقئـل	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسة (قـــذ انمكـانءءـ)	(45-49)	More work required but credit awarded
	F – Fail	راسة	(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	Bio-14		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	B		
ECTS Credits	6:00		
SWL (hr/sem)	150		
Module Level	1	Semester of Delivery	
Administering Department	Biology	College	Science
Module Leader	Oday Jawad Kadhim	e-mail	Oday.kadhim@uowasit.edu.iq
Module Leader's Acad. Title	Lecture	Module Leader's Qualification	Ph.D
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	7-7-2023	Version Number	1

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

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

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

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering the types of simple experiments involving some interesting sampling activities for the students.
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Student Workload (SWL)			
الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوع			
Structured SWL (h/sem) الحمل الدرايس المنتظم للطلاب خلال الفصل	64	Structured SWL (h/w) الحمل الدرايس المنتظم للطلاب أسبوعي	4
Unstructured SWL (h/sem) الحمل الدرايس غري المنتظم للطلاب خلال الفصل	86	Unstructured SWL (h/w) الحمل الدرايس غري المنتظم للطلاب أسبوعي	3
Total SWL (h/sem) الحمل الدرايس الكلي للطلاب خلال الفصل	150		

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

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction physical principles
Week 2	Component of vector
Week 3	Waves

Week 4	Refraction of Light
Week 5	Interference
Week 6	Atomic and Their Structure
Week 7	Magnetic Flux
Week 8	Introduction to Biophysics
Week 9	Structure of the eye
Week 10	Techniques of Biophysics
Week 11	Radioactively
Week 12	Magnetic Resonance Imaging (MRI)
Week 13	Computerized tomography (CT) scan
Week 14	Electrophoresis
Week 15	Osmosis and osmotic pressure
Week 16	Final exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Simple pendulum
Week 2	Lab 2: Calculate the focal length of a convex lens
Week 3	Lab 3: Calculate the focal length of a concave lens
Week 4	Lab 4: Calculating the focal length of mirrors
Week 5	Lab 5: Calculating the viscosity coefficient of liquids
Week 6	Lab 6: Helical spring
Week 7	Lab 7: Ohm's law
Week 8	Lab 8: Kirchhoff's law
Week 9	Lab 9: Calculate the internal resistance of the voltmeter
Week 10	Lab 10: Compound pendulum
Week 11	Lab 11: Calculate the coefficient of friction
Week 12	Lab 12: Calculate the density of the liquid

Week 13	Lab 13: Calculate the surface tension coefficient
Week 14	Lab 14: RC Circuits
Week 15	Lab 15: RLC Circuits
Week 16	Final Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Biophysics: An Introduction, by Cotterill, John Wiley and Sons (2000). Supplementary references Biophysics, by R. Glasser, Springer Verlag - (2001). -Introduction to Molecular Biophysics, by J. Tuszynski, CRC Press (2003). Biophysics: An Introduction, by C. Sybesma, Kluwer Academic (1989)	
Recommended Texts	-Biology in Physics: Is Life Matter, by K. Bogdanov, Academic Press (2000). -.	
Websites		

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	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	Academic English 1		Module Delivery
Module Type	Basic		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	WU02		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	UGI	Semester of Delivery	Two
Administering Department	Mechanical	College	Engineering
Module Leader		e-mail	
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	PhD
Module Tutor	Ali Faraj Hammadi	e-mail	alifaraj@uowasit.edu.iq
Peer Reviewer Name	- Hala A.Naman AL Tae - Ismail Sharhan Hburi - Ahmed Adel Naji	e-mail	alaataeh@uowasit.edu.iq isharhan@uowasit.edu.iq ahmedadil@uowasit.edu.iq
Scientific Committee Approval Date	9-11-2023	Version Number	1.0

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

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

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	This module provides all the language and skills students need to improve their English, with grammar, vocabulary, and skills work in every unit. The aim is represented by the module's trusted methodology combines solid grammar and practice, vocabulary development, and integrated skills.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Demonstrate understanding of academic texts and summarize them orally and in writing. 2- Demonstrate an ability to write with a fair degree of accuracy in a variety of genres. 3- cope effectively with everyday situations everywhere in English 4- Demonstrate learner independence and be aware of their own linguistic strengths and weaknesses. 5- Participate in discussions/seminars on a variety of subject related, academic and general topics.
Indicative Contents المحتويات الإرشادية	12.5 hrs : Reading Skills 12.5 hrs : Writing Skills 12.5 hrs : Listening Skills 12.5 hrs : Speaking Skills

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	Reading a range of pre-intermediate level articles on selected general topics. Writing a topic (informal emails, e.g.,) to classmates to discuss group work. Writing and submitting an assignment to a lecturer, Writing slides for presentations. Listening to authentic material at the beginner level to develop listening skills and comprehension. For Speaking, students may self-select and discuss topics with classmates on a group project. Typical topics that could be used at this level in the teaching of vocabulary include The World Around Us (Countries, Nationality, Language, Physical world, Weather, etc.). It may be appropriate for students to select grammar points for discussion in class, or for the lecturer to select them as they arise in students' writing. Grammar points that typically arise at this level include present simple and past simple; present continuous; question forms and auxiliary verbs; comparison; word order; prepositions; basic phrasal verbs.
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Student Workload (SWL) الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (hr/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	17	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	1.3
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	50		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20%(20)	6, 10	LO 1, LO2
	Home work (ONLINE+ ONSITE)	2	10%(10)	5,10	LO2
	Report	0	-	-	-
	Seminar	1	10%(10)	12	All
	Midterm Exam	2	10%	6,12	All

Summative assessment	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Unit.1 Hello!
Week 2	Unit.2 Your world
Week 3	Unit.3 All about you
Week 4	Unit.4 Family and friends
Week 5	Unit.5 The way I live
Week 6	Unit.6 Every day
Week 7	Unit.7 My favorites
Week 8	Unit.8 Where I live
Week 9	Unit.9 Times past
Week 10	Unit.10 We had a great time!
Week 11	Unit.11 I can do that!
Week 12	Unit.12 Please and thank you
Week 13	Unit.13 Here and now
Week 14	Unit.14 It's time to go!
Week 15	Presentation (seminars)
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1:

Week 2	Lab 2:
Week 3	Lab 3:
Week 4	Lab 4:
Week 5	Lab 5:
Week 6	Lab 6:
Week 7	Lab 7:

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	New headway beginner student book	Yes
Recommended Texts	Murphy R English Grammar in Use	No
Websites	https://apoyanblog.files.wordpress.com/2017/08/new_headway_beginner_-_student	

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.

تفاصيل الساعات المجدولة في الإِسبوع الواحد

CL (hr/w)	Lect (hr/w)	Lab (hr/w)	Pr (hr/w)	Tut (hr/w)	Semn (hr/w)
2	0	0	0	0	0

CL تعني ساعة تدريس في الصف

Lec تعني ساعة تدريس اونلاين

Lab تعني ساعة مختبر

Pr تعني ساعة تطبيقية (عادة تخص المجموعات الطبية)

Tut تعني ساعة مساعدة توتوريال

Sem تعني ساعة سيمينار و ممكن ان يستضاف احد فيها لالقاء موضوع او يقدم فيها الطلبة

نموذج للنشاطات غير المجدولة

الانشطة المذكورة هي امثلة يجب

ان لا تتجاوز ساعاتك 17 ساعة

بالفصل

نوع النشاط	عدد الاسبوع	عدد الساعات لكل اسبوع
تحضير الدروس اليومية	12	1
التهيئة للعرض التقديمي (إن كان هناك عرض تقديمي)	0	0
التهيئة للامتحانات اليومية	2	1
التهيئة للامتحان النهائي	1	3
التهيئة للمشروع (إن كان هناك مشروع مطلوب من قبل استاذ المادة)	-	-
المجموع الكلي للساعات غير المجدولة		17

Code	Course/Module Title	ECTS	Semester
	Academic English 1	2	Two
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/sem)
2	2	33	17
Description			
The purpose of this module is to develop students' linguistic ability by focusing on the key skills of reading, writing, speaking and listening, to encourage students to become independent learners and to introduce them to strategies and skills to enable them to cope with the demands, both academic and cultural, of undergraduate study in an English-speaking environment.			

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Chemistry Analytical		Module Delivery
Module Type	C		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	Bio-102		
ECTS Credits	6.00		
SWL (hr/sem)	150		
Module Level	1	Semester of Delivery	1
Administering Department		College	
Module Leader	Sadik Hameed	e-mail	sftaysa@uowasit.edu.iq
Module Leader's Acad. Title	Assist. Professor	Module Leader's Qualification	Master
Module Tutor	NA	e-mail	
Peer Reviewer Name	NA	e-mail	
Scientific Committee Approval Date		Version Number	

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 meaning of analytical chemistry and chemical analysis and the difference between them. 2- To learn about the meaning of qualitative and quantitative analysis and the difference between them. 3- To learn about Instrumental Analysis 4- To learn about the quantitative chemical Analysis. 5- To learn about the volumetric and Gravimetric Analysis and the difference between them
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. 1. Identify and classify Analytical Chemistry. 2. 2. Make a table classifying the types of Chemical Analysis. 3. 3. Summarize what is meant by the Titration curve, how and what it is for. 4. 4. Discuss the usefulness of making Titration curve in finding the appropriate indicator. 5. 5. Description of tie-down methods. 6. 6. How to draw a Titration curve. 7. 7. Choosing the appropriate proof for sieving for a specific interaction 8. 8. The relationship of the equilibrium constant to the work of chemical evidence 9. 9. Discuss the types of neutralization reactions. 10. 10. Explanation of sedimentation reclamation methods.

Indicative Contents المحتويات الإرشادية	Indicative content includes the following. <u>Part A - Concept of Analytical Chemistry-</u> <u>Chemical analysis - definitions of tempering curves, acid-base theories, the concept of instrumental analysis, its advantages and disadvantages, chemical evidence work [15 hours]</u> <u>Tie-downs I - Types of tie-downs. Strong acid with strong base, Strong acid with weak base. [15 hours]</u> <u>Weak acid denaturation with a strong base II - Weak acid denaturation with a weak base, chemical evidence definition. [10 hours]</u> <u>The relationship of the equilibrium constant with the work of chemical evidence, backlash, Mohre's method, Volhard's method</u> <u>and their solutions. Time response (natural and step responses). Introduction to second order circuits. [15 hrs]</u>
	Revision problem classes [6 hrs] <u>The basics</u> <u>Analytical chemistry, chemical analysis, qualitative analysis, quantitative analysis, organic qualitative analysis, inorganic qualitative analysis, quantitative chemical analysis, Instrumental quantitative analysis, volumetric analysis and gravimetric analysis. [15 hours]</u> <u>Equilibrium constant - chemical evidence work, theories of acids and bases, Bronstedt and Lowry concept, Arrhenius concept, Lewis concept. [7 hours]</u> <u>Precipitation validations - Fagan's method, oxidation-reduction validations, noncomplex validations, chemical equilibrium and the law of mass action, gravimetric analysis, precipitation methods. [15 hours]</u>

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	Type something like: The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.
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Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوع			
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	10
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	All
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO # 1-7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to Analytical Chemistry
Week 2	Chemical Analysis Steps
Week 3	Classification of analytical methods
Week 4	Qualitative analysis
Week 5	Quantitative analysis
Week 6	Instrumental Analysis
Week 7	Chemical analysis
Week 8	Gravimetric Analysis
Week 9	Weight Factor
Week 10	Volumetric Analysis
Week 11	Standard Solutions
Week 12	Neutral Reactions and Indications
Week 13	Curve Titration
Week 14	Precipitation Reactions
Week 15	Redox reactions
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Definition of laboratory tools
Week 2	Lab 2: Safety and security in the chemical laboratory
Week 3	Lab 3: Prepare Primary Standard Alkaline Solution(Na_2CO_3 0.1)N
Week 4	Lab 4: Prepare Secondary Standard Acid Solution(HCl 0.1)N
Week 5	Lab 5: Prepare Secondary Standard Alkaline Solution(NaOH 0.1)N

Week 6	Lab 6: Analysis of a mixture of Carbonate and Sodium Hydroxide
Week 7	Lab 7: Analysis of a mixture of carbonate and sodium bicarbonate
Week 8	Lab 8 : Determination of the percentage of acetic acid in commercial Vinegar
Week 9	Lab 9 : Determination of chloride by Mohr's method and determination of purity of table Salt
Week 10	Lab 10 : Determination of chloride by Volhard method and determination of purity of table salt
Week 11	Lab 11 : Gravimetric determination of chloride using silver Nitrate.
Week 12	Lab 12 : Gravimetric designation of Sulfates.
Week 13	Lab 13 : The gravimetric designation of Nickel
Week 14	Lab 14 : The gravimetric designation of Iron
Week 15	Lab 15 : Spectral identification of ferric by its reaction with Thiocyanate
Week 16	Lab 16 : Determination of sodium, potassium and calcium using the atomic emission Technique

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Foundations of Analytical Chemistry Douglas	Yes
Recommended Texts	Analytical Chemistry, David Harvey, DePauw University	No
Websites	http://dpuadweb.depauw.edu/harvey_web/eTextProject/version_2.1.html	

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors

	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	اللغة العربية		Module Delivery
Module Type	Basic		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	WU01		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	UGI	Semester of Delivery	one
Administering Department	WAR	College	College of Engineering
Module Leader	زينب دايع مطر	e-mail	Zainabd303@uowasit.edu.iq
Module Leader's Acad. Title	مدرس	Module Leader's Qualification	PhD.
Module Tutor		e-mail	
Peer Reviewer Name	مشتاق كاظم جمعة	e-mail	mjmaah@uowasit.edu.iq
Scientific Committee Approval Date	2023-11-9	Version Number	1.0

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

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	1- المهارة اللغوية للطلبة و تمكينهم من التعبير عن أفكارهم و مشاريعهم باللغة العربية و بطلاقة. Linguistic proficiency of students by enabling them to express their ideas and projects in fluent Arabic. 2- تجنب الطلبة التحدث باللغة الدارجة او الكلمات غير العربية Students avoid speaking in colloquial and non-Arabic language in the simplest ways. 3- كتابة التقارير و المقالات باللغة العربية و بشكل انسيابي و دقيق و منظم Writing reports and articles in fluent, concise and well-organized Arabic. 4- استخدام قواعد اللغة العربية بشكل صحيح لان اللغة هي الأداة الأساسية للتواصل بين افراد المجتمع. Use Arabic grammar correctly; Because language is the primary tool of communication between members of society. 5- قراءة و فهم النصوص الاكاديمية باللغة العربية. Reading and understanding academic texts in Arabic. 6- تطوير قابلية الطلبة على أداء المهام و تقديمها في الوقت المطلوب. Developing the student's ability to perform assignments and submit them on time.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	عند الانتهاء من هذا الفصل، سيكون الطلاب قادرين على: 1- إجادة القراءة والكتابة والتحدث باللغة العربية. 2- استخدام اللغة العربية للتواصل بفعالية في الأوساط الأكاديمية والمهنية. 3- التعرف على التعبيرات اللغوية والأدبية. 4- إظهار فهم لأهمية مهارات اللغة العربية للنجاح في الهندسة. 5- تطبيق مهارات التفكير النقدي وحل المشكلات في مواقف العالم الحقيقي. 6- يساهم في زيادة معرفة الطلاب بكيفية إعداد التقارير العلمية. Upon completion of this course, students will be able to: 1- Demonstrate proficiency in reading, writing, and speaking to Arabic. 2- Use Arabic to communicate effectively in academic and professional settings 3- Gain an understanding of linguistic and literary expressions 4- Demonstrate an understanding of the importance of Arabic language skills for success in engineering 5- Apply critical thinking and problem-solving skills to real-world situations 6- It contributes to increasing students' knowledge of how to prepare scientific reports.

Indicative Contents المحتويات الإرشادية	القواعد (12 ساعة) الاملاء (8 ساعة) الادب (6 ساعة) مهارات عامة (4 ساعة)
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Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	• تقديم المحاضرات النظرية وتحديد المعلومات الأكثر أهمية من خلال استخلاص الكلمات المفتاحية والأفكار. • يتم منح الطلاب فرصًا لإنتاج اللغة، وتلقي تعليقات مباشرة لتحسين مهاراتهم اللغوية. • Present theoretical lectures and determine the information that is most significant by extracting keywords and ideas. • Students are given opportunities to produce language, and receive direct feedback to improve their language skills.

Student Workload (SWL) الحمل الدراسي للطلاب محسوب لـ 1٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	17	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	1.13
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	50		

Module Evaluation تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	4	20%	3,5 7, and 11	All
	Assignments	1	1		
	Projects / Lab.	1	1		
	Report	2	20%	4, and 10	All
Summative assessment	Midterm Exam	2hr	10%	9	1,2,3,6
	Final Exam	3hr	50%		All
Total assessment			100%		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Grammar: Speech and what it consists of: the noun, the verb, and the letter. First: the verb and its parts, its signs, and the past tense. القواعد:- الكلام وما يتكون منه: الاسم، والفعل، والحرف. أولاً: الفعل وأجزاؤه، وعلاماته، والفعل الماضي.
Week 2	Grammar: subject and the news, types of subject and its rulings, definition of the news and its types . القواعد: المبتدأ والخبر، أنواع المبتدأ وأحكامه، تعريف . its types الخبر وأنواعه
Week 3	Grammar: Inna and its sisters, the five verbs. القواعد: إن وأخواتها، الأفعال الخمسة.
Week 4	Grammar: Plural of the sound masculine and the attached to it. And Introducing the sources of the Arabic language. قواعد : جمع المذكر السالم والملحق به. التعريف بمصادر اللغة العربية.

Week 5	Grammar: the number قواعد: العدد.
Week 6	Grammar: the verbal sentence, the subject and its deputy القواعد: الجملة الفعلية والفاعل ونائبه
Week 7	Spelling: Rules for writing Hamza> الاملاء: قواعد كتابة الهمزة
Week 8	Spelling: Common linguistic errors. And punctuation marks. الاملاء: الأخطاء اللغوية الشائعة, وعلامات الترقيم
Week 9	Mid exam
Week 10	Spelling: The difference between ḍād, dha, sīn and sūf ..املاء: الفرق بين الضاد والطاء والسين وسوف
Week 11	Spelling: The rules for writing an alif at the end of a word. الاملاء: كتابة قواعد كتابة الالف في نهاية الكلمة
Week 12	Literature: The poet Badr Shaker Al-Sayyab, his life and collections, an analysis of the poem (Jikur and the City), and a reading and analysis of a prose text by Ibn Uyaynah the Sufi. الأدب: الشاعر بدر شاكر السياب, حياته ودواوينه, وتحليل قصيدة (جيكور والمدينة), وقراءة وتحليل نص نثري لابن عيينه الصوفي
Week 13	Literature: The poet Nazik Al-Malaika, her life and poetry, an analysis of the poem (Strangers) and a reading of the prose text of the sermon of the pious by Imam Ali - peace - be upon him الأدب: الشاعرة نازك الملائكة, حياتها ودواوينها, وتحليل قصيدة (غرباء) وقراءة نص نثري خطبة المتقين للإمام علي – عليه السلام-
Week 14	Qur'anic texts, lessons in Islamic education, interpretation and rhetorical miracles. النصوص القرآنية دروس في التربية الإسلامية والتفسير والإعجاز البلاغي

Week 15	Public lecture and discussions محاضرة و مناقشات عامة
Week 16	Preparation for the final exam التهيؤ لامتحان النهائي

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

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Explanation of Ibn Aqeel on the Alfiyyah of Ibn Malik, edited by Muhyiddin Abdul Hamid شرح ابن عقيل على ألفية ابن مالك، تحقيق محيي الدين عبد الحميد.	
Recommended Texts	Arabic language for non-specialization departments اللغة العربية للاقسام غير المختصة	
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.

جدول الساعات المجدولة وغير المجدولة لمادة

Arabic Language

نوع النشاط	الساعات المجدولة SSWL	الساعات غير المجدولة USSWL	عدد الأسابيع	ساعة لكل أسبوع	العبء الكلي للنشاط
محاضرات	محاضرات في القاعات الدراسية		15	2	20
المختبر	دوام المختبر		0	0	0
مناقشات*	المناقشات		0	0	0
مشروع عملي*	مشروع عملي		0	0	0
	التهيئة للمشروع		0	0	0
تحضير الدروس اليومي	تحضير الدروس اليومي		10	1	10
العروض التقديمية*	لقاء العرض التقديمي		0	0	0
	التهيئة للعرض التقديمي		1	1	1
الامتحانات اليومية	الامتحان		0	0	0

١	1	٤	التهيئة للامتحانات اليومية		
٥	٥	٥		الامتحان	امتحان نصف الفصل
2	2	1	التهيئة لامتحان		
3	٤	٤		الامتحان	امتحان نهاية الفصل
2	٤	1	التهيئة لامتحان		
50	العبء الكلي للمادة خلال الفصل:				
2	عدد الوحدات:				
*لا توجد ساعات مجدولة لهذه النشاطات كون تم استيفائها ضمن الصفوف الدراسية.					

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية				
Module Title	General Zoology		Module Delivery	
Module Type	C		Theory & Lab	
Module Code	Bio- 412 (level 1 semester1)			
ECTS Credits	5			
SWL (hr/sem)	125			
Module Level		UGIV	Semester of Delivery	Seven
Administering Department		Biology	College	College of science
Module Leader	Jafar Abbas Issa Al-Maamori		e-mail	jalmaamori@uowasit.edu.iq
Module Leader's Acad. Title		Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Not available		e-mail	Not available
Peer Reviewer Name	Not available		e-mail	Not available
Scientific Committee Approval Date			Version Number	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1. To provide a broad multi-knowledge features in Zoology. 2. This module will offer a strong foundation in biology in an accessible format by student engagement and encouraging science students toward high academic levels which would ultimately lead to more meaningful and memorable learning experiences for biological students.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	When you complete this unit successfully, you will be able to: 1. Identify the properties of life, organization levels among living organisms. 2. Define matter and elements and explain the ways in which naturally occurring elements combine to create molecules, cells, tissues, organ systems, and organisms. 3. Understand the synthesis of macromolecules. 4. Describe the role of cells in organisms besides, summarize cell theory. 5. Compare and contrast prokaryotic cells and eukaryotic cells. As well as, recognize the components, structure and function of cell. 6. Knowledge the cellular exchange pathways of plasma membrane. 7. Explain the respiration, gas exchange and circulation in animals 8. Demonstrate the excretory systems in animals. 9. Understand the nerve system, muscle types and muscle construction 10. Describe of animal's hormones: feedback mechanisms; chemistry of hormones; actions of hormones besides the endocrine glands.
Indicative Contents المحتويات الإرشادية	1. The Chemistry of Life. Our opening unit introduces students to the sciences, including the scientific method and the fundamental concepts of chemistry and physics that provide a framework within which learners comprehend biological processes. 2. The Cell. Students will gain solid understanding of the structures, functions, and processes of the most basic unit of life: the cell. 3. The diversity of life is explored with detailed study of various organisms and discussion of emerging phylogenetic relationships among zoology. 4. An introduction to the form and function of the animal body is followed by chapters on specific body systems and processes. This unit touches on the biology of all organisms while maintaining an engaging focus on human anatomy and physiology that helps students connect to the topics.
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	

Strategies	1. Biology is grounded on a solid scientific base and designed to help students understand the concepts at hand. Throughout the text, one can explore features of zoology that engage the students in scientific inquiry by taking selected topics a step further. 2. Provide exam questions that model good assessment tools and help determine the level of student understanding of the lab work and the concepts upon which it is based. 3. Equal importance is given to practical learning and presentation skills of students		
Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل ل	79	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل ل	71	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل ل	150		

Module تقييم المادة الدراسيةEvaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	26% (20)	7, 12	LO #1, 2, 3,4,5,6 and 6,7,8,9,10,11
	Assignments	1	%10	15	12,13,14
	Lab.	2	12% (12)	Continuous	All
	Report	1	%10	Continuous	All
Summative assessment	Midterm Exam	2 hr	10% (10)	17	All
	Final Exam	2hr	50% (50)	19	All
Total assessment			100% (100 Marks)		
Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري					
	Material Covered				
Week 1	Biological chemistry: Biology; characters of living organisms; elements of life; life molecules				
Week 2	1- Structure and function of cell: The cell; cell theory; prokaryotic and eukaryotic cells; the cell wall; crystals; vacuoles; cell, membrane; nucleus; ribosomes; mitochondria.				
Week 3	2- Structure and function of cell: Endoplasmic reticulum; Golgi complex; lysosomes; microtubules and microfilaments; cilia and flagella; centrioles; classification of organisms.				
Week 4	Exchange through the cell membrane: Diffusion; facilitated diffusion; osmosis; active transport; pinocytosis; phagocytosis; exocytosis; cell communication.				
Week 5	Nutrition and digestion: Animal nutrition; macro and micronutrients; balance diet; minerals; vitamins; digestion; digestive glands and enzyme; absorption; controls of digestion, liver.				
Week 6	Respiration and gas exchange: Respiration organs; body surface; gills; tracheae and lungs; respiratory (blood) pigments; oxygen and carbon dioxide transport; respiratory quotient. Metabolism.				

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Week 7	Quiz
Week 8	Circulation in animals: Circulatory systems; the heart as a pump; ECG; the heart cycle; blood pressure; blood groups; the lymphatic system.
Week 9	Animal excretion: Body fluids; Nitrogen wastes; osmoregulation. Types of excretory organs; the vertebrate kidney; filtration, reabsorption and excretion in the nephron; hormones and kidney function.
Week 10	Neuron: Structure; action potentials; synapsis, neurotransmission types;
Week 11	Muscles: types of muscle tissue; protein of construction; muscle construction: the muscle switch and tetany contraction; fatigue.
Week 12	Quiz
Week 13	1- Animals hormones: What is a hormone; feedback mechanisms; chemistry of hormones; actions of hormones; the hypothalamus;
Week 14	2- Animals hormones: the pituitary gland; thyroid and parathyroid; the adrenals; pineal gland; thymus; pancreatic hormones.
Week 15	Quiz
Week 16	Preparatory week before the final Exam
Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Microscope, Structure and its Parts
Week 2	Animal Cell
Week 3	Animal Tissues
Week 4	Connective Tissue
Week 5	Special connective tissue
Week 6	Muscle Tissue
Week 7	Quiz
Week 8	Zoology Phylum's
Week 9	Platyhelminthes
Week 10	Nematoda
Week 11	Arthropoda
Week 12	Mollusca
Week 13	Echinodermata
Week 14	Chordata
Week 15	Quiz
Learning and Teaching Resources مصادر التعلم والتدريس	

	Text	Available in the Library?
Required Texts	1- Biology: A Functional Approach by Roberts; M. BV. Thomas Nelson and Sons Ltd 4 th edition (1995). 2- Concepts of Biology: by Samantha Fowler, James Wise, Rice University (2017). 3- Biology (Zoology): by Tmt. V. M. Gayathri Rani and Thiru. T. Sekar	Non
	4- Practical Zoology: By Uttarakhand Open University (2017)	
Recommended Texts	The following textbooks are recommended but not compulsory text materials. You may use any other textbook provided it will help you achieve the objects of the course and do your assignment. 1. Biology 2e: by Mary Ann Clark; Jung choi and Matthew Douglas. University of Rice (2020). 2. General Zoology: Lab Supplement (Stephen W. Ziser) To Accompany the Zoology Lab Manual: Smith, D. G. & M. P. Schenk (2020).	Non
Websites	https://openstax.org/books/concepts-biology/pages/1-introduction http://uou.ac.in	

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
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	F – Fail	راسب	(0-44)	Considerable amount of work required

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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Human rights and Democracy		Module Delivery
Module Type	Basic		☒ Theory ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	WUO4		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	UGI	Semester of Delivery	Two
Administering Department	WAR	College	College of Engineering
Module Leader	Entidar Rasheed Izewaer		e-mail: inrasheed@uowasit.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D.
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	none
Scientific Committee Approval Date	20/06/2023	Version Number	1.0

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

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

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	A- Cognitive goals 1- Acquiring the skill of distinguishing between states' relations with their citizens. 2- Dealing with the concept of human rights. 3- Acquisition of knowledge in dealing with problems affecting those rights. 4- Gaining knowledge of the origins and roots of human rights. 5- Reaching knowledge of the practical application of human rights. 6- Developing the student's ability to perform assignments and deliver them on time. 7- Logical thinking to find solutions to the problems facing students in society, especially with the increase in societal problems such as domestic violence, electronic extortion, and the spread of drug abuse. The Iraqi and the extent of his demand for the maintenance and preservation of those rights. 8- View the data on the Iraqi constitution and the extent to which it is required to maintain and preserve those rights.
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Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Graduating a generation that is aware, educated, and aware of its duties as an individual in society and the state, and its rights in exchange for those duties. 2- Developing in society a culture of respect for the other, regardless of his beliefs, personal inclinations, attitudes, and societal behaviors. 3- Referring first and foremost to the law regarding any offensive phenomena that may prevail in the work environment. 4- Developing the student's ability to dialogue and discussion. 5- It has a major role in analyzing emerging problems in society. 6- It contributes to increasing students' knowledge of how to prepare scientific reports.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. 1- Developing the student's ability to deal with societal problems. 2- Developing the student's ability to deal with the analysis of laws and the mechanisms of their application. 3- Developing the student's ability to deal with the multiple means available in the work environment. 4- Developing the student's ability to dialogue and discussion. 5- Developing the student's ability to employ his study tools as practical tools in the work environment. 6- Developing the ability to harmonize between the different conditions that prevail in the work atmosphere in proportion to the ability of the labor market to absorb the different conditions.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	1- Managing the lecture in such a way that the student feels the importance of time. 2- Assigning the student some group activities and duties. 3- Allocate a percentage of the grade for group activities. 4- Developing the topic of group campaigns that shed light on negative societal phenomena and the role of students as active individuals in society. 5- Active participation in the classroom is evidence of the student's commitment and responsibility. 6 Commitment to the deadline for submitting the assignments and reports required of the student to submit them. 7- Quarterly and final exams reflect commitment and knowledge and skill achievement.
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.3
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	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)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	The nature of human rights.
Week 2	Human rights in Islam.
Week 3	Human rights in modern political thought.
Week 4	Human rights in contemporary political thought.
Week 5	Human rights in international conventions

Week 6	Human rights in the Iraqi constitution in force
Week 7	Midterm exam +Human rights violations in multiple experiences with the Universal Declaration of Human Rights
Week 8	Legal rights in the International Covenant on Civil and Political Rights
Week 9	Types of rights mentioned in the Iraqi constitution in force with the provisions of the Iraqi constitution related to rights and freedoms
Week 10	The historical development of the concept of democracy in the civilization of the Mesopotamia Greek civilization and Roman civilization.
Week 11	The difference between freedom and democracy
Week 12	Islamic views in the democratic system of government
Week 13	Forms of democracy and conditions for the success of the democratic system
Week 14	Elements and pillars of the democratic system
Week 15	Preparatory week before the final Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Human rights book, Dr. Taha Hamid Hassan	Yes

نوع النشاط	الساعات المجدولة SSWL	الساعات غري المجدولة USSWL	عدد الأسابيع	ساعة لكل أسبوع	العبء الكلي للمنشط
محاضرات	محاضرات في القاعات الدراسية		15	2	30
المختبر	دوام المختبر				
مناقشات	المناقشات		0	0	0
واجب بي بي		التهيئة للواجب البي بي	2	1	2
	انجاز التقرير	تحضير التقرير	3	1	3
العروض التقديمية	القاء العرض التقديري		0	0	0
		التهيئة للعرض التقديري	0	0	0
الامتحانات اليومية		التهيئة للامتحانات اليومية	2	1	2
امتحان نصف الفصل	الامتحان		0	0	0
		التهيئة للامتحان	1	4	4
امتحان نهاية الفصل	الامتحان		1	3	3
		التهيئة للامتحان	1	4	4
				العبء الكلي للمادة خلال الفصل :	50
				عدد الوحدات :	2

*لا توجد ساعات مجدولة لهذه النشاطات كون تم استيفائها ضمن الصفوف الدراسية .

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	علم الحشرات I		Module Delivery
Module Type	C		☒ Theory Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	Bio-211		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level	three	Semester of Delivery	three
Administering Department	Bio	College	SCi
Module Leader	Asmaa Fadhel Abdul Redha	e-mail	aalqorany@uowasit.edu.iq
Module Leader's Acad. Title	Master's degree in Zoology/Insect Taxonomy	Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	11/9/2024	Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	1

Co-requisites module		Semester	1
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Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	1- توضيح أهمية الحشرات في حياة الإنسان والحيوان والنبات . 2- توصيف أساسي لتركيب أجزاء جسم الحشرة ووظائفها. 3- عدم القتل لأي حشرة تصادفنا خاصة في الحقل . 1-Explaining the importance of insects in the lives of humans, animals and plants 2- A basic description of the structure of the insect's body parts and their functions. 3- Do not kill any insect we encounter, especially in the field .
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- المعرفة والفهم فعند اتمام الطالب دراسته سيكون قد اكتسب معلومات عن موقع الحشرات في المملكة الحيوانية وتركيبها واسباب نجاح انتشارها وطرق جمعها عملياً . - المهارات : القدرة على توصيل المعلومات ومناقشتها. 2 1-Knowledge and understanding When the student completes his studies, he will have acquired information about the location of insects in the animal kingdom, their composition, the reasons for their successful spread, and methods of collecting them practically. 2- Skills: The ability to communicate and discuss information.
Indicative Contents المحتويات الإرشادية	ستوفر المحاضرات فهماً أساسياً للمفاهيم الأساسية لعلم الحشرات من خلال دراستها نظرياً وعملياً بعرض النماذج الحقيقية للحشرات في المختبر إضافة إلى صور واقعية وليس رسوم تخطيطية للاطلاع على كافة أجزاء الحشرات > The lectures will provide a basic understanding of the basic concepts of entomology by studying them theoretically and practically by displaying real models of insects in the laboratory, in addition to realistic pictures, not diagrams, to see all the parts of the insects and their appendages and their functions, and encourage students to have discussions among themselves and ask them questions to attract them to the lecture.

Learning and Teaching Strategies

استراتيجيات التعلم والتعلي م

Strategies	الاستراتيجية الرئيسية التي سيتم تبنيها في تقديم هذه الوحدة هي تشجيع مشاركة الطلاب من خلال توجيه الاسئلة لهم أثناءلقاء المحاضرة لشد الانتباه ، وفي الوقت نفسه صقل وتوسيع مهارات التفكير لديهم . The main strategy that will be adopted in presenting this unit is to encourage student participation by asking them questions during the lecture to attract attention, and at the same time refine and expand their thinking skills.
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Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوع			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل		Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل		Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل			

Module تقييم Evaluation 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) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Location of insects in the animal kingdom (Arthropoda phylum) - General characteristics of the Arthropoda phylum - Characteristics of the insect class .
Week 2	. Reasons for the success of insect spread. The importance of insects : First: from an economic standpoint .

Week 3	Second: Using insects to treat wounds. Third: Using insects to get rid of plastic waste. Fourth: The role of insects in forensic applications.
Week 4	External installation:

	External structure of the body wall: First: Installing the body wall. Second: areas of the body, which are: 1- The head: its structure and the suffixes connected to it. - Tentacles.
Week 5	- Parts of the mouth. - Some types of mouth parts. 2- Thorax : its structure.
Week 6	Appendages of the thoracic region (wings and legs): - Wing mutations. - Leg mutations. 3- The abdomen and its appendages.
Week 7	First month exam
Week 8	Internal anatomy includes: First: The digestive system, its parts, and its accessory glands. Second: the excretory system.
Week 9	Third: The respiratory system: 1- Respiratory mechanism in insects. 2- Types of respiratory openings
Week 10	Fourth: Circulation device: Its parts, components and functions. Fifth: The nervous system
Week 11	Sixth: The reproductive system, which includes: 1- The male and female reproductive system. 2- Some types of reproduction.

Week 12	Growth and transformation in insects: 1- Growth stages (the stages that the insect goes through). 2- Types of transformation.
Week 13	Moulting in insects.
Week 14	Second month exam
Week 15	Insect control methods.
Week 16	Final exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Study of insects (collection, killing and fixation techniques)
Week 2	Reasons for choosing the American cockroach for study and studying the external appearance of the body in general.
Week 3	Study of the head capsul (dorsal, ventral and lateral view)
Week 4	Head appendages (antennae, mouthparts)
Week 5	First month exam
Week 6	Study of the thorax area (dorsal, abdominal and lateral view)
Week 7	Thoracic area accessories: - Wings and their mutations. - Legs and their mutations.
Week 8	Study of the abdominal region and its appendages.
Week 9	Anatomy of American cockroach
Week 10	Internal anatomy: 1- The digestive system.
Week 11	Second month exam
Week 12	Respiratory system and circulatory system
Week 13	Reproductive system

Week 14	Nervous system
Week 15	Growth and metamorphosis
Week 16	Final exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	General entomology book. Written by:	YES
	Mr. Dr. Hussein Abbas Al-Ali, College of Science, University of Baghdad or. Nidal Mahdi Al-Sundf, Second College of Education / University of Baghdad Publication year: 1990 Publishing house: Dar Al-Hekma Press.	
Recommended Texts	General entomology book. Written by: Dr. Ibrahim Qaddouri Qaddo, Dr. Hussein Abbas Al-Ali and Dr. Mustafa Kamal Al-Mulla Hammadi / University of Baghdad.	
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
	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded

Fail Group (0 – 49)	F – Fail	راس ب	(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	علم كيمياء حيائية 1		Module Delivery
Module Type	C		☒ Theory Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	Bio-215		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	three	Semester of Delivery	three
Administering Department	Bio	College	SCi
Module Leader	Ahmad Mahdi Salih	e-mail	aalmyahi@uowasit.edu.iq
Module Leader's Acad. Title	professor	Module Leader's Qualification	Ph.D
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		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	□ The primary objective from this course is to provide a thorough background in the biochemical principles that are particularly important to biological arranging. □ The aim of biochemistry is to describe & explain, in molecular terms, all chemical processes of living cells. □ Biochemists have aimed to isolate the numerous molecules found in cells, determine their structures, and analyze how they function. □ Students are qualified to complete their postgraduate studies inside and outside the country. □ Students acquire a reasonable level of chemical knowledge that is consistent with what is known among the various universities of the world, especially the solid ones. □ They have an understanding of the basic topics in chemistry and its applications in the field of laboratories with appropriate knowledge of the various axes of chemistry.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	□ Training students on how to identify biochemical compounds by focusing on medically relevant topics. □ Providing them with sufficient information to enable them to understand the biological reactions taking place in the human body at the molecular level. □ Conducting practical applications of metabolic processes in the human body. □ Explaining diseases and clinical cases resulting from metabolic disorders in the human body. □ Explaining the biochemical methods used in diagnosing some diseases.
Indicative Contents المحتويات الإرشادية	□ Biochemistry can be defined as the science interested with the chemical basis of life. □ Biochemistry described as the science interested with the chemical constituents of living cells and with the reactions and processes they undergo. □ Biochemistry includes large areas of cell biology, molecular biology, molecular genetic, as well as explanation the normal and pathological cases of organisms.

Learning and Teaching Strategies

استراتيجيات التعلم والتعلي م

Strategies	The chief strategy that will be dependence in delivering this unit is presentation and conversation meetings with the participation of students in the explanation and chemical analysis of cell structures, though at the same time refining and growing their skills. This will be reached through classes, interactive discussion group and by participation in laboratory experiments.
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Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوع			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل		Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل		Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل			

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) المنهاج الاسبوعي النظري	
	Material Covered

Week 1	Molecules and life - models of living cells - properties and functions of cell parts, water and solutions.
Week 2	Carbohydrates , Monosaccharides
Week 3	Carbohydrates , Disaccharides
Week 4	Carbohydrates ,Oligosaccharides
Week 5	Carbohydrates , Polysaccharides
Week 6	Classification of lipid , Properties of lipids , Classification of lipids - Fatty Acids - Characteristics of Fatty Acids
Week 7	Phospholipids, Phospholipids Types
Week 8	1st mid examination
Week 9	Nucleotides and nucleic acids, functions of nucleotides, nitrogenous bases, (RNA & DNA).
Week 10	Amino acids, types of amino acids- definition of proteins , functions of proteins classification of proteins, structural structure of proteins
Week 11	Enzymes, Characteristics of enzymes, Classification of enzymes - Cofactors, type of Cofactors
Week 12	vitamins , General characteristics of vitamins, function of vitamins, classification of vitamins
Week 13	Bioenergetics , ATP (Adenosine triphosphate)
Week 14	Biological Oxidation, Mitochondria and respiratory chain
Week 15	2ed mid examination
Week 16	

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Introduction of carbohhdrest
Week 2	carbohydreat Analysis
Week 3	Raction with mineral acid
Week 4	Raction with oxidative materal
Week 5	Bials test , Molischs teast
Week 6	Bendicts test
Week 7	Tolin teast

Week 8	Barfoeds test
Week 9	1 st mid examination
Week 10	Discoucrited teasts
Week 11	Electrocrafc methods
Week 12	Starche detection
Week 13	Biuret test
Week 14	Glycogen detection
Week 15	2 nd mid examination
Week 16	

Learning and Teaching Resources مصادر التعلم والتدري س		
	Text	Available in the Library?
Required Texts	Fundamentals of Biochemistry 1 st edition, 2008	
Recommended Texts	الكيمياء الحياتية 1- الكيمياء الحياتية 2	√
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	Plant Anatomy		Module Delivery
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	Bio-212		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	UGII	Semester of Delivery	1
Administering Department	Biology	College	sciences
Module Leader	Dr.Wasan Hamza Mezail	e-mail	E-mail:whamza@uowasit.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	Bio-121	Semester	3
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents أهداف
المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	1. The primary objective of the course is to gain an understanding of the internal structure of vascular plants. 2. The emphasis will be on the angiosperms (flowering plants) but consideration of certain features of gymnosperms and lower vascular plants will be made where appropriate for comparison. 3. Further objectives are to discuss the functional significance of plant structure as much as possible. Because complete interpretation of plant function, classification, ecology, etc. depends on a good basic understanding of plant structure, plant anatomy is important to all areas of botany
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Upon completion of the course, you will be able to: 2. Understand the hierarchy of plant structure by learning the basic features of plant cells, tissues, and organs. 3. Differentiate between the basic systematic groups of vascular plants: ferns and fern allies, gymnosperms, and angiosperms. 4. Relate function of an organ to structure 5. To instill in students an appreciation for the complexity of tissue organization that exists within plant bodies that allow plants to develop and live as integrated organisms in diverse environments. 6. Describe organization of tissues and cells in each plant organ and how it responds to changes in the environment. 7. Interpret the basic pattern of plant growth from different kinds of meristems and understand the relationships between primary growth and secondary growth. 8. Understand how plant morphology relates to plant reproduction. 9. Plant morphological and anatomical defense mechanisms.
Indicative Contents المحتويات الإرشادية	1. Further objectives are to discuss the functional significance of plant structure as much as possible.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	There are two parts to this course, the lecture and the laboratory. The lecture will provide an opportunity to discuss conceptual information in the text, and current topics in the subject. The laboratory will provide hands-on opportunities in structured labs and in independent 3 investigations. Both will count significantly to student's final grade.
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Student Workload (SWL) الحمل الدراسي للطالبة محسوب لـ ٥١ اسبوعا			
Structured SWL (h/sem) الحمل الدرا يس المنتظم للطالب خلال الفصل	61	Structured SWL (h/w) الحمل الدرا يس المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدرا يس غري المنتظم للطالب خلال الفصل	64	Unstructured SWL (h/w) الحمل الدرا يس غري المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدرا يس الك ي ل 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, 9,15	LO #1, 2, 10 and 11
	Assignments	2	10% (10)	3, 12	LO # 3, 4, 6 and 7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	-----	
Summative assessment	Midterm Exam	2 hr	10% (10)	10	LO # 1-7
	Final Exam	2hr	50% (50)	15	All
Total assessment			100% (100 Marks)		100% (100 Marks)

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction
Week 2	The cell wall and Pits
Week 3	Living and Non-Living components of plant cell
Week 4	Plant tissues (Meristematic tissue)
Week 5	1 st Midterm EXM
Week 6	Permanent tissue
Week 7	Tissue: Parenchyma and Collenchyma
Week 8	Tissue: Sclerenchyma
Week 9	Tissue: Xylem and Phloem
Week 10	2 nd Midterm EXM
Week 11	Root (Secondary growth of root)
Week 12	Stem (Secondary growth of stem)
Week 13	Leaf (Secondary growth of Leaf)
Week 14	Secretory Cells and Tissues
Week 15	3 rd Midterm EXM
Week 16	

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: The plant cell, The cell wall, pits
Week 2	Lab 2: Intercellular spaces, living & nonliving components.
Week 3	Lab 3: Plant Tissues , Meristematic Tissues.
Week 4	Lab 4: Apical M.T., Lateral M.T. Intercalary M.T.
Week 5	Lab 5: Permanent Tissues, Parenchyma tissues.
Week 6	Lab 6: Collenchyma Tissues .

Week 7	Lab 7: Sclerenchyma T.
Week 8	Lab 8: Fibers, Sclerides.
Week 9	Lab9: Dermal T. ,Epidermis, Stomata.
Week 10	Lab 10: Types & components , subsidiary cells
Week 11	Lab 11: The Xylem .
Week 12	Lab 12: The phloem.
Week 13	Lab 13: Cross section in monocotyledon & dicotyledon root.
Week 14	Lab 14: Cross section in monocotyledon.
Week 15	Lab 15: Cross section in dicotyledon stem

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	1. D.F. Culter, C.E.J. Botha, D.W. Stevenson 2007. PLANT ANATOMY (An Applied Approach). First edition. 2. E. R. Franklin 2006. ESAU'S PLANT ANATOMY (Meristems, Cells, and Tissues of the Plant Body). Third edition. 3. W. Ch. Stevens. PLANT ANATOMY. Fourth edition. 4. William C. Dickison, 2000. Integrative plant anatomy.	yes
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	علم الاحياء المجهرية	Module Delivery	
Module Type	C	☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	1101 (level 1 semester1)		
ECTS Credits	7		
SWL (hr/sem)	175		
Module Level	UGI	Semester of Delivery	اثنان
Administering Department	FOR	College	كلية العلوم / جامعة واسط
Module Leader	د. عبد السادة عبد العباس را ه	e-mail	aabbs@uowsit.edu.iq
Module Leader's Acad. Title	استاذ دكتور	Module Leader's Qualification	دكتوراه
Module Tutor	غري متوف ر	e-mail	غري متوف ر
Peer Reviewer Name	غري متوف ر	e-mail	غري متوف ر
Scientific Committee Approval Date		Version Number	

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

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	1. To educate students about the basic features of general bacteriology, virology and mycology and to provide students with an understanding of the immune system, its protective functions and its role in the pathophysiology of infectious and non- infectious diseases 2. To familiarize students with the common infections and diseases of medical importance, their microbial causes, as well as laboratory diagnosis, treatment, prevention and control of such diseases. 3.To enable the students to practice the principles of sterilization and infection control.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	• Manage the lecture in a way that feels the importance of time. • The method of lecture and the use of the smart board • Readings, self-learning, discussion panels. • Exercises and activities in the classroom. • Guiding students to some websites to benefit from them to develop capabilities • Asking students a set of thinking questions during the lectures such as what, how, when, etc.
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Student Workload (SWL) الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوع			
Structured SWL (h/sem) الحمل الدرا س المنتظم للطلاب خلال الفصل	94	Structured SWL (h/w) الحمل الدرا س المنتظم للطلاب أسبوعي	6
Unstructured SWL (h/sem) الحمل الدرا س غري المنتظم للطلاب خلال الفصل	81	Unstructured SWL (h/w) الحمل الدرا س غري المنتظم للطلاب أسبوعي	2
Total SWL (h/sem) الحمل الدرا س الك ل للطلاب خلال الفصل	175		

Module تقييم Evaluation المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	26% (20)	7, 12	LO #1, 2, 3,4,5,6 and 6,7,8,9,10,11
	Assignments	1	2	15	12,13,14
	Projects / Lab.	2	12%(12)	Continuous	ALL
	Report				
Summative assessment	Midterm Exam	2hr	10%(10)	17	ALL
	Final Exam	2hr	50%(50)	19	ALL
Total assessment			100%(100)marks		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to bacteriology
Week 2	Gram positive Cocci <i>Staphylococci</i>
Week 3	<i>Streptococci</i>

Week 4	Gram -Ve diplococci <i>Neisseria</i>
Week 5	Gram positive rods: 1. Spore forming 2. Non spore forming
Week 6	<i>Clostridium</i>
Week 7	<i>Bacillus</i>
Week 8	<i>Corynebacterium</i>
Week 9	<i>Mycobacterium</i>
Week 10	Gram Negative Bacilli Enterobacteriaceae
Week 11	Gram Negative Bacilli Enterobacteriaceae
Week 12	Mycology
Week 13	Virology
Week 14	Immunology and serology
Week 15	Exam
Week 16	

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Types , shapes and stain of bacteria
Week 2	=
Week 3	=
Week 4	=
Week 5	=
Week 6	=
Week 7	Microbiological and Biochemical tests

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	Jawetz, Melnick&Adelberg's Medical Microbiology, Brooks, Butel and Morse. Cal Books/McGraw-Hill Publishers.	
Recommended Texts	Mims' Medical Microbiology and Immunology, 7th Edition.	
Websites	Medical Microbiology by Murray <i>et al.</i> al. Elsevier https://www.microbiologybook.org/	

Grading Scheme مخطط الدرجات				
Group	Grade	التقديرات	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
	FX – Fail	راسب (فقد المعالجة)	(45-49)	More work required but credit awarded

Fail Group (0 – 49)	F – Fail	راسب	(0-44)	Considerable amount of work required

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module معلومات المادة الدراسية				
Module Title	Invertebrates		Module Delivery	
Module Type	C		☒ Theory Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	Bio-213			
ECTS Credits	5			
SWL (hr/sem)	125			
Module Level	3	Semester of Delivery		3
Administering Department	Bio	College	Sci	
Module Leader	Professor Abdulkareem Aakool Altamemy		e-mail	abdulkareem@uowasit.edu.iq
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.	
Module Tutor			e-mail	
Peer Reviewer Name			e-mail	
Scientific Committee Approval Date	2024\ 9\ 1	Version Number	1	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	علم الحيوان العام	Semester	1
Co-requisites module	علم الطفيليات	Semester	4

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	- Provide learners with knowledge of the principles of invertebrate science -Developing positive attitudes towards this knowledge - Identify research methods in the field of invertebrate sciences - Identify the basic concepts in the division and classification of invertebrates -Preparing students to know the basic idea of classifying invertebrates - Identify the goals of life sciences - Identify the basic components and structural component details of invertebrates. -Acquisition of detailed information about this segment of living organisms

Module Learning Outcomes مخرجات التعلم للمادة الدراسية	A- Cognitive goals 1- Identify groups of invertebrates 2- To know the ways and means of living. 3- Know the difference between vertebrates and invertebrates 4- To identify coexistence and coexistence between groups of invertebrates 5- Understanding the environmental conditions surrounding this group of organisms B - The soft skills objectives of the course 1 - Learn and understand the basic division of invertebrates 2 - Developing the skill of self-evaluation through what the visit to the invertebrates laboratory provides him with
Indicative Contents المحتويات الإرشادية	Invertebrates? In addition, what is its definition? Living things that do not have a skeleton or backbone are called invertebrates, but they are lost A specific characteristic does not mean the existence of a relationship between its members, and in general, invertebrates are characterized by the existence of a structure external and dorsal heart site and ventral nerve cord site Although these attributes are not absolute ie It is found in certain groups of invertebrates and lost in other groups, since invertebrates It includes all organisms, from unicellular to echinoderms, as they have varying characteristics They are large and are also of divergent origins. On this basis, invertebrates are defined as a group of heterogeneous organisms with divergent origins

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	- Method of presentation and live discussion -Including teaching methods using educational technology (data show for face-to-face education and linking lectures with explanatory videos supporting the subject) - Encouraging students to self-learning
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Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوع			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	64	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعي	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	61	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعي	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

Module Evaluation تقييم المادة الدراسية				
As	Time/ Number	Weight (Marks)	Week Due	Relevant Learning Outcome

Formative assessment	Quizzes	2	10% (10)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO # 1-7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	An introduction to invertebrate science and a glimpse of the principles of classification
Week 2	Classification and importance of invertebrates
Week 3	Division of Protozoa and their general characteristics and importance
Week 4	Models of Protozoa with an indication of its importance
Week 5	The Porifera division, with an indication of its general features and importance
Week 6	Models of Porifera
Week 7	Cnidaria division with a statement of its general features and importance
Week 8	First examination
Week 9	Hydra classification and importance
Week 10	Division of flatworms with an indication of their general features and importance
Week 11	Division of Aschelminthes with an indication of their general features and importance
Week 12	Models of Aschelminthes
Week 13	Annelids with an indication of their general features and importance
Week 14	Division of Arthropods with an indication of their general features and importance
Week 15	Mollusc Division with an indication of its general features and importance
Week 16	Second examination

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Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

Week	Material Covered
Week 1	View and learn about the invertebrates Laboratory and its related equipment
Week 2	Invertebrate lab. Diagnosis, Techniques and methods
Week 3	Methodology of invertebrates specimens collection
Week 4	Identification and description of some Protozoa
Week 5	Identification and description of some Porifera
Week 6	Common models of Porifera
Week 7	Identification and description of some Cnidaria
Week 8	First examination
Week 9	Hydra and other important Hydrozoa
Week 10	Identification and description of some Platyhelminthes
Week 11	Identification and description of some Aschelminthes
Week 12	Common models of Aschelminthes
Week 13	Identification and description of some Annelid
Week 14	Identification and description of some Arthropod
Week 15	Identification and description of some Mollusc
Week 16	Second examination

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	General invertebrates text book	
Recommended Texts	General Microbiology	
Websites	https://www.sciencedirect.com/science/article/pii/S0960982216305358 https://www.esajournals.onlinelibrary.wiley.com/doi/full/10.1890/0012-9623%282008%2989%5B407%3AAHOTES%5D2.0.CO%3B2	

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 language2		Module Delivery
Module Type	S		☒ Theory Lecture Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	Bio-217		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	three	Semester of Delivery	three
Administering Department	Bio	College	SCi
Module Leader	Dr.Enass Abdul Kadhum	e-mail	ialmkhdary@uowasit.edu.iq
Module Leader's Acad. Title		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		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	• Enhance students' English writing skills. • Reinforce understanding of advanced grammar and spelling rules. • Develop the ability to express ideas clearly and effectively. • Improve research skills and use of sources in writing. • Encourage interaction and peer feedback for improved writing skills. • Prepare students for writing in academic and professional
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Improve English writing skills. 2- Analyze and evaluate texts effectively. 3- Produce clear and organized writings. 4-Conduct independent research and critically use sources. 5-Identify different writing styles. 6-Engage in peer review and provide feedback. 7-Apply principles of clarity and coherence in writing.
Indicative Contents المحتويات الإرشادية	1-Advanced Grammar and Sentence Structure 2-Academic Writing Skills 3-Literary Analysis 4-Creative Writing 5-Presentation Skills 6-Examples 7-Question forms 8-Vocabulary 9-Writing 10- Homework Class activities

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	
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Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوع			
Structured SWL (h/sem) الحمل الدرايس المنتظم للطالب خلال الفصل		Structured SWL (h/w) الحمل الدرايس المنتظم للطالب أسبوعي	
Unstructured SWL (h/sem) الحمل الدرايس غير المنتظم للطالب خلال الفصل		Unstructured SWL (h/w) الحمل الدرايس غير المنتظم للطالب أسبوعي	
Total SWL (h/sem) الحمل الدرايس الكلي للطالب خلال الفصل			

Module تقييم Evaluation 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) المنهاج الاسبوعي النظري	
	Material Covered

Week 1	Tenses A. Present simple B. Getting to know you
Week 2	Past Simple
Week 3	Present Continuous
Week 4	Past Continuous
Week 5	Present Perfect
Week 6	First Exam
Week 7	Past Perfect
Week 8	The Future Tense
Week 9	Writing Skills Types of Writing
Week 10	Reported Statement 1-Examples 2-Question forms 3-Vocabulary 4-Writing 5- Homework
Week 11	Reading Skills
Week 12	Listening Skills
Week 13	A. Every day English B. Let's go shopping 1-Examples 2-Question forms 3-Vocabulary 4-Writing 5- Homework
Week 14	Speaking Skills

Week 15	Greetings 1-Examples 2-Question forms 3-Vocabulary 4-Writing 5- Homework
Week 16	Second 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	
Week 8	
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	
Week 16	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Headway Plus (Intermediate workbook) .John and Liz Soars/ Oxford Headway Plus (Pre-intermediate workbook) Students Book .John and Liz Soars/ Oxford	
Recommended Texts		
Websites		

Grading Scheme مخطط الدرجات				
Group	Grade	التقديرات	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 (فقد 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	جرائم حزب البعث العراقي		Module Delivery
Module Type	نظري		☒ Theory Lecture Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	Bio-217		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	نظري	Semester of Delivery	1
Administering Department	Type Dept. Code	College	كلية العلوم / جامعة واسط
Module Leader	Ahmad Abdulhamid rsan		e-mail
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	11/09/2024	Version Number	1.0

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

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	تعريف الطلاب بجرائم النظام البائد بحق الشعب العراقي. - توعية الطلاب وتحصينهم لمواجهة اكاذيب ازام النظام . - تعريف الطلاب بجرائم النظام البائد بحق الانسانية كافة - تعريف الطلاب بجرائم النظام البائد بحق البيئة - تعريف الطلاب بجرائم النظام البائد بحق علماء الدين والمتحررين.
Module Learning Outcomes مخرجات التعلم للمادة الدراسي ة	يستهدف البرنامج طلبة المرحلة الاولى
Indicative Contents المحتويات الإرشادية	يقدم المحتوى النظري عن طريق المحاضرة و التوضيح على السبورة والمناقشات لي ف الفصل الدرا ي س

Learning and Teaching Strategies	
استراتيجيات التعلم والتعلي م	
Strategies	- المناقشات الجماعية وحل الواجبات - خلق اجواء المنافسة بين الطلبة وعلاج الفروقات الفردية باستخدام الوسائل التعليمية المناسبة - التقارير العلمية. - تضمين طرائق التدريس الحديثة تشجيع الطلبة على البحث والاستقصاء للأدلة.

Student Workload (SWL)			
الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوع ا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	109	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	7

Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	91	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعياً	6
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	200		

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

Delivery Plan (Weekly Syllabus) المنهاج الأسبوعي النظري	
	Material Covered
Week 1	انتهاكات الحقوق والحريات العامة
Week 2	نبذة وصفية عن الانظمة السياسية في العراق (1921 – 2003 م)
Week 3	سلوكيات النظام واثرها في المجتمع
Week 4	تسلط النظام على الدولة واستبداده بمقدراتها
Week 5	عسكرة المجتمع
Week 6	الدين والدولة ومحارة العلماء
Week 7	الميدان النفسي
Week 8	الميدان الاجتماعي

Week 9	اثر القمع والحروب على البيئة والمجتمع
Week 10	استعمال الاسلحة المحرمة دولي ا
Week 11	التلوث البيئي
Week 12	سياسة الارض المحروقة
Week 13	تجفيف الاهوار وتهجير السكان قسري ا
Week 14	تدمير البيئة الزراعية والحيوانية
Week 15	التلوث الاشعاعي
Week 16	المقابر الجماعية وقصف دور العبادة

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي 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	

Week 16	
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Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	الكتاب المنهجي المقرر من الوزارة	
Recommended Texts		
Websites	محاضرات خاصة بالموضوع / كتب وبحوث وتقارير	

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	الحاس وب 2		Module Delivery
Module Type	B		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☒ Seminar
Module Code	WU22		
ECTS Credits	3		
SWL (hr/sem)	75		
Module Level		Semester of Delivery	
Administering Department	Biology	College	Science
Module Leader	Dr. Esam A. Ahmed Alnussairy	e-mail	eahmed@uowasit.edu.iq
Module Leader's Acad. Title	Assist. Prof.	Module Leader's Qualification	Ph.D.
Module Tutor		e-mail	
Peer Reviewer Name	Ms. Haider Majid	e-mail	
Scientific Committee Approval Date	1/6/2023	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	Bio-C101	Semester	1

Co-requisites module	NONE	Semester	
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Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	يهدف الى اكتساب الطلبة مهارات وتعلم البرامج المكتبية في قيادة الحاسوب وانجاز اعماله الاكاديمية من خلال تلك البرامج .
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	-مقدمة عامة عن حزمة البرامج المكتبية اوفيس Microsoft Office . -طرق تشغيل البرنامج ج -الواجهة الرئيسية لبرنامج الورد Word والاكسل Excel وعارض النصوص PowerPoint -مكونات الواجهة الرئيسية للبرنامج. -مكونات القوائم. -استخدام الاوامر المختصرة في البرنامج. -عرض وطباعة المستند.
Indicative Contents المحتويات الإرشادية	- الفه م - الاستنتاج ج - الابداع والابتكار العلمي

Learning and Teaching Strategies	
استراتيجيات التعلم والتعلي م	
Strategies	- كيفية تنصيب وتعلم البرامج المكتبية Microsoft Office . - كيفية فهم عمل البرامج ج - كيفية تعلم وفهم كل برنامج ج. كيفية توظيف هذا البرامج في العمل الاكاديمي والاعمال الاخرى.

Student Workload (SWL)			
الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوع ا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	60	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	15	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	1

Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	75
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Module تقييم Evaluation المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (20)	2, 8	LO #1, 3, 9 and 11
	Assignments	1	10% (5)	all	Continuous
	Projects / Lab.	2	10% (10)	3, 10, 12	LO # 1, 2, 3, 10, 11 and 13
	Report	1	10% (5)	all	Continuous
Summative assessment	Midterm Exam	2hr	20%(10)	4	LO # 1-3
	Final Exam	2hr	50%(50)		All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	مقدمة عامة عن حزمة البرامج المكتبية Microsoft Office
Week 2	طرق تشغيل البرنامج
Week 3	الواجهة الرئيسية لبرنامج الورد Word والاكسل Excel وعارض النصوص PowerPoint
Week 4	مكونات الواجهة الرئيسية لبرنامج Word
Week 5	مكونات القوائم
Week 6	استخدام الاوامر المختصرة
Week 7	مكونات الواجهة الرئيسية لبرنامج الاكسل Excel
Week 8	مكونات القوائم
Week 9	استخدام الاوامر المختصرة
Week 10	مكونات الواجهة الرئيسية لبرنامج عارض النصوص PowerPoint
Week 11	مكونات القوائم

Week 12	استخدام الاوامر المختصرة
Week 13	حفظ المستند و اظهاره او تغييره
Week 14	عرض وطباعة المستند
Week 15	مراجعة والتحضير لامتحان النهائي
Week 16	مراجعة والتحضير لامتحان النهائي

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	حزمة البرامج المكتبية Microsoft Office
Week 2	مكونات الواجهة الرئيسية لبرنامج Word
Week 3	مكونات القوائم (استخدام الاوامر المختصرة)
Week 4	حفظ المستند و اظهاره او تغييره
Week 5	عرض وطباعة المستند
Week 6	مكونات الواجهة الرئيسية لبرنامج Excel
Week 7	مكونات القوائم (استخدام الاوامر المختصرة)
Week 8	شرح ورقة العمل واهم الدوال
Week 9	حفظ المستند و اظهاره او تغييره
Week 10	مكونات الواجهة الرئيسية لبرنامج عرض النصوص PowerPoint
Week 11	مكونات القوائم و استخدام الاوامر المختصرة
Week 12	حفظ المستند و اظهاره او تغييره
Week 13	عرض وطباعة المستند
Week 14	مراجعة والتحضير لامتحان النهائي
Week 15	مراجعة شاملة والتحضير لامتحان النهائي

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Microsoft Office 2010	Available online as pdf
Recommended Texts	Word 2010, Excel 2010, Power Point 2010	Available online as pdf
Websites	Any website especially www. google.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	اللغة العربية (2)		Module Delivery
Module Type	B		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	WU21		
ECTS Credits	2		
SWL (hr/sem)			
Module Level	نظري	Semester of Delivery	1
Administering Department	Type Dept. Code	College	كلية العلوم / جامعة واسط
Module Leader	Name م . د أحمد عبد الحميد رسن	e-mail	ahmedabd@uowasit.edu.iq
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	20/01/2025	Version Number	1.0

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

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة 6- الدراسي تعلم 6	1- أن يفهم الطالب أهمية اللغة العربي ة 2- التعرف على القواعد الرئيسية في اللغة العربي ة 3- التعرف على اهم الاخطاء الشائعة في الكتابة 4- التعرف على مختلف النصوص الادبية والشعري ة 5- تعريف الطلبة على كتابة الاعداد بصورة صحيحة 6 – تعليم الطلبة اسس البلاغة 7- تعلم الطلبة على علامات التنقي ط
Module Learning Outcomes مخرجات التعلم للمادة الدراسي ة	1-- المعرفة والفهم 2- التعرف على اللغة العربي 3- التعرف على مراحل التطور الادب ي 4- المقارنة بين الشعر العامودي و بين الشعر الحر 5 -التعرف على مناهج البحث العلمي
Indicative Contents المحتويات الإرشادية	رفع مستوى الطلبة من خلال التوجيه والارشاد وتحليل القصائد الشعرية والتعرف على اهم الاجطاء اللغوية وفهم البلاغة العربية بصورة ادق واوسع

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	المهارات العامة والتأهيلية المنقولة (المهارات الأخرى المتعلقة بقابلية التوظيف والتطور الشخصي). 1- توفير فرص التعلم المستمر للطلبة وتحفيزهم عليه 2- التعلم الذاتي المنظم 3- التواصل الاجتماعي 4- الإدارة الذاتية

Student Workload (SWL) الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوع			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	109	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعياً	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	91	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعياً	6
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	200		

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

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

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	اسم التفضيل
Week 2	شرح وتحليل قصيدة الشاعر المتنبي الخيل والليل والبيداء تعرفني
Week 3	المبتدأ والخبر
Week 4	الرواية الشعرية
Week 5	اختبار الشهر الاول
Week 6	الحروف الشمسية والقمرية
Week 7	قصيدة بدر شاكر السياب مطر مطر
Week 8	الضمائر في اللغة العربية
Week 9	حياة الشاعرة نازك الملائكة وتحليل قصيدة الشهيد
Week 10	الثاني
Week 11	اسلوب الاستفهام في اللغة العربية
Week 12	قصيدة نازك الملائكة النهر العاشق
Week 13	شرح وتحليل قصيدة الفرزدق في مدح الامام السجاد عليه السلام
Week 14	الجملة الفعلية في اللغة العربية
Week 15	اختبار الشهر الثالث
Week 16	مراجعة شاملة

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	الكتاب المنهجي المقرر من الوزارة	Yes
Recommended Texts		No
Websites	محاضرات خاصة بالموضوع / كتب وبحوث وتقارير	

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	Plant Taxonomy		Module Delivery
Module Type	Core		☒ Theory ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	BIO221		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	UGII	Semester of Delivery	2
Administering Department	Biology	College	sciences
Module Leader	Dr.Wasan Hamza Mezail	e-mail	E-mail:whamza@uowasit.edu.iq
Module Leader's Acad. Title	Assist. Prof	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	Bio-212	Semester	4
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	• Explain how plants are classified, including both benefits of and contradictions within the scientific system as followed by horticulturists and botanical scientists across different parts of the world • Examine and describe parts of a plant, both sexual and asexual, at various stages of the plant's life cycle. • Process descriptive information about a plant using taxonomic techniques that involve processing that data to create a better understanding and/or record of that information. • Explain a variety of tools used in taxonomic work. • Explain the taxonomy of land plants that do not produce seeds. • Explain taxonomy of a range of significant, seed producing plants, including gymnosperms. • Explain the relationship between different types of plants (i.e. phylogeny), and how molecular information impacts on this in taxonomic considerations. • Differentiate between at least 10 different families of monocotyledon plants, through inspection and identification of a range of commonly shared characteristics within that family.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	• The students will be able to interpret reproductive and vegetative structure, to recognise the combinations of characters used to define plant families. • They will be able to use keys to place an unknown plant in a named family. • The students will be able to describe the principle morphological features of the principal groups of lycophytes, pteridophytes, gymnosperms and angiosperms. The underlying evidence and principles of molecular systematics, the construction of phylogenetic trees, and the interpretation of phylogeny within a taxonomic framework. • The processes involved in running and managing a herbarium collection, the requirements to fulfil in making a good herbarium specimen. • The students will be able to communicate plant diversity to a wide audience.
Indicative Contents المحتويات الإرشادية	• Overview of properties of plant • Explain a variety of tools used in taxonomic work

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	There are two parts to this course, the lecture and the laboratory. The lecture will provide an opportunity to discuss conceptual information in the text, and current topics in the subject. The laboratory will provide hands-on opportunities in structured labs and in independent 3 investigations. Both will count significantly to student's final grade

Student Workload (SWL) الحمل الدراسي للطالبة محسوب لـ ٥١ اسبوعا			
Structured SWL (h/sem) الحمل الدرا ي س المنتظم للطالب خلال الفصل	61	Structured SWL (h/w) الحمل الدرا ي س المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدرا ي س غري المنتظم للطالب الفصل	64	Unstructured SWL (h/w) الحمل الدرا ي س غري المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدرا ي س الك ي ل للطالب خلال الفصل	125		

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

Total assessment	100% (100 Marks)		100% (100 Marks)
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Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to Plant Taxonomy
Week 2	International Code of Botanical Nomenclature
Week 3	The Basic Ideas
Week 4	Taxonomic Name Resolution Service
Week 5	1 st Midterm EXM
Week 6	International Plant Names Index
Week 7	Describing Plant Parts
Week 8	Recording & Analysing Plant Descriptions
Week 9	Taxonomic Techniques
Week 10	2 nd Midterm EXM
Week 11	Primitive Plants
Week 12	Seed Plants
Week 13	Phylogeny of Land Plants
Week 14	Monocotyledons
Week 15	3 rd Midterm EXM
Week 16	

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: General Terms used in plant Taxonomy

Week 2	Lab 2: classification of plants depending on habit
Week 3	Lab 3: classification of plants depending on environments .
Week 4	Lab 4: The Root in Plants , types of root , modification of roots .
Week 5	Lab 5: The stem in Plants , types of stem in plants
Week 6	Lab 6: modifications of stem in plants.
Week 7	Lab 7: The leaves in plants , simple & compound leaves ,types of leaves in plants,
Week 8	Lab 8:. modifications of leaves in plants.
Week 9	Lab9: Flowers in plants
Week 10	Lab 10: The Seeds (component & types); Pollen grain & pollination
Week 11	Lab 11: Taxonomy of Plant kingdom; Characters of Seed plants.
Week 12	Lab 12: Gymnospermae (general characters, taxonomy, example family pinaceae).
Week 13	Lab 13: Angyospermae (general characters, taxonomy, example).
Week 14	Lab 14: Examples on monocotyledons families.
Week 15	Lab 15: Examples on dicotyledons families

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	1. Amal Kumar Mondal. 2016. Advanced Plant Taxonomy. New Central Book Agency 2. Bharat Bhattacharia. 2005. systematic Botany, Narosa publishers, New Delhi. 3. Chopra, G.L. 1982. Angiosperms (Systematics & Life Cycle) Pradeep publishers, Jullander, Punjab. 4. Gurucharan Singh. 2005. Plant Systematics (Theory & Practice), Oxford & IBH publishers, New Delhi.	yes
Recommended Texts		
Websites		

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
	A - Excellent	امتياز	90 - 100	Outstanding Performance

Success Group (50 - 100)	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 (فقد 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	Parasitology		Module Delivery
Module Type	C		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	Bio-222		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	11 1	Semester of Delivery	
Administering Department	Biology	College	Science
Module Leader	Professor	e-mail	Ph.D.
Module Leader's Acad. Title		Module Leader's Qualification	
Module Tutor	Abdulkareem Aakool Altamemy	e-mail	abdulkareem@uowasit.edu.iq
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	- Provide learners with knowledge of the principles of Parasitology science -Developing positive attitudes towards this knowledge - Identify research methods in the field of Parasitology sciences - Identify the basic concepts in the division and classification of Parasites -Preparing students to know the basic idea of classifying Parasitology - Identify the goals of life sciences - Identify the basic components and structural component details of Parasitology. -Acquisition of detailed information about this segment of living organisms

Module Learning Outcomes مخرجات التعلم للمادة الدراسية	A- Cognitive goals 1- Identify groups of Parasites 2- To know the ways and means of living. 3- Know the difference between free living and Parasitic organisms 4- To identify coexistence and coexistence between groups of Parasites 5- Understanding the environmental conditions surrounding this group of organisms B - The soft skills objectives of the course 1 - Learn and understand the basic division of Parasites 2 - Developing the skill of self-evaluation through what the visit to the Parasites laboratory provides him with
Indicative Contents المحتويات الإرشادية	Parasites ? In addition, what is its definition? Living organisms a live holly or partially at the expense of other organism A specific existence relationship between hosts and Parasites Parasites found in certain groups of invertebrates and lost in other groups It includes all organisms, from unicellular to echinoderms, as they have varying characteristics They are large and are also of divergent origins. On this basis, Parasites are defined as a group of heterogeneous organisms with divergent origins

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	- Method of presentation and live discussion -Including teaching methods using educational technology (data show for face-to-face education and linking lectures with explanatory videos supporting the subject) - Encouraging students to self-learning

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوع			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	80	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعي ا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل		Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعي ا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	80		

Module تقييم Evaluation المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	7, 12	LO #1, 2, 3,4,5,6 and 6,7,8,9,10,11
	Assignments	1	10% (5)	10	12,13,14
	Projects / Lab.	2	10%(10)	Continuous	ALL
	Report	1	10% (5)	8	7,6,5
Summative assessment	Midterm Exam	2hr	10%(10)	13	ALL
	Final Exam	2hr	50%(50)	15	ALL
Total assessment			100%(100)marks		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to Parasitology
Week 2	Introduction to Protozoa
Week 3	Samples of Protozoa
Week 4	Samples of intestinal Protozoa
Week 5	Haemoflagellates Protozoa
Week 6	Blood and tissue protozoa
Week 7	Platyhelminthes, Trematods
Week 8	First examination
Week 9	Platyhelminthes, Cestode, fish Tapeworm and <i>Hymenolepis nana</i>
Week 10	Canis Tapeworm
Week 11	Nematode Thread worms
Week 12	Filarial Nematode
Week 13	Enteric Nematodes of Lower Animals Transmitted to Humans: Zoonoses
Week 14	Visceral and Ocular Larva Migrans
Week 15	Cutaneous Larva Migrans
Week 16	Second examination

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Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	View and learn about the Parasitic Laboratory and its related equipment
Week 2	Diagnosis of parasitic disease, Techniques and methods
Week 3	Methodology of Parasites specimens collection
Week 4	Identification and description of some Protozoa
Week 5	Identification and description of some Haemoflagellates protozoa
Week 6	Common species of blood and tissue protozoa
Week 7	Identification and description of some Platyhelminthes, Trematods
Week 8	First examination
Week 9	The common Cestode, fish Tapeworm and Hymenolepis nana
Week 10	Species of common Canis Tapeworm
Week 11	Identification and description of Nematode Thread worms
Week 12	Common species of Filarial Nematode
Week 13	Identification and description of Enteric Nematodes of Lower Animals Transmitted to Humans
Week 14	Identification and description of species of Visceral and Ocular Larva Migrans
Week 15	Identification and description of some species of Cutaneous Larva Migrans
Week 16	Second examination

k

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	General Parasitology text book	
Recommended Texts	Clinical Parasitology General Microbiology	
Websites	https://www.sciencedirect.com/science/article/pii/S0960982216305358 https://www.esajournals.onlinelibrary.wiley.com/doi/full/10.1890/0012-9623%282008%2989%5B407%3AAHOTES%5D2.0.CO%3B2	

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	جي د	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	راس ب	(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	علم الاحياء المجهرية		Module Delivery	
Module Type	C		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	Bio-223			
ECTS Credits	5			
SWL (hr/sem)	175			
Module Level	UGI	Semester of Delivery	اثنان	
Administering Department	FOR	College	كلية العلوم / جامعة واسط	
Module Leader	د. عبد السادة عبد العباس را ه		e-mail	aabbs@uowsit.edu.iq
Module Leader's Acad. Title	استاذ دكتور	Module Leader's Qualification	دكتوراه	
Module Tutor	غري متوف ر		e-mail	غري متوف ر
Peer Reviewer Name	غري متوف ر		e-mail	غري متوف ر
Scientific Committee Approval Date		Version Number		

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

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	1. To educate students about the basic features of general bacteriology, virology and mycology and to provide students with an understanding of the immune system, its protective functions and its role in the pathophysiology of infectious and non- infectious diseases 2. To familiarize students with the common infections and diseases of medical importance, their microbial causes, as well as laboratory diagnosis, treatment, prevention and control of such diseases. 3.To enable the students to practice the principles of sterilization and infection control.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	• Manage the lecture in a way that feels the importance of time. • The method of lecture and the use of the smart board • Readings, self-learning, discussion panels. • Exercises and activities in the classroom. • Guiding students to some websites to benefit from them to develop capabilities • Asking students a set of thinking questions during the lectures such as what, how, when, etc.
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Student Workload (SWL) الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوع			
Structured SWL (h/sem) الحمل الدرا س المنتظم للطلاب خلال الفصل	94	Structured SWL (h/w) الحمل الدرا س المنتظم للطلاب أسبوعي	6
Unstructured SWL (h/sem) الحمل الدرا س غري المنتظم للطلاب خلال الفصل	81	Unstructured SWL (h/w) الحمل الدرا س غري المنتظم للطلاب أسبوعي	2
Total SWL (h/sem) الحمل الدرا س الك ل للطلاب خلال الفصل	175		

Module تقييم Evaluation المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	7, 12	LO #1, 2, 3,4,5,6 and 6,7,8,9,10,11
	Assignments	1	10% (5)	Continuous	ALL
	Projects / Lab.	2	10%(10)	10	12,13,14
	Report	1	10% (5)	Continuous	ALL
Summative assessment	Midterm Exam	2hr	10%(10)	13	ALL
	Final Exam	2hr	50%(50)	16	ALL
Total assessment			100%(100)marks		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to bacteriology
Week 2	Gram positive Cocci <i>Staphylococci</i>
Week 3	<i>Streptococci</i>

Week 4	Gram -Ve diplococci <i>Neisseria</i>
Week 5	Gram positive rods: 1. Spore forming 2. Non spore forming
Week 6	<i>Clostridium</i>
Week 7	<i>Bacillus</i>
Week 8	<i>Corynebacterium</i>
Week 9	<i>Mycobacterium</i>
Week 10	Gram Negative Bacilli Enterobacteriaceae
Week 11	Gram Negative Bacilli Enterobacteriaceae
Week 12	Mycology
Week 13	Virology
Week 14	Immunology and serology
Week 15	Exam
Week 16	

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Types , shapes and stain of bacteria
Week 2	=
Week 3	=
Week 4	=
Week 5	=
Week 6	=
Week 7	Microbiological and Biochemical tests

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	Jawetz, Melnick&Adelberg's Medical Microbiology, Brooks, Butel and Morse. Cal Books/McGraw-Hill Publishers.	
Recommended Texts	Mims' Medical Microbiology and Immunology, 7th Edition.	
Websites	Medical Microbiology by Murray <i>et al.</i> al. Elsevier https://www.microbiologybook.org/	

Grading Scheme مخطط الدرجات				
Group	Grade	التقديرات	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
	FX – Fail	راسب (فقد المعالجة)	(45-49)	More work required but credit awarded

Fail Group (0 – 49)	F – Fail	راسب	(0-44)	Considerable amount of work required

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	علم الحشرات 2		Module Delivery
Module Type	C		☒ Theory Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	Bio-220		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	three	Semester of Delivery	three
Administering Department	Bio	College	Sci
Module Leader	Asmaa Fadhel Abdul Redha	e-mail	aalqorany@uowasit.edu.iq
Module Leader's Acad. Title	Master's degree in Zoology/Insect Taxonomy	Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	11/9/2024	Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	1
Co-requisites module		Semester	1

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1- توضيح اسس تصنيف الحشرات والتسمية العلمية . 2- توضيح الصفة التصنيفية ومهام عالم التصنيف. 3- توضيح معنى المفاتيح التصنيفية وأنواعها .
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- المعرفة والفهم لكيفية تصنيف الحشرات بأدوارها المختلفة وأهم طريقة للتصنيف . 2- المهارات : اكتساب اطالب معلومات عن كيفية بدء الباحث دراسته في مجال التصنيف .
Indicative Contents المحتويات الإرشادية	ستوفر المحاضرات فهماً للمفاهيم الأساسية لعلم تصني ف الحشرات من خلال تقسيمها اعتماداً على وجود او غياب الاجنح ة وطريقة نمو الاجنحة داخلياً او خارجياً ونوع التعرق وغيرها من الصفات التصنيفية المهمة وحث الطلبة على المناقشات فيما بينهم وطرح الاسئلة عليهم لجذبهم للمحاضرة

Learning and Teaching Strategies استراتيجيات التعلم والتعلي م	
Strategies	الاستراتيجية الرئيسية التي سيتم تبنيها في تقديم هذه الوحدة هي تشجيع مشاركة الطلاب من خلال توجيه الاسئلة لهم اثناء القاء المحاضرة لشد الانتباه ، وفي الوقت نفسه صقل وتوسيع مهارات التفكير لديهم . The main strategy that will be adopted in presenting this unit is to encourage student participation by asking them questions during the lecture to attract attention, and at the same time refine and expand their thinking skills.

Student Workload (SWL) الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوع			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل		Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل		Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	
Total SWL (h/sem) 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% (20)	7, 12	LO #1, 2, 3,4,5,6 and 6,7,8,9,10,11
	Assignments	1	%10(5)	15	12,13,14
	Projects / Lab.	2	10%(10)	Continuous	ALL
	Report	1	10% (5)	Continuous	ALL
Summative assessment	Midterm Exam	2hr	10%(10)	13	ALL
	Final Exam	2hr	50%(50)	15	ALL
Total assessment			100%(100)marks		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	اسس تصنيف الحشرات (المجنحة وعديمة الاجنحة) والتسمية العلمية
Week 2	علم التصنيف القديم والحديث والفوائد التطبيقية لعلم التصنيف
Week 3	الصفة التصنيفية ومهام عالم التصنيف
Week 4	تشخيص النماذج والتفرقة التصنيفية
Week 5	الاجراءات التصنيفية والاسبقية في التسمية العلمية
Week 6	المفاتيح التصنيفية وانواعها
Week 7	رتب الحشرات الاولى عديمة الاجنحة
Week 8	رتب الحشرات خارجية نمو الاجنحة : الرتب القديمة (رتبة ذبابة مائس ورتبة الرعاشات)
Week 9	رتبة مستقيمة الاجنحة و رتبة الشبقيات

Week 10	رتبة متساوية الاجنحة و رتبة جلدية الاجنحة
Week 11	رتبة القمل القارض و رتبة القمل الماص
Week 12	رتبة نصفية الاجنحة و رتبة متشابهة الاجنحة
Week 13	رتب الحشرات داخلية نمو الاجنحة : رتبة شبكية الاجنحة و رتبة حرشفية الاجنح ة
Week 14	رتبة غمدية الاجنحة و رتبة ثنائية الاجنح ة
Week 15	امتحان النص ف

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	تصنيف الحشرات عديمة الاجنحة (الرتب الاولى)
Week 2	تصنيف الحشرات المجنحة (داخلية وخارجية نمو الاجنحة)
Week 3	عوائل رتبة حرشفية الاجنحة
Week 4	عوائل رتبة الرعاشات
Week 5	عوائل رتبة ثنائية الاجنحة
Week 6	عوائل رتبة مستقيمة الاجنح ة
Week 7	عوائل رتبة الشبقيات
Week 8	عوائل رتبة غشائية الاجنحة
Week 9	امتحان الشهر الاول
Week 10	عوائل رتبة غمدية الاجنح ة
Week 11	عوائل رتبة متشابهة الاجنحة
Week 12	عوائل رتبة نصفية الاجنحة
Week 13	امتحان الشهر الثاني
Week 14	المفتاح التصنيفي
Week 15	نشاط لاصفي لتصفية صناديق حفظ الحشرات القديمة وتهينة الطلبة على كيفية ترتيب الصناديق الجديدة والحفاظ على الحشرات من التلف.

Learning and Teaching Resources مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	General entomology book. Written by: Mr. Dr. Hussein Abbas Al-Ali, College of Science, University of Baghdad or. Nidal Mahdi Al-Sundf, Second College of Education / University of Baghdad	YES
	Publication year: 1990 Publishing house: Dar Al-Hekma Press.	
Recommended Texts	General entomology book. Written by: Dr. Ibrahim Qaddouri Qaddo, Dr. Hussein Abbas Al-Ali and Dr. Mustafa Kamal Al-Mulla Hammadi / University of Baghdad.	
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	كيمياء حيائية 2		Module Delivery
Module Type	C		☒ Theory Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	Bio-224		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	three	Semester of Delivery	three
Administering Department	Bio	College	SCi
Module Leader	Ahmad Mahdi Salih	e-mail	aalmyahi@uowasit.edu.iq
Module Leader's Acad. Title	professor	Module Leader's Qualification	Ph.D
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		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	□ The primary objective from this course is to provide a thorough background in the biochemical principles that are particularly important to biological arranging. □ The aim of biochemistry is to describe & explain, in molecular terms, all chemical processes of living cells. □ Biochemists have aimed to isolate the numerous molecules found in cells, determine their structures, and analyze how they function. □ Students are qualified to complete their postgraduate studies inside and outside the country. □ Students acquire a reasonable level of chemical knowledge that is consistent with what is known among the various universities of the world, especially the solid ones. □ They have an understanding of the basic topics in chemistry and its applications in the field of laboratories with appropriate knowledge of the various axes of chemistry.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	□ Training students on how to identify biochemical compounds by focusing on medically relevant topics. □ Providing them with sufficient information to enable them to understand the biological reactions taking place in the human body at the molecular level. □ Conducting practical applications of metabolic processes in the human body. □ Explaining diseases and clinical cases resulting from metabolic disorders in the human body. □ Explaining the biochemical methods used in diagnosing some diseases.
Indicative Contents المحتويات الإرشادية	□ Biochemistry can be defined as the science interested with the chemical basis of life. □ Biochemistry described as the science interested with the chemical constituents of living cells and with the reactions and processes they undergo. □ Biochemistry includes large areas of cell biology, molecular biology, molecular genetic, as well as explanation the normal and pathological cases of organisms.

Learning and Teaching Strategies

استراتيجيات التعلم والتعلي م

Strategies	The chief strategy that will be dependence in delivering this unit is presentation and conversation meetings with the participation of students in the explanation and chemical analysis of cell structures, though at the same time refining and growing their skills. This will be reached through classes, interactive discussion group and by participation in laboratory experiments.
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Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ 14 اسبوع			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل		Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل		Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل			

Module تقييم Evaluation المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	7, 12	LO #1, 2, 3,4,5,6 and 6,7,8,9,10,11
	Assignments	1	10%(5)	10	12,13,14
	Projects / Lab.	2	10%(10)	Continuous	ALL
	Report	1	10%(5)	8	7, 6,5
Summative assessment	Midterm Exam	2hr	10%(10)	14	ALL
	Final Exam	2hr	50%(50)	15	ALL
Total assessment			100%(100)marks		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري

	Material Covered
Week 1	Enzymes, Characteristics of enzymes, Classification of enzymes - Cofactors, type of Cofactors
Week 2	vitamins , General characteristics of vitamins
Week 3	function of vitamins, classification of vitamins
Week 4	Bioenergetics , ATP (Adenosine triphosphate)
Week 5	Biological Oxidation
Week 6	Hormones Classification of hormone Hormones
Week 7	1st mid examination
Week 8	Metabolism of lipids
Week 9	Protein Metabolism
Week 10	Protein determination methods
Week 11	Lipoprotein
Week 12	Carbohydrate Metabolism
Week 13	Mitochondria and respiratory chain
Week 14	2ed mid examination

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Introduction of lipid
Week 2	Quantative teset of lipid – detection of satureation by coppe acetet
Week 3	Iodin teste
Week 4	Saponification test
Week 5	Soap interactions
Week 6	Quanlitative tests of chlostreol - Salkowaki test
Week 7	Libernan test

Week 8	1 st mid examination
Week 9	Acrolin test
Week 10	Ninhydrin reation
Week 11	Xanthoproteine reaction
Week 12	Biuret test
Week 13	Lead sulfide test
Week 14	2 nd mid examination

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Fundamentals of Biochemistry 1 st edition, 2008	
Recommended Texts	الكيمياء الحياتية 1 - الكيمياء الحياتية 2	√
Websites		

Grading Scheme

مخطط الدرجات

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