First Stage: Level 1

	Ministry of Higher Education and Scientific Research - Iraq University of Baghdad College of Science Department of Biology	

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	General Zoology			**Module Delivery**	
Module Type	Core			☒ Theory ☒ Lab.	
Module Code	BIO1101				
ECTS Credits	8				
SWL (hr/sem)	200				
Module Level	UG 1		**Semester of Delivery**	1	
Administering Department	Type Dept. Code		**College**	Type College Code	
Module Leader	Asst. Prof. Dr. Fadhel Mohammed Lafta		**e-mail**	fadhellafta@sc.uobaghdad.edu.iq	
Module Leader's Acad. Title	Assistant Professor		**Module Leader's Qualification**	Ph.D.	
Module Tutor	**Lctr. Dr. Zainab khidhair hussain**		**e-mail**	zainab.khidhair@sc.uobaghdad. edu.iq	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date			**Version Number**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	Upon successful completion of the module a student will be able to: 1. Describe the functional characteristics of animals. 2. Describe the structure, embryology, classification, habits, and distribution of all animals, both living and extinct. 3. Develop a comprehensive understanding of the biology of animals.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Determination of the attributes of life and characteristics of living organisms. 2. Describing animal cell, its theory and structure. 3. Understanding the basic zoological concepts and phenomena. 4. Exploring the animal kingdom through investigations of the physiology, reproduction, development of both invertebrates and vertebrates. 5. Knowing how animals adapt to their environment, and their genetics. 6. Knowing the most important relationships between the main kingdoms.
Indicative Contents المحتويات الإرشادية	The module will explore a wide range of zoology and animal science topics with an applied focus on broad themes around species ecology and biology, genetics, evolution begin with a brief introduction outlining the module's goals, content, and evaluation criteria, as well as the learning outcomes. Following that, the module material is divided into separate themes, offering details for the most relevant biology concepts. In this context, we will explain the characteristics and roles of the basic molecules of life and demonstrate an understanding of the biochemistry that governs their interactions and their functions. Laboratory sessions of 2-hours duration will give active practice in a variety of Zoology aspects and techniques in tandem with lecture topics.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	This module's contact teaching will be conducted through lecturing (15 lectures) and compulsory 15 practical sessions, which include learning videos and scientific animations. Students will be invited to participate in interactive discussion throughout this program.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	64	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	136	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	9
Total SWL (h/sem)			200

الحمل الدراسي الكلي للطالب خلال الفصل	

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	20	2, 4, 6	LO #1, #2
	Assignments	1	20	8	LO #4
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO #1, #2, #3, and #4
	Final Exam	hr 3	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

	Material Covered
Week 1	Course introduction; Zoology –An Overview
Week 2	Animal Biology
Week 3	Structure and Function of Animal Cells
Week 4	The Cytoskeleton
Week 5	Cell Cycle (cell division cycle)- Mitosis
Week 6	Cell Cycle (cell division cycle)- Meiosis
Week 7	Mid-term Exam
Week 8	Genes and Heredity
Week 9	Animal Tissues
Week 10	Taxonomy and Systematics of the Organisms
Week 11	Animals Kingdom- I
Week 12	Animals Kingdom- II
Week 13	Evolution
Week 14	The evolutionary history of biological diversity
Week 15	Behavioral Biology
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Materials Covered
Week 1	**Course induction, introduction, and Lab Safety Guidelines**
Week 2	**Light and Electron Microscopy**
Week 3	**Animal Cells Types**
Week 4	**Animal Cells Shapes and Functions**
Week 5	**Cell Division- Mitosis**
Week 6	**Cell Division- Meiosis**
Week 7	**Mid-Term Exam**
Week 8	**Genes and Chromosomes**
Week 9	**Animal Tissues 1- Epithelial**
Week 10	**Animal Tissues 2- Connective**
Week 11	**Animal Tissues 3- Muscular**
Week 12	**Animal Tissues 4- Specialized**
Week 13	**Classification of the animal kingdom I**
Week 14	**Classification of the animal kingdom II**
Week 15	**Classification of the animal kingdom III**
Week 16	**Preparatory week before the final Exam**

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	1. General Zoology : Karen Reiss (2022) 2. SUBACZ, K. & CHRISTIAN, J. 2019. General Zoology Laboratory Manual.	No
Recommended Texts	Darrell S. and Randy Moore (2023). Biology Laboratory Manual, Thirteenth Edition. Published by McGraw Hill LLC.	No
Websites	Study Zoology: All you need to know | Study.eu	

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.

Ministry of Higher Education and Scientific Research - Iraq
University of Baghdad
College of Science
Department of Biology

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information
معلومات المادة الدراسية

Module Title	General Chemistry	**Module Delivery**	
Module Type	Support		☒Theory ☒Lab
Module Code	COS11002		
ECTS Credits	8		
SWL (hr/sem)	200		
Module Level	UG 1	**Semester of Delivery**	1
Administering Department	Department of Biology	**College**	College of Science
Module Leader	Dr. Bahaa Malik Altahir	**e-mail**	bahaa.malik@sc.uobaghdad.edu.iq
Module Leader's Acad. Title	Ass. professor	**Module Leader's Qualification**	Ph.D.
Module Tutor	Dr. Zainab Amer Sallal	**e-mail**	zainab.sallal1105@sc.uobaghdad.edu.iq

Peer Reviewer Name		**e-mail**	E-mail
Scientific Committee ApprovalDate	9/11/2023	**Version Number**	1

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

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الارشادية

Module Objectives أهداف المادة الدراسية	1. Provide students with a thorough understanding of the guiding concepts that volumetric analysis, quantitative analysis approaches, and organic chemistry are based on. 2. Develop experts in general chemistry and its practical applications to equip them to meet the country's industrial and developmental needs. 3. Foster a scientifically literate generation that recognizes the value of science as a catalyst for transformative change. This includes cultivating critical thinking skills, promoting analytical thinking, and facilitating adaptability to evolving technologies and societal demands. 4. Strengthen the connection between the university and society by offering advisory counseling, training programs, and professional development opportunities for faculty and staff, ensuring that academic knowledge is effectively applied to real-world contexts. 5. Contribute to the country's overall progress by producing chemistry graduates who possess the skills and knowledge to actively contribute to its development. 6. Address the increasing demand for highly qualified professionals in various sectors that require specialized expertise in chemistry. 7. Encourage exceptional students to serve as teaching assistants within the department, nurturing their potential to become future members of the academic teaching staff and fostering the growth of a knowledgeable and skilled workforce.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Create an excellent foundation for this specialty by introducing students to the basic concepts of volumetric analysis, and their practical applications in medicine, pathological analyzes and the environment. 2- Encouraging students to understand the theoretical foundations of titration and practical applications in diagnosing basic compounds of importance in the field of industry, energy, oil and mining. 3- Provide students with a comprehensive knowledge of different analytical technique, in addition to using various tools can be used in different laboratories in different branches such as the medicine and agriculture and oil field 4- Equip students with the necessary knowledge and skills to proficiently apply classical quantitative analytical methods in diverse laboratory working in different application of agricultural, medicine and industry 5- Enhance students' research skills by encouraging them to engage in scientific exploration and facilitating constructive discussions can be applied in different application of medical and environmental analysis. 6- Develop proficiency in the use and development of laboratory techniques and equipment, enabling students to conduct experiments effectively and obtain accurate results that applied in different biological application of different specialties of genetic, biotechnology, pollution, environmental analysis 7- Cultivate critical thinking skills that allow students to analyze and solve scientific problems related to the laws of chemistry, promoting a deeper understanding of the subject that help them in their application of medical and industrial fields 8- 4-Foster the development of practical skills and the ability to apply theoretical and empirical scientific knowledge gained through their studies in real-life situations, taking into account industrial and commercial constraints of various application in different parts of working in medical, environmental investigation.

Indicative Contents المحتويات الارشادية	The purpose of the course is to give students a thorough understanding of conventional titration techniques in analytical chemistry. It covers the fundamental principles of acid/base titration, complexometric titration, redox titration, and precipitation titration. Students will delve into the theory behind these methods and explore their wide-ranging applications. In addition to theoretical knowledge, the course emphasizes practical skills. Students will learn how to calculate pH values for various acids, bases, salts, and buffers, enabling them to make accurate determinations in real-world scenarios. They will also develop the ability to evaluate and interpret the results obtained from titration experiments, enhancing their analytical capabilities. Throughout the course, selected classical quantitative analytical methods will be highlighted, giving students a deeper understanding of their importance and practical use. By the end of the course, students will have gained the necessary knowledge and skills to apply classical titration methods effectively in analytical chemistry, both in theory and practice. Indicative content includes the following. 1. Structural isomers and structures of alkanes; physical and chemical properties of alkanes, alkenes, and alkynes. 2. Terminology, essential ideas, and some basics of organic chemistry. 3. Basic reactions of alkanes, alkenes, alkynes, and cyclic compounds. 4. Naming and classification of organic compounds.

Learning and Teaching Strategies إستراتيجيات التعلم والتعليم	
Strategies	The module will be conducted in a student-centered manner with a focus on developing critical thinking abilities and active involvement. Through a combination of classes, interactive tutorials, and purposeful experiments, students will be actively engaged in the learning process, fostering the development of their critical thinking abilities. The aim is to create an interactive and dynamic learning environment that encourages students to actively participate, think critically, and attain a profound comprehension of the subject matter. By adopting this strategy, students will have the opportunity to apply their knowledge, engage in analytical discussions, and enhance their overall learning experience.

Student Workload (SWL) الحمل الدراسي للطالب المحسوب ١٥ أسبوعا			
Structured SWL (h/sem) *الحمل الدراسي المنتظم للطالب خلال الفصل*	64	**Structured SWL (h/w)** ***الحمل الدراسي المنتظم للطالب أسبوعيا***	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	136	**Unstructured SWL (h/w)** ***الحمل الدراسي غير المنتظم للطالب أسبوعيا***	9

Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	2 0 0

Module Evaluation
تقيم المادة الدراسية

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

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

Week no.	Material Covered
Week 1	Introduction to analytical chemistry, preparing solutions, and methods for the expression of concentration
Week 2	Volumetric analysis, volumetric analysis reaction types, volumetric calculations
Week 3	Ionic equilibria, the hydrogen-ion exponent (pH), hydrolysis
Week 4	Titration curves, titration of a solution of strong acid with a strong base, titration of solutions of weak acid or bases, acid-base indicators, titration with strong acid for one base, or a mixture of two bases
Week 5	Gravimetric methods of analysis, types of gravimetric methods, and calculation of results from gravimetric data
Week 6	Instrumental methods, instrumental methods of analysis, spectroscopic Instruments, filter photometer
Week 7	Mid-term exam
Week 8	Introduction to organic chemistry - structure and properties
Week 9	Alkanes - Structure and nomenclature
Week 10	Alkanes - Preparation and reactions
Week 11	Alkenes - Structure, geometric isomers and nomenclature

Week 12	Alkenes - Preparation and reactions
Week 13	Alkynes - Structure and nomenclature
Week 14	Alkynes - Preparation and reactions
Week 15	Final exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

Week no.	Material Covered
Week 1	Learn about laboratory tools and equipment and how to use them
Week 2	Learn the principles of descriptive analysis and the descriptive interactions of the first group of ions
Week 3	A test on the analysis of information samples for the first group, based on the descriptive analysis
Week 4	A test on the analysis of the anonymous samples of the first group, based on the descriptive analysis
Week 5	Characteristic descriptive interactions of the second group of ions
Week 6	A test on the analysis of the known samples from the second group
Week 7	A test on the analysis of anonymous samples of the second group
Week 8	Safety guidelines in the organic chemistry laboratory
Week 9	Determination of the melting point
Week 10	Determination of the boiling point
Week 11	Purification of the solid organic compounds (recrystallization process)
Week 12	Purification of the liquid organic compounds (simple distillation)
Week 13	Purification of the liquid organic compounds (fractional distillation)
Week 14	Qualitative analysis of the functional groups
Week 15	Final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Fundamental of analytical chemistry by Skoog, West, Holler & Crouch, 8th, 2004. Organic Chemistry, Morrison and Boyd book, 6th edition	Yes Yes

Recommended Texts	1-Fundamental of analytical chemistry by Skoog, West, Holler, 6th , 1992. 2-Principles of instrumental analysis by Skoog, West, Holler & Crouch, 8th, 2004. 3-K. Burger D, Sc, "Organic regents in metal analysis", 1st, New York, 1973. 4-J.N.Miller & J.C. Miller" Statistical for anal. Chem.", 2nd, New York, 1988.	
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 with decimal places above or below 0.5 will be rounded to the higher or lower full mark accordingly. For instance, a mark of 54.5 will be rounded up to 55, while a mark of 54.4 will be rounded down to 54. The University strictly adheres to a policy that does not allow for "near-pass fails," and therefore, the only adjustment made to the marks awarded by the original marker(s) will be the automatic rounding as described above.

MODULE DESCRIPTION FORM
نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	Computer Skill I			**Module Delivery**	
Module Type	Basic			☒ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	COS11004				
ECTS Credits	3				
SWL (hr/sem)	75				
Module Level	UG 1		**Semester of Delivery**	1	
Administering Department	Biology		**College**	Science	
Module Leader	Zainab J. Ahmed		**e-mail**	zainab.jawad@sc.uobaghdad.edu.iq	
Module Leader's Acad. Title	Asst. Professor		**Module Leader's Qualification**		
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	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**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	This module provides an introduction to essential computer skills. In this module, students will learn, • computer literacy, including hardware and software fundamentals in theory as well as practical. • various office applications (Microsoft Word, Excel, and PowerPoint), where students will use these software applications to create a current resume, and slide presentation. • basic computer knowledge and skills required to obtain an understanding of computer hardware, software, Internet, and web search.

Module Learning Outcomes مخرجات التعلم للمادة الدراسية	By the end of this module, students should be able to: 1. Understand computer hardware, software components, and peripheral devices, enabling them to use computers confidently. 2. Manage and organize files and folders on a computer effectively, including creating, renaming, moving, and deleting files and folders. 3. Efficiently employ Microsoft Office to execute fundamental tasks with ease. 4. Navigate the internet and communicate via email, while understanding internet safety. 5. Upon finishing the course, students will be aware of the ethical and security considerations when using computers, promoting safe and responsible digital behavior.
Indicative Contents المحتويات الإرشادية	Part A: Understanding Computer Components Starting with an introduction to computers, the first part introduces learners to identify computer peripherals, internal components, and the operation of the Windows operating system. Part B: Exploring Microsoft Office In this part, the student will learn how to work with Microsoft Office package to create Word documents and Excel spreadsheets and get ideas to create a PowerPoint presentation. Part C: Navigating the Internet In this part, the student will learn the knowledge of harnessing the power of the internet to search for information through web browsers. Part D: Computer Ethics In this part, the student will learn to address issues related to the misuse of computers and how they can be prevented.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1. Providing lectures to explain essential principles related to computer skills. 2. Projects and activities shared among students. 3. Examinations to gauge students' understanding and identify areas where additional support may be needed. 4. Providing guidance on textbooks, online resources, and supplementary references that can aid students in their studies more efficiently.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	45	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	30	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	2
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**75**		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	3	5)15% (1	4,9, and 13	1,2,3, and 4
	Assignments	3	15% (15)	4, 8 and 11	1,2,3, and 4
	Projects/ Lab	1	5% (5)	Continuous	All
	Report	1	5% (5)	Continuous	All
Summative assessment	**Midterm exam**	2 hr	)0% (101	7	All
	Final Exam	3 hr	0% (50)5	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Computer Fundamentals. Characteristics of Computers, Block Diagram of Computer: Input Unit, Storage Unit, Memory size, Output Unit, Arithmetic Logical Unit, Control Unit, Central Processing Unit, Data Representation: Binary Number System.
Week 2	Memory: Types, Units of memory, RAM, ROM, Secondary storage devices – HDD, Flash Drives, Optical Disks: DVD I/O Devices – Keyboard, Mouse, LCDs, Scanner, Plotter, Printer and Latest I/O devices in market
Week 3	MS Windows: Desktop, My Computer, Files and folders using windows explorer; Control Panel, Searching Files and folders
Week 4	MS Word: Introduction, Environment, Help, Creating and Editing Word Document. Saving Document, Working with Text: Selecting, Formatting, Aligning and Indenting
Week 5	MS Word: Finding Replacing Text, Bullets and Numbering, Header and Footer, Working with Tables, Properties Using spell checker, Grammar, AutoCorrect Feature, Synonyms and Thesaurus
Week 6	MS Word: Graphics: Inserting Pictures, Clipart, Drawing Objects, Using Word Art. Setting page size and margins; Printing documents. Mail Merge Practical
Week 7	**Mid Exam**
Week 8	MS-Excel: Environment, Creating, Opening, and Saving Workbook. Range of Cells. Formatting Cells, Functions: Mathematical, Logical, Date, Time, Auto Sum
Week 9	MS-Excel: Formulas. Graphs: Charts. Types and Chart Tool Bar. Printing: Page Layout, Header and Footer Tab
Week 10	MS PowerPoint: Environment, Creating and Editing presentation, Auto content wizard, using built-in templates
Week 11	MS PowerPoint: Types of Views: Normal, Outline, Slide, Slide Sorter, Slide Show, Creating customized templates; formatting presentations Graphics: AutoShapes, adding multimedia contents, printing slides
Week 12	Internet: Basic Internet terms: Web Page, Website, Home page, Browser, URL, Hypertext, ISP,

Week 13	Web Server Applications: WWW, e-mail, Instant Messaging, Internet Telephony, Videoconferencing, Web Browser and its environment
Week 14	Computer Ethics and Societal Impact: Computer ethics encompass a collection of moral principles that regulate the utilization of computers. It reflects society's perspectives regarding the use of computer hardware and software. These ethical considerations address a range of critical issues, including privacy concerns, intellectual property rights, and the broader societal impact of computer technology.
Week 15	**Preparatory week**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Identifying hardware components (CPU, RAM, storage, etc.); Assemble and disassemble computer hardware components.
Week 2	.Installing an operating system (e.g., Windows or Linux); Installing and uninstalling software applications
Week 3	Importance of data backup, backup methods, and the Understand the principles of data backup and recovery; recovery procedures; Organize, manipulate, and maintain files and folders on a computer or other digital storage devices. It involves tasks such as creating, moving, copying, renaming, deleting, and searching for files.
Week 4	Word Processing. Understanding the Word interface and essential functions; Creating, saving, and opening documents; Formatting documents (headers, footers, styles).
Week 5	Word Processing (continued). Formatting text (font, size, style, and color); Formatting paragraph (alignment, spacing, and indentation); Setting up page layout (margins, orientation, and size).
Week 6	Word Processing (continued). Creating and formatting tables; Inserting images, shapes, and text boxes; Adding hyperlinks and bookmarks; Mail merge for personalized documents; Saving a PDF and setting options.
Week 7	**Mid Exam**
Week 8	MS-Excel. Overview of Excel and its interface; Basic spreadsheet concepts, including rows, columns, and cells; Entering data and formatting; Using basic functions like SUM, AVERAGE, and COUNT; Error handling in formulas; Absolute and relative references.
Week 9	MS-Excel (continued). More advanced functions, including IF, VLOOKUP, and HLOOKUP; Creating and formatting charts and graphs; Types of charts: bar, line, pie, and more; Adding titles, labels, and data labels to charts; Creating and working with Excel tables; Saving a PDF and setting options.
Week 10	MS-PowerPoint Overview of PowerPoint and its interface; Creating a presentation (Choosing a Template/Theme, Changing the Template/Theme, Adding Slides, and Typing in Content); Formating slide layouts (Choosing a Slide Layout, Changing the Slide Layout); Adding and editing text with outline view.
Week 11	MS-Power Point (continued). Adding/Adjusting pictures and graphics (placing pictures into placeholders, cropping photos, sizing graphics, fixing stretched/squished photos, where to get photos, picture border, and effects); Running a presentation (starting and stopping a slide show, ways to navigate slide shows); Saving a PDF and setting options.
Week 12	Using Email: Understanding how to send and receive email is essential for communication in the modern workplace. Basic skills include composing, sending messages, and attaching files
Week 13	Using Web Browsers: Web browsers such as Google Chrome or Mozilla Firefox are used for browsing the internet. Basic skills include navigating websites, using bookmarks, and completing online forms.
Week 14	Understanding computer ethics issues: 1) Divide the students into small groups. 2) Provide each group with (a real-world privacy scenario. For example, a social media company's data collection practices **or** Present a case study involving intellectual property issues, such as software copyright infringement). 3) In their groups, students should discuss the ethical issues raised by the scenario, potential consequences, and possible solutions.

	4) Each group presents their findings to the class.
Week 15	**Preparatory week**

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	-	
Recommended Texts	Wallace Wang, Absolute Beginners Guide to Computing, Apress, 2016. Michael Miller, Absolute Beginner's Guide to Computer Basics, Que, 2022. Chris Ewin, Carrie Ewin, Cheryl Ewin, Computers for Seniors: Email, Internet, Photos, and More in 14 Easy Lessons, William Pollock, 2017.	**Available online**
Websites	https://ebooks.lpude.in/library_and_info_sciences/DLIS/Year_1/DCAP101_BASIC_COMPUTER_SKILLS.pdf	

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 is 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.

Ministry of Higher Education and Scientific Research - Iraq
University of Baghdad
College of Science
Department of Biology

MODULE DESCRIPTION FORM
نموذج وصف المادة الدراسية

Module Information
معلومات المادة الدراسية

Module Title	Mathematics and Biostatistics	**Module Delivery**	
Module Type	Support	☒ Theory ☒ Tutorial.	
Module Code	COS11003		
ECTS Credits	7		
SWL (hr/sem)	175		
Module Level	UG 1	**Semester of Delivery**	1
Administering Department	Type Dept. Code	**College**	Type College Code
Module Leader	Dr. Iraq T. Abbas	**e-mail**	Iraq.t@sc.uobaghdad.edu.iq
Module Leader's Acad. Title	Assistant Professor	**Module Leader's Qualification**	Ph.D.
Module Tutor	/	**e-mail**	/
Peer Reviewer Name	Name	**e-mail**	E-mail
Scientific Committee Approval Date	14/6/2023	**Version Number**	1.0

Relation with other Modules
العلاقة مع المواد الدراسية الأخرى

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

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

Module Aims أهداف المادة الدراسية	The objectives of the academic program of teaching mathematics for the first stage in universities typically include the following: 1. **Developing fundamental mathematical skills**: The first stage of university mathematics education aims to develop students' fundamental mathematical skills, including algebra, geometry, trigonometry, and calculus. Students are expected to master these skills to build a strong foundation for more advanced mathematical concepts. 2. **Promoting critical thinking**: Mathematics education in universities aims to promote critical thinking skills by teaching students to solve problems using logical reasoning, deduction, and analysis. Students learn how to approach complex problems and break them down into simpler, more manageable parts. 3. **Fostering creativity**: Mathematics education can also foster creativity by encouraging students to explore new ideas and develop their own approaches to problem-solving. By encouraging creativity, students can develop a deeper appreciation for the beauty and elegance of mathematics. 4. **Preparing students for advanced study**: The first stage of university mathematics education is often a prerequisite for advanced study in mathematics and related fields. Therefore, one of the primary objectives is to prepare students for more advanced coursework by building a strong foundation in fundamental mathematical skills. 5. **Enhancing career prospects**: Mathematics education can also enhance students' career prospects by providing them with the analytical and problem-solving skills that are highly valued in a wide range of industries, including finance, engineering, and computer science. Thus, the academic program of teaching mathematics at the first stage in universities aims to equip students with the necessary skills and knowledge to succeed in their future careers.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	*Module learning outcomes in math typically include the following*: 1. ***Knowledge***: Students should be able to demonstrate a comprehensive understanding of mathematical concepts, theories, and principles relevant to the module. 2. ***Problem-solving***: Students should be able to apply mathematical knowledge and skills to solve problems and analyze real-world situations. 3. ***Mathematical reasoning***: Students should be able to use mathematical reasoning to derive conclusions and make predictions based on available data. 4. ***Communication***: Students should be able to communicate mathematical ideas and concepts clearly and effectively, both in writing and orally. 5. ***Use of technology***: Students should be able to use technology, such as calculators, computer software, and online resources, to enhance their understanding of mathematical concepts and solve problems. 6. ***Independent learning***: Students should be able to engage in independent learning, such as reading relevant literature, conducting research, and applying mathematical concepts to novel problems. 7. ***Critical thinking***: Students should be able to critically evaluate mathematical arguments and solutions, identify potential errors or weaknesses, and propose alternative solutions. 8. ***Numeracy:*** Students should be able to demonstrate proficiency in numerical skills, including arithmetic, algebra, geometry, and statistics, as appropriate to the module. 9. ***Mathematical modeling:*** Students should be able to create and interpret mathematical models of real-world phenomena, using appropriate mathematical tools and techniques. 10. ***Ethics and professionalism***: Students should be able to apply mathematical knowledge and skills in an ethical and professional manner, respecting the rights and dignity of

	others and adhering to relevant codes of conduct and professional standards.
Indicative Contents المحتويات الإرشادية	The mathematics course for the first stage typically covers a range of fundamental mathematical topics, including calculus, The Rate of change of function, limit, Derivatives of algebraic function and Applications. The course aims to develop students' mathematical skills, including problem-solving, critical thinking, and analytical reasoning, and to prepare them for advanced study in mathematics and related fields.

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

Strategies	This module's contact teaching will be conducted through lecturing (15 lectures) and compulsory 15 practical sessions, which include learning videos and scientific animations. Students will be invited to participate in interactive discussion throughout this program.

Student Workload (SWL)
الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	127	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	58.
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	751		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	4	10% (10)	3, 6, 10, and 13	LO #1, #2 and #10
	Assignments	4	10% (10)	2, 5, 10, and 13	LO #3, #4 and #6, #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	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

	Material Covered
Week 1	1. Slope, and equation of line. 2. Functions and their graphs.

	3. Shifts, circle, and parabolas
Week 2	1. Limits. 2. Limits involving infinity. 3. Continuous functions. 4. Slopes, tangent lines, and derivatives. 5. Differentiation rules. 6. Velocity, speed, and other rates of change. 7. Derivatives of trigonometric functions. 8. Chain rule. 9. Maxima, minima.
Week 3	1. Definite integrals. 2. The fundamental theorem of integral calculus. 3. Indefinite integrals. 4. Integration by substitution. 5. A brief introduction to logarithms and exponentials. 6. Areas between carves, volumes of solids of revolution. 7. Areas of surfaces of revolution.
Week 4	1. Inverse function and their derivatives. 2. $\ln x$, e^x , and logarithmic differentiation. 3. Hospital rule. 4. The inverse trigonometric function. 5. Derivatives of inverse trigonometric functions.
Week 5	1. Basic integration formula. 2. Integrations by parts. 3. Trigonometric integrals. 4. Rational functions and partial fractions. 5. Improper integrals.
Week 6	1. Sequences. 2. Series and absolute convergence. 3. Power series. 4. Taylor's series and Maclaurin series.
Week 7	Mid-Term exam
Week 8	1. polar coordinates. 2. Graphing in polar coordinates.
Week 9	Some Basic concepts Statistics, Data, Biostatistics, Variables: Types of Variables, Population, Sample
Week 10	Descriptive Statistics Frequency Distribution Measures of Central Tendency: Mean, Median, Mode, Percentiles and Quartiles Measures of Central Tendency: Grouped Data Measures of Variation: The Range, The Variance and the Standard Deviation, Moments, Skewness and Kurtosis Measures of Variation: Grouped Data
Week 11	Basic Probability Concepts Properties of Probability, Probability of an Event, Marginal Probability, Conditional Probability, Baye's Theorem
Week 12	Discrete Probability Distributions Probability Distributions for Discrete Random Variables, Expected Value and Variance of a Discrete Random Variable, Bernoulli Distribution, Binomial Distribution, Poisson Distribution
Week 13	Continuous Probability Distributions Continuous Probability Distribution, Expected Value and Variance of a Continuous Random Variable, The Normal Distribution, The Standard Normal Distribution
Week 14	Sampling Distribution Sampling Distribution(definition), Sampling Distribution of the Sample Mean, Sampling from Normal Population
Week 15	Central Limit Theorem: Sampling from Non-normal Population, The T-Distribution, Chi-Square Distribution, F- Distribution
Week 16	**Preparatory week before the final Exam**

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	1. . Stewart. J. "Calculas", 7th Edition, 2012. 2. Wayne W. Daniel (1995) "Biostatistics: Basic Concepts and Methodology for the Health Sciences", Sixth Edition, John Wiley and Sons M.	
Recommended Texts	1. Ataharul Islam, Abdullah Al-Shiha (2018) "Foundations of Biostatistics", Springer	
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.

Ministry of Higher Education and Scientific Research - Iraq
University of Baghdad
College of Science
Department of Remote Sensing and GIS

MODULE DESCRIPTOR FORM
نموذج وصف المادة الدراسية

Module Information
معلومات المادة الدراسية

Module Title	Democracy & Human rights	**Module Delivery**	
Module Type	Support	☒ **Theory** ☐ **Lecture** ☐ **Tutorial** ☐ **Seminar**	
Module Code	UOB11006		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	UG 1	**Semester of Delivery**	1
Administering Department	Type Dept. Code	**College**	Type College Code
Module Leader	**Ansa**	**e-mail**	**ul - Rezzak Al-Obidi** **ansam.faik@sc.uobaghdad.edu.iq**
Module Leader's Acad. Title	**Lecturer**	**Module Leader's Qualification**	M.Sc.
Module Tutor	None	**e-mail**	None
Peer Reviewer Name		**e-mail**	
Review Committee Approval	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**	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1. This course deals with the basic concept of human rights& democracy 2. Clarifying and training students on the most important principles of human rights and democracy. 3. Organizing discussions and presentations on the most vital and basic topics affecting community building, related to human rights and democracy.. 4. Adopting teamwork with students to develop their cognitive abilities and create a spirit of cooperation, initiative, creativity and exchange of views in an effort to build the foundations of peaceful community coexistence. 5. Providing society with conscious youth aware of the importance of its role in building society, its unity and cohesion through spreading the culture of human rights and establishing the rules of correct democracy. 6. Human rights guarantee the protection and respect of an individual's interests, even when he or she is not a majority. In a democratic climate, sustainable democratic power cannot be conceived without respecting, protecting and fulfilling human rights. Through their combined influence, they allow the individual a life based on the freedom of self-determination and collective. That is why the protection and realization of human rights truly form the basis of the democratic project.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Cognitive goals. 1. Educate students and inform them about the importance of human rights and democracy. 2. Recognize and understand the methods of teamwork for the exchange of ideas and creative discussions 3. Developing students' performance through guidance in preparing mini-research on modern vocabulary on vital topics related to human rights and democracy. 4. Providing students with creative development abilities in modern proposals and creative developmental ideas by discussing awareness videos presented on electronic classes. 5. Developing the skills of sharing opinions and ideas and respecting others opinion. 6. Objective Skills : 7. Basic knowledge in the principles of human rights and democracy. 8. Building the innovative personality of knowledge through online research and the transfer and exchange of information. 9. Discuss the various properties about everything related to human rights and their importance in our daily lives. 10. Identify everything related to democracy and the foundations of the performance of the electoral process and its importance in building the nation. **11.** Identify the capacitor and inductor phasor relationship with respect to voltage and current.
Indicative Contents **المحتويات الإرشادية**	- Developing the student's analytical and critical skills regarding the reality and future of human rights and democracy - Training the student on the importance of active participation in aspects of public life, such as promoting respect for the principles of public human rights and active participation in political and cultural life. - Enable students to understand the importance of education and its role in spreading the culture of human rights and democracy in building a civilized society based on good governance, the most important component of which is belief in human rights, education and active participation in governance through free and fair elections.

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 discussions, dialogues and group work lectures & exercises, while at the same time refining and expanding their critical thinking skills. There are many teaching and learning methods used, and the most important of these methods are: Theoretical lecture, discussion and dialogue, panel discussions on certain topics, theoretical student research Library and electronic activities (which helps students to reach the following results: 1- The scientific ability to distinguish between correct information and wrong information. 2- Ease of scientific drafting and ease of correction. 3. Ability to memorize and guess. 4- The ability to link concepts and principles with reality. 5. Ability to invoke, link, interpret.

Student Workload (SWL)
الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.25
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	2	10% (10)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Attending lectures	1	10% (10)	1.5	41#15 weeks
	Report	1	10% (10)	13	LO # 5, 9 and 10
Summative assessment	**Midterm Exam**	2 hr	10% (10)	8	LO # 1-7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري مادة الديمقراطية و حقوق الانسان	
	Material Covered
Week 1	Familiarity with the concept of human rights and the definitions approaching it, discussing, dismantling and criticizing them in a scientific way in order to reach the most accurate and objective. - Definition of right , of human, of the concept of human rights. Human rights qualities, Types of human rights Human Rights Categories
Week 2	The historical development of human rights: Orcagina Reforms 1- Urnamo Law.2- The law of Ishtar Bit. 3- The law of the Kingdom of Eshnuna.4- Code of Hammurabi.
Week 3	Human rights in other ancient civilizations: 1- Indian and Chinese civilization 2-Pharaonic civilization of Egypt 3- Greek civilization 4- Roman civilization
Week 4	Human rights in heavenly laws .Human Rights in Judaism, Human rights in Christianity, Human Rights in Islam
Week 5	Human rights in Renaissance - modern and contemporary societies Introducing the student to the most important UN document in the field of human rights, which was approved and approved by the Assembly on January 10, 1948 .Universal Declaration of Human Rights 1948
Week 6	Non-governmental organizations defending human rights: Amnesty International, b. International Committee of the Red Cross. Arab Organization for Human Rights.
Week 7	Definition of the phenomenon of administrative corruption, Types of administrative corruption, Causes of administrative corruption. The repercussions of the phenomenon of administrative Successful treatments to combat corruption and protect .corruption on human rights and society society from it.
Week 8	Introduction - Historical development of the concept of democracy, definition of democracy, freedom. The difference between freedom and democracy, The relationship between the rights and public freedoms of individuals and democracy, Islamic views in a democratic system of government , Shura and Democratic System
Week 9	Specifications and duties of the Islamic ruler reading, The era of Imam Ali "peace be upon him" to his governor over Egypt: Specifications of the Islamic ruler: First: The moral and doctrinal components of the ruler Second: The general culture of the Islamic ruler, Third: Acumen and good choice: -Fourth: Direct relationship with people: Fourth: Direct relationship with people. Duties of the Islamic ruler: First: Social Reform: Second: Achieving security and defense Third: The architecture of the country "economic development"
Week 10	Forms of democracy: (1): Direct democracy ,(2): Semi-direct democracy , (3): Parliamentary democracy (parliamentary representation)4): Liberal Democracy (5): consociation Democracy, (6): Delegated Democracy.
Week 11	Conditions for the success of the elements and pillars of the democratic system General conditions for the success of the democratic system: 1. Respect for human rights, 2. Political pluralism 3. Peaceful transfer of power 4. Political equality 5. Respect the principle of the majority 6. Existence of the rule of law.
Week 12	Components or elements of democracy: 1 – Citizenship 2- Political participation 3. Elections 4. MPs and Responsibility 5. Opposition 6- Separation of government and parliament 7- Constitutional legitimacy
Week 13	The concept of elections and their legal adaptation: First: The concept of election Second: Legal adaptation of the Election, Third: Conditions of Election, Fourth: Concepts of Elections, Fifth: Types of Electoral Systems. Assessing the Democratic System, Pros and advantages of the

	democratic system, Disadvantages and disadvantages of the democratic system, Implementing the democratic system in Iraq.
Week 14	Lobbyists: First: the concept and definition. Second: Types of pressure groups. Third: The methods of pressure groups that they use to achieve their goals. Fourth: Lobbying and Democracy.
Week 15	Preparatory Week
Week 16	Final Exam

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Martyrdom verses from the Holy Quran Mohammed Al-Tarawneh et al., International Humanitarian Law, ICRC, Amman, 2005 Diamond Larry, Democracy: Its Development and Ways to Enhance It, translated by Fawzia Naji, Dar Al-Mamoun for Translation, Iraq, 2005.	Yes
Recommended Texts	journal.un.org Hadi, Riad Azabz. (2005). Human rights (evolving contents and protection) (Baghdad).	Yes
Websites	Universal Declaration of Human Rights | United Nations https://sc.uobaghdad.edu.iq/?page_id=8415 https://www.youtube.com/@ansamalobidimanagerofhuman2891	

APPENDIX:

GRADING SCHEME
مخطط الدرجات

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

Note:

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

First Stage: Level 2

	Ministry of Higher Education and Scientific Research - Iraq University of Baghdad College of Science Department of Biology	

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	General Botany			**Module Delivery**	
Module Type	Core			☒ **Theory** ☒**Lab** ☐**Seminar**	
Module Code	BIO12007				
ECTS Credits	8				
SWL (hr/sem)	200				
Module Level	2		**Semester of Delivery**	2	
Administering Department	Biology		**College**	Collage of science	
Module Leader	Dr. Laith Mohammed Jawad		**e-mail**	laith.alshamma@sc.uobaghdad.edu.iq	
Module Leader's Acad. Title	Professor		**Module Leader's Qualification**	Ph.D.	
Module Tutor	Dr. Rasha Kareem Mohammed		**e-mail**	rasha.kareem@sc.uobaghdad.edu.iq	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date			**Version Number**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1. recognize the plant cell and its properties. 2- recognize the properties of plant cell biochemistry and molecular biology 3- identifying the properties of each tissue in different plant body. 4- recognize the difference in basal physiological activity in plant cell. 5-undestanding the differences in plant body parts.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- experience in recognizing the properties of plant cell wall and its living and nonliving component. 2- experience in understanding the biochemical and molecular of plant cell. 3- experience in understanding the cell division, and identification of different plant tissues. 4- experience in understanding the basic physiological cell pathways. 5- experience in identification the differences in plant body parts.
Indicative Contents المحتويات الإرشادية	The general botany module is designed to recognize the plant cell and its wall as well as its organelles, the properties of living and nonliving cell component as well as the properties of each tissue in different plant body, in addition to understanding the biochemistry and molecular biology of the cell, and identify the difference between basic physiological pathways and activity, lately to understanding the differences in plant body parts.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The general botany strategies is aimed to identified the internal structure, physiology and molecular of plant cell as well as its aimed to understanding the differences in plant body by using different theoretical and laboratory skills to create student knowledge can be used in different scientific specialties and researches.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	64	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	136	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	9
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	200		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	10	35% (35)	2, 3, 5, 7, 8, 9, 11, 12, 14, and 15	All
	Report	2	5% (5)	4,13	1,3
Summative assessment	Midterm Exam	2 hr	10% (10)	6,10	1,2
	Final Exam	hr 3	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

	Material Covered
Week 1	Plant cell structures (living organelles)
Week 2	Plant cell structures (non-living organelles)
Week 3	Biochemistry compounds, their types, classification and properties
Week 4	Secondary plant chemicals, their types, classification and properties
Week 5	molecular biology of plant cell (DNA structure)
Week 6	molecular biology of plant cell (RNA structures)
Week 7	Mid exam
Week 8	Cell division (mitosis and meiosis)
Week 9	Diversity in Plant Life
Week 10	Photosynthesis
Week 11	Respiration
Week 12	Plant growth regulators
Week 13	**Exchange through the cell membrane**
Week 14	Plant tissues
Week 15	**Plant body parts**
Week 16	**final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Plant cell structures (living organelles)
Week 2	Plant cell structures living organelles (plastids)
Week 3	Plant cell structures (non-living organelles)
Week 4	(**report 1)**, cell division mitosis
Week 5	Cell division meiosis
Week 6	Plant internal structures
Week 7	Mid exam
Week 8	Scientific name and classification
Week 9	Respiration
Week 10	Photosynthesis
Week 11	Plant growth regulators
Week 12	Diversity in Plant Life
Week 13	(**report 2)** Exchange through the cell membrane
Week 14	Plant tissues
Week 15	**Plant body parts**
Week 16	**final Exam**

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Plant anatomy 2ed - - Introduction to Botany, Alexey Shipunov, **2018** General Cytology , Plant Science , Essentials of Genetics	yes
Recommended Texts	1-D.G.Mackean,2004.*GCSE Biology*. Third edition 2-Bowsher, C.,M.Steer, and Tobin. 2008. *Plant Biochemistry*. London: garland science 3-William, S. Klug and Michael R. Cumming *Essential of Genetic., 1990. Fifth edition.* 4-Hopkins, W.G., AND N. A.P.Honer.2004. *Introduction to Plant Physiology*. 3rd ed. Hoboken, NJ:John Wiley and Sons.	Some of them

Websites	1- Li M, Jiang H, Hao Y, Du K, Du H, Ma C, Tu H, He Y. A systematic review on botany, processing, application, phytochemistry and pharmacological action of Radix Rehmnniae. Journal of Ethnopharmacology. **2022** Mar 1; 285:114820. 2- Gray A. Manual: The Botany, the Northern United States. BoD–Books on Demand; 2021 Nov 4. 3- Van Duppen, J. (**2021**). Book review: The Botanical City. 4- Cunha AR, Soares AL, Vasconcelos T, Duarte MC. Advances in Botanical Research. Advances in Botanical Research. **2021**:224. 5- Hall M. The imagination of plants: A book of botanical

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

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نموذج وصف المادة الدراسية

Module Information
معلومات المادة الدراسية

Module Title	Bacteriology	**Module Delivery**	
Module Type	Core	☒ Theory ☒ Lab.	
Module Code	BIO12010		
ECTS Credits	6		
SWL (hr/sem)	150		
Module Level	UG 1	**Semester of Delivery**	2
Administering Department	Type Dept. Code	**College**	Type College Code
Module Leader	Prof. Dr. Harith Jabbar Fahad Al-Mathkhury	**e-mail**	harith.fahad@sc.uobaghdad.edu.iq
Module Leader's Acad. Title	Professor	**Module Leader's Qualification**	Ph.D.
Module Tutor	Prof. Dr. Ayaid K. Zgair	**e-mail**	ayaid.zgair@sc.uobaghdad.edu.iq
Peer Reviewer Name	Name	**e-mail**	E-mail
Scientific Committee Approval Date	14/6/2023	**Version Number**	1.0

Relation with other Modules
العلاقة مع المواد الدراسية الأخرى

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

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

Module Aims أهداف المادة الدراسية	4. Getting general information about bacteria. 5. Understanding the technique of isolating and identification of bacteria 6. Understanding cellular structure and metabolic mechanisms of bacteria 7. Getting information about the genotype and phenotype of bacteria.
Module Learning Outcomes	11. Knowledge of the basics of bacteriology. 12. Understanding the replication and pathogenicity mechanisms and how the bacteria infect the host. 13. How to isolate and identify the bacteria.

مخرجات التعلم للمادة الدراسية	14. Knowing the bacterial infectious diseases.
Indicative Contents المحتويات الإرشادية	In this course, the module will begin with a brief introduction outlining the module's goals, content, and evaluation criteria, as well as the learning outcomes. Following that, the module material is divided into separate themes, offering the key pathways that drive pathogenesis. In this context, we will also examine how such knowledge might help with bacterial isolation and identification, prevention, and prophylaxis ways. Laboratory sessions of a 2-hour duration will give active practice in a variety of bacterial methodologies in tandem with lecture topics.

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

Strategies	This module's contact teaching will be conducted through lecturing (15 lectures) and compulsory 15 practical sessions, which include learning videos and scientific animations. Students will be invited to participate in interactive discussions throughout this program.

Student Workload (SWL)
الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	64	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	86	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	501		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	6	20	2, 4, 6, 9,10, 12	LO #1, #2, #4
	Assignments	3	20	5, 7, 11	LO #4
Summative assessment	**Midterm Exam**	2 hr	10% (10)	7	LO #1, #2, #3
	Final Exam	hr 4	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	Structure of bacterial cells
Week 3	Cytoplasmic ultra-structures
Week 4	Microbial genetics, DNA replication
Week 5	RNA, Protein synthesis
Week 6	Microbial metabolism
Week 7	Mid-Term Exam
Week 8	Microbial Enzymes
Week 9	Microbial Growth and multiplication
Week 10	Types of bacterial culture, Growth curve
Week 11	Factors affecting growth: Temperature, Hydrostatic pressure
Week 12	Factors affecting growth: pH, Osmotic pressure, Radiation
Week 13	Nutrition of microorganisms
Week 14	Control of microbial growth by physical techniques
Week 15	Control of microbial growth by biological and chemical techniques
Week 16	Final exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	**Introduction to microbiology, aseptic technique safety**
Week 2	**The microscope**
Week 3	**Tools and equipment**
Week 4	**Culture media**
Week 5	**Bacterial staining ,negative stain**
Week 6	**Bacterial staining, Simple stain**
Week 7	Mid-Term Exam
Week 8	**Differential stain, acid fast stain, Differential stain, Gram stain**
Week 9	**Selective stain, capsule stain**
Week 10	**Selective stain, Spore stain**
Week 11	**Selective stain, Flagella stain**
Week 12	**Bacterial count, total count(Breed,haemocytometer,optical density**

Week 13	**Bacterial count, viable plate count**
Week 14	**Methods of culturing**
Week 15	**Introduction to microbiology, aseptic technique safety, and The microscope**
Week 16	Final exam

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	1. Riedel, S., Morse, S., Mietzner, T., and Miller, S. (2019). Jawetz, Melnick, and Adelberg's Medical Microbiology, 28 ed. McGraw-Hill New York. 2. Trivedi, P. C., Pandey,S., Bhadauria, S. Text book of microbiology. Aavishkar Publishers, India	No
Recommended Texts	Shors, T. (2009). Understanding viruses. 1st ed. Jones and Bartlett Publishers, Sudbury, Massachusetts, 639 pp.	No
Websites	https://www.cdc.gov; www.who.int	

Grading Scheme
مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	**A** - Excellent	امتياز	90 - 100	Outstanding Performance
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Ministry of Higher Education and Scientific Research - Iraq
University of Baghdad
College of Science
Department of Biology

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Biochemistry**			**Module Delivery**	
Module Type	**Support**			☒ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**COS12008**				
ECTS Credits	**6**				
SWL (hr/sem)	**150**				
Module Level	UG 1		**Semester of Delivery**	2	
Administering Department	Department of Chemistry		**College**	Science College/ University of Baghdad	
Module Leader	Dr. Nuha Nihad Aburahma		**e-mail**	noha.n@sc.uobaghdad.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	Ph.D.	
Module Tutor	Dr. Maysoon Khalid Hussein		**e-mail**	Maysoon.K@sc.uobaghdad.edu.iq	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee ApprovalDate	9/11/2023		**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الاخرى			
Prerequisite module	General Chemistry	**Semester**	1

Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الارشادية

Module Objectives اهداف المادة الدراسية	Teaching the subject of biochemistry for the second stage (Department of Biological Technologies) aims : 8. To introduce the biochemical structure of living systems mainly dealing with biomolecules like carbohydrates, proteins, lipids, and nucleic acids. 9. To provide and display the most important foundations necessary to understand the relationship of chemistry to the functions of the body through multiple examples that depend on modern information. It also aims to clarify the chemical reactions and changes that occur within the body in normal and pathological conditions. 10. To give students basic concepts of biochemistry and its nature of interdisciplinary importance. 11. To expose students in basic biochemistry practical laboratory to see basic tools used in practical. To acquire confidence, interest, challenge and discipline laboratory be haviour in biochemistry practical. 12. The course gives an idea for the maintenance of laboratory and the practices that should be accomplished in a laboratory. The course explains how to prepare solutions and reagents, various methods of qualitative tests for proteins, carbohydrates and lipids. 13. Preparing specialists with a solid foundation in biochemical processes, to develop analytical, technical and critical thinking skills and to make them scientifically literate so as to contribute to the discipline after graduation.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Recognize the basic life compounds such as carbohydrates, fats, amino acids, peptides, nucleotides, and nucleic acids, their classification and their importance. 2. Describe and explain their most important physical and chemical properties. 3. Be able to detect and distinguish between the basic life compounds. 4. Be able to read relevant scientific research and literature. 5. Be able to benefit from scientific references and the Internet to extract research and summary reports on the prescribed practical subject. 6. Conduct appropriate laboratory investigations safely and skillfully. 7. Be able to work in particular and individually on research projects in the government and private sectors. 8. Providing students with skills that meet local requirements that enable them to work in the academic, research, industry, or health fields.
Indicative Contents المحتويات الارشادية	**1. Carbohydrates: [12 hr]** • Principles, importance, and roles of carbohydrates in living organisms • Classification of carbohydrates: monosaccharides, disaccharides, oligosaccharides, and polysaccharides • Exploration of carbohydrate physical properties, including isomers, enantiomers, and projection formulas **2. Lipids: [12 hr]** • Overview of lipids, their principles, importance, and roles in living organisms • Examination of lipid properties and classification: simple, compound, and derived lipids • Understanding the significance of compound and complex lipids **3. Amino Acids and Proteins: [12 hr]** • Principles, importance, and roles of amino acids in living organisms

	• Properties and classification of amino acids: polar, nonpolar, acidic, and basic • Study of protein structure and importance: primary, secondary, tertiary, and quaternary structures **4. Nucleic Acids: [12 hr]** • Principles, importance, and roles of nucleic acids in living organisms • Classification of nucleic acids: purines and pyrimidines

Learning and Teaching Strategies إستراتيجيات التعلم والتعليم	
Strategies	Clarifying the scientific material through approved biochemistry books, creating electronic lectures to clarify the mechanisms and some chemical structures. Motivate students to conduct reports and research regarding the subjects they study, use modern technologies in research, and develop their research skills. Preparing some electronic courses and seminars that have a great role in educating students and constructive discussion between the student and tutor.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	64	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب اسبوعيا	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	86	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب اسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**150**		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	4 and 10	LO; 1, 2, and 6
	Assignments	2	10% (10)	3 and 11	LO; 3 and 8
	Projects / Lab.	15	10% (10)	Continuous	All.
	Report	1	10% (10)	13	LO; 8.
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO; 1 – 5.
	Final Exam	3hr	50% (50)	16	All.
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Carbohydrates overview : principles of carbohydrates include their important and roles in the living organisms.
Week 2	Carbohydrates classification : monosaccharides, disaccharides, oligosaccharides and polysaccharides Carbohydrates physical properties : carbohydrate isomers, enantiomers, epimers, fisher and haworth projection formula etc.
Week 3	Disaccharides: disaccharides properties, conjugation and glycosidic bond formation.
Week 4	Polysaccharides : polysaccharides properties, important and their types.
Week 5	Lipids overview : principles of lipids include their important and roles in the living organisms.
Week 6	Lipids properties and classification: simple, compound and derived lipids.
Week 7	Mid Term Exam
Week 8	The important of compound and complex lipids.
Week 9	The role of lipids in cell membrane.
Week 10	Amino acids overview: principles of amino acids include their important and roles in the living organisms.
Week 11	Amino acids properties and classification: polar, nonpolar, acidic and basic aminoacids.
Week 12	Protein’s structure and important: primary, secondary, tertiary, quaternary structures.
Week 13	Protein functions and roles.
Week 14	Nucleic acids overview: principles of nucleic acids include their important and roles in the living organisms.
Week 15	Nucleic acids classification: purines and pyrimidines.

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	A comprehensive review of all calculations related to the preparation of chemical solutions, acids and bases
Week 2	Study the tests that distinguish the different types of monosaccharides
Week 3	Study the tests that distinguish the different types of disaccharides and sucrose hydrolysis
Week 4	Study the tests that distinguish the different types of polysaccharides and starch hydrolysis
Week 5	Detection the type of unknown sugar in solution (part I)
Week 6	Detection the type of unknown sugar in solution (part II)
Week 7	Mid Term Exam
Week 8	Study the tests that distinguish the different types of fats and fatty acids
Week 9	Study of rancidity and acid value
Week 10	Study of saponification value and iodine number
Week 11	Detection the type of fat in an unknown solution using of qualitative tests
Week 12	Study the tests that distinguish the different types of amino acids
Week 13	Detection of the type of amino acid in an unknown solution using qualitative tests (part I)
Week 14	Detection of the type of amino acid in an unknown solution using qualitative tests (part II)
Week 15	Detection of vitamin C in an unknown solution using volumetric test (titration)

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	- Nelson D. & Cox M., "Lehninger Principles of Biochemistry", W.H. Freeman and Company, New York, 8th ed. 2021. -Abali EA, *et al*. "Lippincott's illustrated reviews: Biochemistry". 8th, Wolters Kluwer Health; 2022. -Naik P. "Essentials of Biochemistry", 1st ed. 2012. - Campbell NA and Reece JB. Biology, 9th edition 2009.	Yes
Recommended Texts	Kennelly PJ, Botham KM, McGuinness O, Rodwell VW, Weil PA. Harper's illustrated biochemistry. McGraw Hill Professional; 32th, 2022.	No
Websites		

Grading Scheme
مخطط الدرجات

Group	Grade	التقدير	Marks %	Definitio
Success Group (50 - 100)	**A** - Excellent	امتياز	90 - 100	Outstanding Performan
	B - Very Good	جيد جدا	80 - 89	Above average with some erro
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	Ministry of Higher Education and Scientific Research - Iraq University of Baghdad College of Science Department of Biology	

MODULE DESCRIPTION FORM
نموذج وصف المادة الدراسية

Module Information
معلومات المادة الدراسية

Module Title	Biosafety and Biosecurity	**Module Delivery**	
Module Type	Core	☒ **Theory** ☐**Lab**	
Module Code	UOB120009		
ECTS Credits	3		
SWL (hr/sem)	75		

Module Level	UG 1	**Semester of Delivery**	2
Administering Department	Biology	**College**	Science
Module Leader	Ahmed Jasim Mohammed	**e-mail**	Ahmed.jasim@sc.uobaghdad.edu.iq
Module Leader's Acad. Title	Assist.Professor	**Module Leader's Qualification**	Ph.D.
Module Tutor	Faiza Kadhim Emran	**e-mail**	Faiza.kadhim@sc.uobaghdad.edu.iq
Peer Reviewer Name	/	**e-mail**	/
Scientific Committee Approval Date	14/6/2023	**Version Number**	1.0

Relation with other Modules
العلاقة مع المواد الدراسية الأخرى

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	The student learns the basic concepts in safety and biosecurity, the student learns how to deal with laboratory materials, biological devices and equipment, the student learns how infection and pathogens are transmitted and how to deal with them with care, the student learns how to protect himself and his colleagues by following the international guidelines for safety and biosecurity, Teaching the student the ethics of scientific research and not disclosing important information
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. The student learns what safety and biosecurity. 2. the student learns how to use instrument carefully and protect himself by following the guiding rules. 3. dealing with biological materials and wearing special laboratory clothes 4. Identifying the local and international guiding rules and how to apply them with caution through the use of the projector.
Indicative Contents المحتويات الإرشادية	Knowing the local and international guidelines and how to apply them with caution, guiding the student and developing his desire for specialization, expanding the student's ability to understand biosafety laws, dealing with biological materials professionally, safely and ethically, not dealing with any party outside the laboratory or scientific institution.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The use of modern projectors and films, the use of drawings and charts on the board, the use of PowerPoint to present information, written tests, Ask intellectual questions during the lecture

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	18	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	1
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	57	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	75		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	10	20	1, 3, 5, 8, 11, 12, 13, 14, 15	All
	Assignments	7	20	2, 4, 6, 8, 9, 10,12	All
Summative assessment	**Midterm Exam**	2 hr.	10% (10)	7	LO #1, #2, #3
	Final Exam	hrs. 3	50% (50)	16	All
	Total assessment		100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

	Material Covered
Week 1	Occupational Safety and Health, Biosafety, Technical Definitions, Biological waste
Week 2	Treatment and drainage methods, Mitigation and drainage
Week 3	Procedures and methods of trading and dealing with laboratory waste
Week 4	The responsibility of management in achieving safety at work sites
Week 5	Why we need Biosafety? What is Biosecurity? Biosafety is related to several fields, Biosafety containment levels
Week 6	Biohazard Symbol, Biosafety Issues, What are biological hazards?
Week 7	Mid term exam
Week 8	Biohazards Materials, Types of pathogens, Biohazardous Materials
Week 9	Control of biological hazards, Methods of control biological hazards
Week 10	Biological Agent, Standard Microbiological Practices
Week 11	Biological Safety Cabinets (BSCs), Biohazardous Waste Containers, Transportation
Week 12	Some factors influencing biosecurity, What are the Biosecurity hazards?
Week 13	Biosecurity in laboratories, Laboratory Risks, A Biosecurity Risk Assessment and Management Process
Week 14	Biosecurity risks, Laboratory biosecurity program , The Virtual Biosecurity Center (VBC)
Week 15	Responsibility for VBM (Valuable Biological Material), Elements of a Strong Biosecurity Program
Week 16	**Preparatory week before the final Exam**

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Salerno, R.M and Gaudioso, J. Laboratory Biosecurity Handbook , CRC Press. 2007	No
Recommended Texts	Harding, A.L., and Brandt Byers, K. Epidemiology of laboratory-associated infections . In: Fleming, D.O., and Hunt, D.L. Biological safety: principles and practices. Washington, DC: ASM Press, 2000;35-54	No
Websites	Salerno, R.M and Gaudioso, J. Laboratory Biosecurity Handbook , CRC Press. 2007	

Grading Scheme
مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	**A** - Excellent	امتياز	90 - 100	Outstanding Performance
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MODULE DESCRIPTION FORM
نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**English Language / First Year**			**Module Delivery**	
Module Type	Core			☒ **Theory** ☒ **Lecture** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UOB12013**				
ECTS Credits	2				
SWL (hr/sem)	50				
Module Level	UG 1		**Semester of Delivery**	2	
Administering Department	Biology		**College**	Science	
Module Leader	Dr. Muthana Hameed Khalaf		**e-mail**	muthana.khalaf@sc.uobaghdad.edu.iq	
Module Leader's Acad. Title	Assistant 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	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**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	New Headway Beginner Plus is a Beginner course in English intended to provide students with the fundamentals of the language and a foundation at First Year students / college of science, moving towards a higher level of proficiency at this stage. 1. Listening Objectives:

	• Understand and respond to basic greetings, introductions, and simple instructions. • Comprehend and extract information from short, simple spoken passages related to everyday topics. • Identify and understand common vocabulary and expressions in spoken English. 2. Speaking Objectives: • Engage in basic conversations using simple greetings, introductions, and expressions related to personal information. • Ask and answer simple questions about personal details, daily routines, and familiar topics. • Participate in short dialogues and role-plays to practice communication skills. 3. Reading Objectives: • Read and comprehend simple texts, such as signs, labels, short passages, and dialogues. • Recognize and understand basic vocabulary words and phrases in context. • Extract information from texts related to everyday situations and topics. 4. Writing Objectives: • Write short sentences and paragraphs about personal information, experiences, and familiar topics. • Fill out basic forms with personal details, such as name, age, and nationality. • Write simple messages, notes, and emails related to everyday situations. 5. Vocabulary and Grammar Objectives: • Acquire a basic vocabulary related to common topics, such as greetings, numbers, time, family, food, and everyday objects. • Understand and use basic grammatical structures, including present simple, present continuous, simple past, and basic question forms. • Recognize and use common prepositions, articles, and basic sentence structures. 6. Cultural Awareness Objectives: • Develop an understanding of cultural customs and practices related to greetings, social norms, and everyday interactions in English-speaking countries. • Gain exposure to cultural elements through reading or listening to texts about customs, traditions, and holidays.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	By the end of the course, the students will be able to: 1. Listening and Speaking Skills: • Understand and respond appropriately to basic questions and statements. • Engage in simple conversations related to personal information, daily routines, and immediate surroundings. • Follow simple instructions and directions.

	• Develop basic pronunciation and intonation skills. 2. Reading Skills: • Recognize and understand basic vocabulary words and phrases in simple texts. • Comprehend and extract information from short, simple texts such as signs, notices, and labels. • Understand basic sentence structures and common grammatical patterns. 3. Writing Skills: • Write simple sentences and short paragraphs about personal information, experiences, and familiar topics. • Fill out simple forms and write basic personal information. • Write simple messages, notes, and emails related to everyday situations. 4. Vocabulary and Grammar: • Acquire and use a basic range of vocabulary related to everyday topics, such as greetings, numbers, time, family, food, and common objects. • Understand and use basic grammatical structures, including present simple, present continuous, simple past, and basic question forms. • Recognize and use common prepositions, articles, and basic sentence structures. 5. Cultural Awareness: • Develop an understanding of cultural customs and practices related to greetings, social norms, and everyday interactions in English-speaking countries. • Gain exposure to cultural elements through reading or listening to texts about customs, traditions, and holidays.
Indicative Contents المحتويات الإرشادية	1. Use simple forms of polite expressions to establish basic social contact and to perform everyday functions including making requests and offers, conducting simple phone conversations, asking and telling time, giving simple directions, asking about price, ordering a meal, etc. 2. Use a narrow range of positive and negative adjectives to describe objects, people and places. 2.3. Exchange information by forming and responding to simple questions. 3. Produce simple sentences using the correct word order and punctuation marks. 4. Use capital and lower case letters accurately in writing. 5. Construct a short guided paragraph on a familiar topic concerning home, family, friends and holidays. 5. Use the basic tenses including the present and past simple, and present continuous correctly.

	6. Use the basic auxiliary verbs (am/is/are/was/were/can) and a range of regular and irregular verbs. 7. Demonstrate awareness of the essential grammatical features and functions including questions and negatives, plural nouns, frequency adverbs, possessives, pronouns and determiners.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1.Communicative Approach: Emphasize communicative activities that promote interaction among students. Encourage pair and group work, role-plays, and discussions to practice language skills in meaningful contexts. 2.Integrated Skills: Integrate the four language skills (speaking, listening, reading, and writing) in lessons to create a balanced approach to language learning. Provide opportunities for students to use and develop these skills simultaneously. 3.Vocabulary Expansion: Incorporate vocabulary-building exercises and activities throughout the course. Use real-life contexts, visuals, and practical examples to help students learn and remember new words. 4.Grammar Focus: Teach and reinforce grammar structures in a systematic and progressive manner. Provide clear explanations, examples, and practice exercises to ensure students understand and can apply the grammar rules correctly. 5.Authentic Materials: Include authentic texts, such as articles, newspaper clippings, songs, and videos, to expose students to real-world language usage. This helps develop their reading and listening comprehension skills and exposes them to cultural aspects of English-speaking countries. 6.Cultural Awareness: Integrate cultural topics and discussions into the lessons to foster cultural awareness and sensitivity. Encourage students to share their own cultural backgrounds and experiences to promote understanding and appreciation of diverse perspectives. 7.Error Correction: Provide constructive feedback and error correction during speaking and writing activities. Help students identify and correct their mistakes, focusing on accuracy while encouraging fluency and self-expression. 8.Technology Integration: Utilize technology tools, such as interactive whiteboards, online resources, and language learning apps, to engage students and enhance their language learning experience. Incorporate multimedia materials for listening and speaking practice. 9.Regular Assessment: Assess students' progress regularly through quizzes, tests, and assignments. Provide timely feedback to guide their learning and address areas that need improvement. 10.Individualization: Cater to the individual needs and learning styles of students. Offer differentiated tasks and activities to ensure all learners are appropriately challenged and supported.

	11.Cooperative Learning: Promote collaboration and teamwork among students through pair work, group projects, and peer feedback. This encourages active participation and a supportive learning environment. 12.Review and Revision: Schedule regular review sessions to consolidate previously learned material. Encourage students to revise and practice independently, providing resources for self-study and additional practice.

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	32	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	18	**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	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects	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	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered

Week 1	# Hello! p6 ***am/are/is, my/your*** *I'm Pablo.* *My name's Judy.* *What's your name?* p6 ***This is ...*** *This is Ben.* *Nice to meet you.* p7
Week 2	# Your world p12***he/she/they, his/her*** *He's from the United States.* *Her name's Karima.* p13 *They're on holiday.* p16 Questions *What's his name?* *Where's she from?* p13
Week 3	# All about you p18 ***am/are/is*** *We're all singers.* p20 Negatives *She isn't a nurse.* p18 *I'm not from Scotland.* p20 *They aren't builders.* p20 Questions *What's her address? How old is she?* *Is she married?* p19 Short answers *Yes, she is. / No, she isn't.* p20
Week 4	# Family and friends p24 **Possessive adjectives** *my, your, our, their* p24 **Possessive *'s*** *Annie's husband Jim's office* p24 ***has/have*** *I have a small hotel. She has a job.* *We have three sons.* p27 **Adjective + noun** *a small hotel a big house a good job* p27*apples, beer, bread, cake* p36 **Shopping** *newsagent's, chemist's, off-licence* p36 **Can you come for dinner?** *Would you like some more rice?* *Could you pass the salt, please?*

	How would you like your coffee? *This is delicious!* p37
Week 5	# The way I live p32 **Present Simple *I/you/we/they*** *I like ice-cream. I don't like tennis.* *Do you like football?* p33 *Where do you work? Do you live in Dundee?* p34 *In Brazil they speak Portuguese.* p36 ***a* and *an*** *a waiter, an actor, an Italian restaurant* p34 **Adjective + noun** *an American car Spanish oranges* p37
Week 6	# Every day p40 **Present Simple *he/she*** *He gets up at 6.00.* *He has lunch in his office.* p42 *She lives in a small house.* p44 Questions and negatives *What time does he have breakfast?* *He doesn't live in London.* p43 **Adverbs of frequency** *He always works late.* *He never goes out.* p42
Week 7	Mid-term Exam
Week 8	# My favourites p48 **Question words** *who, where, why, how* p48 **Pronouns** Subject/Object/Possessive *I/me/my we/us/our they/them/ their* p49 ***this* and *that*** *I like this wine. Who's that?* p50
Week 9	# Where I live p56 ***There is/are ...*** *There's an old sofa.* *Are there any armchairs?* *There are some books.* p57 **Prepositions** *in, on, under, next to* p58
Week 10	# Times past

	p64 ***was/were born*** *When were you born?* *I was born in 1996.* p65 **Past Simple – irregular verbs** *went, came, saw* *She went shopping.* p68
Week 11	# We had a great time! p72 **Past Simple – regular and irregular** *played, got, watched, did* p72 Questions *What did you do?* *Did you go out?* p73 Negatives *They didn't go to work.* p73 ***ago*** *I went to Rome ten years ago.* p78
Week 12	# I can do that! p80 ***can/can't*** *He can speak French. I can't draw.* *Can she run fast?* p80 **Adverbs** *I can cook a little bit. I can't cook at all.* *really well, fluently* p82 **Requests and offers** *Can you tell me the time? Can I help you?* p83
Week 13	# Please and thank you p88 ***I'd like ...*** *I'd like some ham.* *How much would you like?* p88 ***some* and *any*** *I'd like some cheese.* *Do you have any Emmental?* *I don't have any apple juice.* p89 ***like* and *would like*** *I like Coke.* *I like going to the cinema.* *I'd like to go out.* p91
Week 14	# Here and now p96 **Present Continuous** *She's wearing a T-shirt.*

	What's he doing? p97 **Present Simple and Present Continuous** *He lives in London.* *They're staying in a hotel.* p98
Week 15	It's time to go! p104 **Future plans** *They're going on holiday.* *Which countries are you going to visit?* *I'm leaving on Tuesday.* *What are you doing this evening?* p104 **Revision** Question words – *when, where, who, how* p106 Tenses – present, past, and future tenses p110
Week 16	**Preparatory week before the final Exam**

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Soars, John and Liz, (2011), New Headway Plus, Special Edition, Beginner Level, Oxford University Press.	Yes
Recommended Texts	New Headway Plus provides an integrated skills course with each unit divided into grammar, vocabulary, skills work and everyday English segments	yes
Websites	Oxford University Press: The New Headway series is published by Oxford University Press. Visit their website at www.oup.com and search for "New Headway Plus, Special Edition, Beginner Level " or browse their English language teaching section for information on the course.	

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.