University of Basrah

First Cycle – Bachelor's Degree (B.Sc.) -
Fisheries & Marine Resources

Table of Contents

Academic Program Description Form

University Name: **University of Basrah**

Faculty/Institute: **College of Agriculture**

Scientific Department: **Department of Fisheries & Marine Resources**

Academic or Professional Program Name: **Fisheries & Marine Resources**

Final Certificate Name: **Bachelor's**

Academic System: **Semester system**

Description Preparation Date: **11 June 2025**

File Completion Date: **18 June 2025**

Signature:

Head of Department Name:

Prof. Dr. Khalidah Salim Al-Niaeem

Date: **18 June 2025**

Signature:

Scientific Associate Name:

Prof. Dr. Sadiq Jabar Muhsin

Date: **19 June 2025**

The file is checked by: **Prof. Dr. Riyadh A. Al-Tameemi**

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: **25 June 2025**

Signature:

Prof. Dr. Sarmad Ghazi Mohammed Al-Shawi

Approval of the Dean

1. Mission & Vision Statement

Vision Statement

Fisheries and Marine Resources Departments looks forward to a leading role to promote education and scientific research and community service in the field of Fisheries and Marine Resources**.**
The department plays a big role to be a pattern of distinction in providing high-quality education supported locally and globally and keep pace with the times by providing academic environment where students and faculty interact to create appropriate educational ambience.

Mission Statement

The mission of the Fisheries and Marine Resources Department is to provide a premium and contemporary education to prepare graduates as professionals capable of identifying, evaluating, and solving complex and multi-layered problems in the field of environmental science and engineering, to conduct and encourage fundamental and applied research with a focus of designing and implementing sound, feasible, and sustainable engineering solutions to the environmental real-world issues, to build-up the proficient expertise with a global, inter- disciplinary, and innovative perspective, to be a competent actor coordinating with the public administration, the industry, and the other local, national and, international bodies for implementation of the generated sustainable solutions.

2. Program Specification

Programme code:	BSc-FISH	**ECTS**	240
Duration:	4 levels, 8 Semesters	**Method of Attendance:**	Full Time

The Fisheries and Marine Resources program is a comprehensive and dynamic discipline that explores the intricate relationships within aquatic ecosystems. This degree not only covers the biological aspects of fish and marine organisms but also integrates ecological, environmental, and management principles critical for sustainable practices. For some students, the appeal lies in the diversity of the subject, while for others, it provides a pathway to specialized fields such as aquaculture, marine conservation, and fisheries management.

In the first year, students are introduced to the foundational concepts of fisheries science, creating a solid base for progression into more specialized modules in subsequent years. Core topics covered include fish biology, aquatic ecosystems, and the principles of sustainable resource management. This structure prepares students for research-focused modules in their later studies, ensuring they are well-equipped to address real-world challenges in marine environments.

Throughout Levels 2, 3, and 4, students have the flexibility to choose a significant portion of their module credits, allowing them to tailor their education according to their interests in various aspects of fisheries and marine science. This personalization enables students to explore topics ranging from marine ecology to fish genetics, ensuring they graduate with a well-rounded understanding of the field.

The program fosters a strong research ethos from the outset, with practical experiences embedded within lecture modules and dedicated practical sessions. Students participate in field courses in Level 1, which are mandatory for progression, and have the opportunity to engage in mandatory field studies in later years. In Level 4, every student undertakes an independent research project, which can be laboratory-based, field-oriented, or involve data analysis, allowing them to apply their knowledge in a practical context.

Academic support is a key feature of the program, with tutorials held consistently across Levels 1 and 2, led by the same personal tutor. This continuity ensures students receive tailored guidance and mentorship throughout their studies. These tutorials include workshops designed to develop essential skills such as research methodologies and presentation techniques, alongside assessed exercises that provide students with opportunities to practice and refine their abilities.

Additionally, the program offers options for international study and industrial placements, accommodating individual student needs and career aspirations. This holistic approach prepares graduates to become leaders in sustainable fisheries and marine resources management, equipped to tackle the pressing challenges facing our oceans today.

3. Program Objectives

The Fisheries and Marine Resources Department will:

1. Create, disseminate and integrate knowledge of engineering, science and technology that expands our Fisheries and Marine Resources knowledge base, which in turn enables the betterment of human society.
2. Develop and transfer innovative applications of engineering, science and technology to improve Fisheries and Marine Resources practice.
3. Recognized by our peers as a highly effective leader in the conducted interdisciplinary research and the development of innovative approaches to solve Fisheries and Marine Resources problems.
4. Attract and welcome undergraduate students to our Bachelor of Science program in Fisheries and Marine Resources, and to graduate B.S. students who are innovative problem solvers, who become leaders in their organizations, and who possess the knowledge and skills required for a wide range of careers and career changes.
5. Maintain an intellectually challenging, yet supportive and welcoming environment that encourages and enables our students, faculty and staff to achieve their best in a diverse community.
6. Concentrating on scientific research and its leading role in helping to serve the society and solving its problems through conducting application researches.
7. Continuous development of curricula and studying plans for all stages and levels of studying at the Department to keep up with the latest developments in Fisheries and Marine Resources.
8. Cooperating with related public sector institutions to supply scientific and engineering advice, and preparing different training courses in the development and capacity building for their engineering staffs.

4. Student Learning Outcomes

Biology is the study of the organization and operation of life at the molecular, cellular, organism, and population levels. Graduates obtain information on the historical, technical and social aspects of biology and utilize basic knowledge toward realizing broader concepts. The Department offers a Bachelor of Science in Biology with a concentration in General Biology; Pre-medicine / Pre-dentistry; Biotechnology / Molecular Biology and a minor in Secondary Education that leads to a Public Instruction License. Additionally, the Department offers courses to a large number of students from other departments and supports pre-professional programs. The biology curriculum and experiences are designed to prepare students, in part, for entry into professional health programs, graduate studies, technical careers and education

Outcome 1

The basics of culture and propagating aquatic organisms and manufacturing feeds:

Learn the basic principles of culture and propagating fish and aquatic organisms and manufacturing feed using modern methods.

Outcome 2

The basics of fisheries and fresh and marine water aquatic resources:

Graduates will be able to formally Learn the basic principles of fishing, aquatic life, and exploiting the biological resources found in fresh and marine water bodies using modern methods.

Outcome 3

The basics of the aquatic environment, its preservation, and the problems of water pollution:

Learn the basic principles of preserving the aquatic environment, environmental diversity, sustainability, and avoiding environmental pollutants and their negative effects.

Outcome 4

Knowledge of modern applications in the above fields:

Identify modern and advanced applications in the fields of knowledge related to fish farming and fisheries.

5. Academic Staff

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6. Credits, Grading and GPA

Credits

University of Basrah is following the Bologna Process with the European Credit Transfer System (ECTS) credit system. The total degree program number of ECTS is 240, 30 ECTS per semester. 1 ECTS is equivalent to 25 hrs student workload, including structured and unstructured workload.

Grading

Before the evaluation, the results are divided into two subgroups: pass and fail. Therefore, the results are independent of the students who failed a course. The grading system is defined as follows:

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:				
Number 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.				

Calculation of the Cumulative Grade Point Average (CGPA)

The CGPA is calculated by the summation of each module score multiplied by its ECTS, all are divided by the program total ECTS.

CGPA of a 4-year B.Sc. degree:

CGPA = [(1^{st} module score x ECTS) + (2^{nd} module score x ECTS) + ……] / 240

Curriculum/Modules .7

Semester 1 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UOB104	Democracy and Human Rights	33	17	2	B	
UOB102	English Language	33	17	2	B	
ANCH121	Analytical Chemistry	78	97	7	B	
ZOOL126	Zoology	78	97	7	B	
ECOL105	Ecology	78	97	7	B	
MATH111	Mathematic	48	77	5	B	

Semester 2 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UOB101	Arabic Language	33	17	2	B	
UOB103	Computer	48	27	3	B	
BIOD113	Biodiversity	33	92	5	C	
ICTH145	Ichthyology	78	97	7	C	
LATE119	Laboratory Techniques in Fisheries	48	102	6	C	
CLBO112	Climate Change and Biosustainability	78	97	7	C	

Contact .8

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University of Basrah
جامعة البصرة

First Cycle – Bachelor's Degree (B.Sc.) -
Fisheries & Marine Resources

Table of Contents

1. Overview

This catalogue outlines the courses (modules) offered by the Fisheries & Marine Resources program, designed for students pursuing a Bachelor of Agricultural Science degree. The program comprises 48 modules, totaling 6000 student workload hours and 240 ECTS credits. The delivery of these modules adheres to the principles of the Bologna Process, ensuring a structured and quality-driven approach to higher education. Each module is designed to provide students with the necessary knowledge and skills to excel in the field of fisheries and marine resources, integrating theoretical concepts with practical .applications

2. Undergraduate Courses 2024-2025

Module 1

Code	Course/Module Title	ECTS	Semester
UOB104	Democracy and Human Rights	2	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2/0/0/0	33	17
Description			
The course "Democracy and Human Rights" addresses the fundamental principles and concepts related to democratic governance and human rights. It explores the historical development of democracy, the different democratic systems, and the importance of active citizenship. Students will engage with key human rights documents, such as the Universal Declaration of Human Rights, and analyze their impact on individuals and societies. The course also examines contemporary issues related to human rights violations, social justice, and the role of international organizations in promoting and protecting human rights. Through case studies and discussions, students will critically assess the relationship between democracy and human rights, and understand how each reinforces the other. The course aims to equip students with the knowledge and skills necessary to advocate for democratic values and human rights in different contexts and to foster a spirit of citizenship.			

Module 2

Code	Course/Module Title	ECTS	Semester
UOB102	English Language	2	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2/0/0/0	33	17
Description			
The course "Academic English" focuses on developing the essential language skills that students need in the fields of study and academic research. It emphasizes improving the four core skills: reading, writing, listening, and speaking. In terms of reading, students learn how to analyze academic texts and understand the general structure of research papers and articles. Effective strategies for reading quickly and efficiently are introduced, enabling students to extract key information and important ideas. With regard to writing, the course helps students develop academic essay-writing skills, including organizing ideas, constructing arguments, and using sources appropriately. Special attention is given to writing literature reviews, reports, and research papers, with a focus on proper documentation and citation. For listening, students are trained to comprehend lectures and academic discussions, allowing them to participate effectively in classroom settings. They also learn how to take notes during listening and to analyze the information presented. In speaking, the course encourages students to actively engage in academic discussions and presentations. Their confidence is strengthened in expressing opinions and sharing ideas in a clear and persuasive manner. The course also includes the expansion of academic vocabulary by introducing a range of words and phrases commonly used in academic contexts.			

Module 3

Code	Course/Module Title	ECTS	Semester
ANCH121	Analytical Chemistry	7	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2/3/0/0	78	97
Description			
The course "Analytical Chemistry" in the first year focuses on studying the methods and techniques used in the analysis of chemical substances. It aims to introduce the fundamental principles of analytical chemistry, including various measurements and techniques. The main topics include quantitative and qualitative analysis methods, such as spectroscopic and chromatographic techniques, in addition to studying how to identify chemical pollutants in different samples. The course also addresses the analysis of nutrients, where students learn how to measure nutritional components. The course requires a basic knowledge of general chemistry and readiness for practical laboratory applications, helping students develop the skills necessary to understand and analyze chemical changes in various fields.			

Module 4

Code	Course/Module Title	ECTS	Semester
ZOOL126	Zoology	7	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0/3/0/0	78	97
Description			
The Zoology course provides a general study of animal science, highlighting its importance, various branches, and the relation of some of these branches to the department's specialization. The course covers epithelial and nervous tissues and their scientific and practical applications in fish and other organisms. It also includes the classification of different animals within the Kingdom Protozoa, focusing on selected phyla and genera of medical and veterinary significance, as well as sponges (Phylum Porifera), their types, applications, and importance as marine resources. The course introduces cnidarians (Coelenterata), with emphasis on species relevant to fisheries, in addition to flatworms, nematodes, annelids, crustaceans, and echinoderms. The course further examines the benefits and harms of animals belonging to the above-mentioned groups, and identifies dangerous species affecting fish and aquatic organisms through toxin production, pollution, or by serving as intermediate hosts for parasites that impact fish productivity and reduce their economic value.			

Module 5

Code	Course/Module Title	ECTS	Semester
ECOL105	Ecology	7	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2/3/0/0	78	97
Description			
The course " Ecology" examines the interactions between living organisms and their environments. It aims to provide an understanding of ecosystems and how environmental factors influence the distribution and diversity of organisms. The course begins with an introduction to fundamental ecological concepts, such as ecosystems, biotic and abiotic factors, and the role of each in shaping the environment. Different types of ecosystems are explored, including forests, aquatic systems, and deserts. Focus is also given to interactions among living organisms, such as competition, parasitism, and cooperation. Food chains and food webs are studied to understand how energy and nutrients flow through ecosystems. Biodiversity and its importance in maintaining ecological balance are emphasized, with analysis of threats such as climate change, habitat loss, and pollution. Conservation strategies and sustainable resource management are discussed to enhance environmental awareness among students. Through theoretical lectures and practical activities, the course develops critical and analytical thinking skills for understanding contemporary environmental challenges. Ultimately, it equips students with the knowledge required to apply ecological principles in fields such as natural resource management, environmental conservation, and scientific research.			

Module 6

Code	Course/Module Title	ECTS	Semester
MATH111	Mathematic	5	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	3/0/0/0	48	77
Description			
The course "Mathematics" in the first year is designed to provide students with the mathematical foundations necessary for understanding basic concepts across various disciplines. It begins with an introduction to algebra, where students learn how to work with equations and variables, developing essential problem-solving skills. The course then covers geometry, including the study of geometric shapes, areas, and volumes. Students learn to apply geometric principles to real-life problems, thereby enhancing their understanding of the world around them. Calculus is also introduced, focusing on the fundamental concepts of differentiation and integration and their use in analyzing change. This component is crucial for practical applications in the natural and engineering sciences. In addition, the course addresses data collection, analysis, and interpretation, equipping students with the tools to recognize patterns and behaviors in diverse contexts. The course emphasizes logical reasoning and problem-solving, thereby fostering critical thinking skills. Students are encouraged to work collaboratively and discuss mathematical problems, enhancing their communication and teamwork abilities.			

Module 7

Code	Course/Module Title	ECTS	Semester
UOB101	Arabic Language	2	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2/0/0/0	33	17
Description			
The course "Arabic Language" focuses on developing the fundamental skills necessary for effective communication in Arabic. It aims to enhance students' abilities in reading, writing, listening, and speaking, thereby fostering a deeper understanding of the language and its culture. The course covers essential grammar and morphology, enabling students to construct correct sentences and use vocabulary effectively in different contexts. Reading skills are developed through the analysis of literary and scientific texts, helping students extract main ideas and interpret deeper meanings. Writing skills are strengthened through the preparation of essays, assignments, and reports, with an emphasis on organizing ideas and proper citation. Listening skills are trained through exposure to lectures and discussions, which improves students' ability to participate actively in classroom settings. Students are encouraged to practice speaking and engage in group discussions to build confidence in expressing their opinions. Through practical activities and diverse resources, the course promotes critical thinking and effective communication, enabling students to interact positively with their academic community. Ultimately, it prepares students to use Arabic competently in academic and professional contexts while deepening their appreciation of Arab culture and heritage.			

Module 8

Code	Course/Module Title	ECTS	Semester
UOB103	Computer	3	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	1/2/0/0	48	27
Description			
This course is designed to introduce students to the fundamental concepts of computer systems and their applications. It provides an overview of computer hardware, software, and operating systems, offering students the basic knowledge required to use computers effectively. The course covers word processing applications, enabling students to create, edit, and professionally format documents. Spreadsheet applications are also included, where students learn to enter data, use formulas, and generate analytical outputs and charts. In addition, presentation software is introduced to help students design effective and engaging presentations. The course also focuses on essential internet skills, including online research and evaluating electronic sources, thereby enhancing students' ability to access accurate and reliable information. Practical assignments and projects are integrated to encourage hands-on application of acquired skills. Ultimately, this course aims to equip students with the basic computer knowledge and practical competencies needed for academic success and to prepare them for future professional environments.			

Module 9

Code	Course/Module Title	ECTS	Semester
BIOD113	Biodiversity	5	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2/0/0/0	33	92
Description			
This course focuses on the study of life's diversity on Earth and its importance in maintaining ecosystems and planetary health. It aims to develop an understanding of biodiversity, which includes species diversity, genetic diversity, and ecosystem diversity. The course begins with an introduction to the definition and dimensions of biodiversity, including species and ecosystems. It explores the significance of biodiversity in supporting life, such as providing food, medicine, and natural resources, as well as its role in ensuring environmental stability. The course also addresses the threats facing biodiversity, such as habitat loss, climate change, pollution, and invasive species, analyzing their impacts on ecosystems and natural resources. Conservation strategies are examined, including the establishment of protected areas, ecological restoration, and sustainable practices, with reference to successful global case studies. Through lectures and practical activities, the course seeks to raise awareness of the importance of biodiversity and to foster students' critical thinking skills. It encourages active participation in environmental conservation efforts. In conclusion, the course aims to equip students with the knowledge and skills necessary to understand the challenges related to biodiversity and to contribute to sustainable solutions.			

Module 10

Code	Course/Module Title	ECTS	Semester
ICTH145	Ichthyology	7	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2/3/0/0	78	97
Description			
This course examines fish as biological organisms from multiple perspectives, including their taxonomy, biology, and behavior. It aims to provide students with a comprehensive understanding of fish biodiversity and their ecological importance within aquatic systems. The course begins with an overview of fish taxonomy, highlighting the main groups and species, and analyzing the morphological and physiological traits that distinguish them, as well as their ecological roles. Focus is also placed on fish biology, including growth, nutrition, and reproduction. The course explores how environmental factors influence fish behavior and distribution, allowing students to better understand the complex interactions within aquatic ecosystems. Additional emphasis is given to fisheries management and conservation strategies, including the study of threats such as pollution and habitat loss, alongside effective approaches for protecting endangered species. Through lectures and practical activities, students are encouraged to conduct independent research and analyze field data, thereby enhancing their research and analytical skills. Ultimately, the course equips students with the knowledge and skills required to apply ichthyological principles in areas such as marine resource management and biodiversity conservation.			

Module 11

Code	Course/Module Title	ECTS	Semester
LATE119	Laboratory Techniques in Fisheries	6	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2/1/0/0	48	102
Description			
This course introduces students to a set of essential skills used in the study and management of aquatic organisms. It is designed to provide students with the tools and knowledge required to perform experiments and analyses in fisheries laboratories. The course begins with laboratory safety, emphasizing the importance of following proper protocols and procedures to ensure personal and environmental safety. It then addresses data collection techniques, including methods of sampling water and fish, with a focus on proper handling of samples to guarantee reliable results. Special emphasis is placed on water quality analysis, where students are trained to measure key chemical and physical parameters such as pH, temperature, and dissolved oxygen, all of which directly influence the health of aquatic organisms. The course also covers techniques for fish species identification, enabling students to recognize different species and understand associated biodiversity. In addition, students learn how to conduct fish health assessments, including the detection of diseases and disorders, and to apply diagnostic tools and procedures to maintain aquatic health. Through a combination of theoretical lectures and practical applications, the course aims to strengthen students' hands-on understanding of laboratory techniques and their applications in fisheries science.			

Module 12

Code	Course/Module Title	ECTS	Semester
CLBO112	Climate Change and Biosustainability	7	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0/3/0/0	78	97
Description			
This course explores the impacts of climate change on ecosystems and living organisms. It aims to provide students with a comprehensive understanding of the global challenges posed by climate change and the strategies required to achieve sustainability under such conditions. The course begins with an introduction to climate change, addressing its main drivers—such as greenhouse gas emissions and their effects on global temperatures and climate patterns. It analyzes how ecosystems and biodiversity are affected by these changes. The concept of biological sustainability is emphasized, focusing on the preservation of biodiversity and environmental resources for future generations. Effective strategies for climate change adaptation are explored, including natural resource management and sustainable agricultural practices. The course also examines the social and economic implications of climate change, such as its effects on food security, public health, and water resources, while analyzing how communities respond to these challenges. Through lectures and group discussions, the course aims to raise awareness of the importance of adaptation and sustainability. Students are encouraged to engage in critical thinking and develop innovative solutions to climate-related challenges. Ultimately, the course equips students with the knowledge and skills necessary to contribute to biological sustainability and climate change adaptation, preparing them for future roles in environmental protection and sustainable management.			

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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Democracy and Human Rights**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UOB104**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	FISHERIES		**College**	College of Agriculture	
Module Leader	Dr. Widad Salem Muhammad		**e-mail**	widad.mohammad@uobasrah.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	Msc	
Module Tutor			**e-mail**		
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	01/09/2024		**Version Number**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. Explain Democratic Principles: Understand the fundamental principles of democracy, including popular sovereignty and separation of powers. 2. Analyze Human Rights Frameworks: Review key international human rights documents and their importance in protecting rights globally. 3. Evaluate Current Issues: Critically assess contemporary issues related to democracy and human rights through case studies. 4. Assess Institutional Roles: Examine the roles of various institutions in upholding democracy and human rights. 5. Promote Active Citizenship: Develop strategies for fostering civic engagement and individual actions that support democracy and human rights.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Articulate Key Concepts: Students will be able to clearly articulate key concepts related to democracy and human rights. 2. Analyze Case Studies: Students will analyze case studies to identify challenges and successes in promoting democracy and human rights. 3. Evaluate Legal Frameworks: Students will evaluate the effectiveness of national and international legal frameworks in protecting human rights. 4. Critically Assess Media Influence: Students will assess the role of media in shaping public perceptions of democracy and human rights issues. 5. Engage in Discussions: Students will engage in informed discussions about current events related to democracy and human rights, demonstrating critical thinking skills. 6. Design Advocacy Strategies: Students will design advocacy strategies aimed at promoting human rights and democratic principles within their communities.
Indicative Contents المحتويات الإرشادية	**Indicative Content for Democracy and Human Rights** Part A - Foundations of Democracy Introduction to Democracy Definitions, historical evolution, and forms of democratic governance. [SSWL=5 hrs] Principles of Human Rights Overview of human rights concepts and their relationship with democracy. [SSWL=5 hrs] Part B - Human Rights in Practice Civil and Political Rights Exploration of civil liberties, political rights, and the right to a fair trial. [SSWL=5 hrs] Economic, Social, and Cultural Rights Understanding rights related to work, education, and health. [SSWL=5 hrs] Part C - Engaging with Democracy and Human Rights Current Issues in Human Rights Analysis of contemporary issues such as gender equality and minority rights. [SSWL=5 hrs]

	Public Participation and Civic Engagement Methods and importance of civic engagement in democratic processes. [SSWL=5 hrs] Revision and Problem-Solving Sessions Review of key concepts and preparation for assessments. [SSWL=5 hrs] Total SSWL = 30 hrs Total hrs = 30 SSWL - (Exam hrs) = 32 - 2 = 30 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The course will feature interactive lectures with multimedia to engage students in democracy and human rights concepts. Small group discussions will promote critical thinking and diverse perspectives. Real-world case studies will illustrate the application of principles, while role-playing activities will help students empathize with different stakeholders. Guest speakers from the field will provide insights, and collaborative projects will allow students to investigate specific human rights issues. Online discussion forums will facilitate ongoing engagement. Reflective journal entries will encourage personal connections to the material, and research assignments will support independent inquiry. Timely feedback on assessments will enhance learning and improvement.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	20	**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 / Lab.				
	Report	1	20% (20)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to Democracy
Week 2	Principles of Human Rights
Week 3	Principles of Human Rights
Week 4	Economic, Social, and Cultural Rights
Week 5	Key Human Rights Documents
Week 6	Democratic Institutions
Week 7	Current Issues in Human Rights
Week 8	Role of Non-Governmental Organizations (NGOs)
Week 9	Public Participation and Civic Engagement
Week 10	Global Perspectives on Democracy
Week 11	Advocacy and Policy Making
Week 12	Media and Human Rights
Week 13	Reflective Practices
Week 14	Revision and Problem-Solving
Week 15	Assessments and Feedback
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	
Week 2	

Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	a- Relying on the prescribed curricula issued by the Ministry. Among them: The book on human rights, written by: Hafez Alwan Hammadi Al-Dulaimi. 2010 B- Relying on the curricula prepared by the subject teacher.	Yes
Recommended Texts	1- The Genesis of Human Rights, written by: Lynn Hunt, translated by: Fayqa Girgis Hanna 2- -Al The Philosophy of Human Rights, written by Ansam Amer Sudani 3- Human Rights in the Western Religious Heritage and Islam, written by: Muhammad Jalaa Idris and Amal Muhammad Abd al-Rahman Rabie.	No
Websites	The United Nations website: https://www.un.org/ar/global-issues/human-rights	

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**English Language**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UOB102**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level		1	**Semester of Delivery**		1
Administering Department		FISHERIES	**College**	College of Agriculture	
Module Leader	Dr. Hazim Sabah Al-Hamadani		**e-mail**	hazim.rahmah @uobasrah.edu.iq	
Module Leader's Acad. Title		Lecturer	**Module Leader's Qualification**		Ph.D.
Module Tutor			**e-mail**		
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date		01/09/2024	**Version Number**		1.0

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. Develop overall language proficiency in listening, speaking, reading, and writing skills. 2. Improve communication abilities in English for various contexts and purposes. 3. Expand vocabulary knowledge and usage in different topics and disciplines. 4. Enhance grammar, sentence structure, and language mechanics for accuracy and fluency. 5. Foster critical thinking and intercultural competence while promoting collaborative skills.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. **Effective Communication**: Demonstrate the ability to write clear and coherent academic essays, incorporating appropriate structure and argumentation. 2. **Critical Reading Skills**: Analyze and interpret various academic texts, identifying main ideas, arguments, and supporting details. 3. **Research Proficiency**: Conduct effective research using academic sources, integrating findings appropriately into written assignments. 4. **Oral Presentation Skills**: Deliver organized and engaging presentations on academic topics, utilizing visual aids and responding to audience questions.
Indicative Contents المحتويات الإرشادية	**Indicative Content for Academic English** **Part A - Foundations of Academic Writing** **Introduction to Academic Writing** Overview of academic writing conventions, importance of clarity, and coherence. [SSWL=5 hrs] **Essay Structure** Understanding the components of academic essays, including thesis statements, introductions, body paragraphs, and conclusions. [SSWL=5 hrs] **Part B - Reading and Research Skills** **Critical Reading Techniques** Strategies for analyzing academic texts, identifying key arguments, and evaluating sources. [SSWL=5 hrs] **Research Methodology** Introduction to research methods, using academic databases, and proper citation practices. [SSWL=5 hrs] **Part C - Presentation and Communication Skills** **Oral Presentation Skills** Techniques for organizing and delivering effective presentations, including the use of visual aids. [SSWL=5 hrs] **Digital Communication** Best practices for academic communication through email and online platforms, including etiquette and clarity. [SSWL=5 hrs]

	Total SSWL = 30 hrs Total hrs = 30 SSWL - (Exam hrs) = 32 - 2 = 30 hrs (Time table hrs x 15 weeks)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The course will utilize interactive lectures to introduce key concepts in academic English, complemented by hands-on writing workshops for practical application. Group discussions will foster collaborative learning and critical thinking, while peer review sessions will enhance editing skills and provide constructive feedback. Additionally, students will engage in research projects that encourage independent inquiry and the use of academic resources. Finally, oral presentations will help develop effective communication skills, allowing students to articulate their ideas clearly and confidently.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	20	**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	20% (20)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.				
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to Academic Writing : Overview of course objectives and writing conventions.
Week 2	Essay Structure : Components of an academic essay: thesis, introduction, body, and conclusion.
Week 3	Developing Thesis Statements : Crafting clear and concise thesis statements.
Week 4	Paragraph Development : Techniques for writing effective and cohesive paragraphs.
Week 5	Critical Reading Skills : Analyzing academic texts and identifying key arguments.
Week 6	Research Methodology : Introduction to research methods and using academic databases.
Week 7	Citing Sources : Understanding citation styles (APA, MLA, etc.) and avoiding plagiarism.
Week 8	Drafting Essays : Writing first drafts with an emphasis on structure and coherence.
Week 9	Peer Review Process : Engaging in peer reviews to provide and receive feedback on drafts.
Week 10	Revising and Editing : Techniques for revising drafts and improving clarity and style.
Week 11	Oral Presentation Skills : Organizing and delivering effective presentations.
Week 12	Visual Aids in Presentations : Utilizing slides and other visual aids effectively.
Week 13	Digital Communication : Best practices for academic communication through email and online platforms.
Week 14	Final Project Preparation : Working on final essays and presentations, incorporating feedback.
Week 15	Final Presentations and Assessments : Delivering final presentations and submitting final essays.
Week 16	**Preparatory week before the final Exam**

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

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Eastwood, J. (2006). Oxford Practice Grammar – Intermediate. OUP.	Yes
Recommended Texts	Graff, G. (2014). They Say / I Say: The Moves That Matter in Academic Writing (Third Edition).	No
Websites	https://www.duolingo.com/enroll/en/uk/Learn-English	

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Analytical Chemistry**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**ANCH121**				
ECTS	**7**				
SWL (hr/sem)	**175**				
Module Level		1	**Semester of Delivery**		1
Administering Department		Food science	**College**	Agriculture	
Module Leader	Faleeha Hasan Hussein		**e-mail**	faleeha.hussein@uobasrah.edu.iq	
Module Leader's Acad. Title		Assistant professor	**Module Leader's Qualification**		Ph.D.
Module Tutor	Faleeha Hasan Hussein		**e-mail**	faleeha.hussein@uobasrah.edu.iq	
Peer Reviewer Name		Name	**e-mail**	E-mail	
Scientific Committee Approval Date		2024/9/2	**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	A general study of chemistry, including analytical chemistry, which is divided into two types: quantitative analysis and descriptive qualitative analysis, knowledge of the requirements for volumetric analysis, and also methods for expressing the concentration of solutions to know their weights. Analytical chemistry also studies the indicators used in the analysis of acids and bases, the foundations of choosing the indicator, the mechanism of the work of the indicator, and calculating the ph for all solutions. * Objectives of analytical Chemistry By knowing the objectives of analytical Chemistry, the following can be reached: - • Study the basics of analytical chemistry and its sections • Determining the weights of some chemicals using volumetric determination methods • Knowing the requirements for volumetric corrosion • Methods of expressing the concentration of solutions to determine the weights of some compounds • Analysis of acids and bases • Knowing the evidence used in analyzing acids and bases • Interpreting the work of the guide • How to choose the appropriate guide • Calculate the pH of all solutions
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	The graduate of the department is awarded a degree (Bachelor of Science in general chemistry) and acquires the following skills: 1- The ability to apply knowledge of the general chemistry method and related techniques 2- The ability to evaluate and implement experiments. 3- The ability to use ready-made programs to accomplish the required cases. 4- The ability to work with diverse teams. 5- The ability to know and bear responsibility. 6- The ability to communicate. 7- The ability to use skills. 8- The ability to intertwine with other specializations to serve them
Indicative Contents المحتويات الإرشادية	The guiding content includes the following. - Be extremely careful when sorting chemicals that cause violent reactions when mixed together. [SSWL=10 hrs] - Immediately dispose of containers that do not have a label indicating their contents at the end of the daily working hours. [SSWL=10 hrs] - Operate the suction fan (pump) to get rid of fumes. [SSWL=10 hrs]

	- Connect electric heating devices to a control device to disconnect the power from the device in the event of a noticeable rise in the temperature of the device. [SSWL=10 hrs] - Periodically check the efficiency of the laboratory devices and keep records of the devices that have been checked to determine their validity. [SSWL=10 hrs] - Use both hands when handling large bottles and do not lift them up. [SSWL=10 hrs] - Return all materials, glassware and equipment to their designated places after use. [SSWL=15 hrs] Total hrs = 75 SSWL - (Exam hrs) = 77 - 2 = 75 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1- Identify the tools and devices used in chemical analysis and train to use and deal with them correctly. 2- Identify some chemical materials and their physical and chemical properties and their solutions and how to prepare them. 3- Practice writing equations correctly. 4- Practice choosing the appropriate guide for the calibration process. 5- Practice performing various chemical calibrations correctly and with high confidence. 6- Practice performing chemical calculations and calculations of concentrations and purity.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	75	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	100	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6.6
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**175**		

Module Evaluation تقييم المادة الدراسية

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

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Analytical chemistry
Week 2	Types of oxidation and reducing agents
Week 3	Standard solution
Week 4	Calculating the pH of buffer solutions
Week 5	Volumetric titration methods
Week 6	Examples of Volumetric titration methods
Week 7	Calculating the pH of acids and bases
Week 8	Calculating the pH of salts
Week 9	Mid-term exam
Week 10	Acid-base titration
Week 11	True redox indicators
Week 12	How to choose the right guide
Week 13	Titration Base-Acid
Week 14	Calculate the pH of all solutions
Week 15	**Preparatory week before the final Exam**
Week 16	

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered

Week 1	Lab 1: principle of volumetric analysis by titrimetric method:
Week 2	Lab 2: Standard solutions
Week 3	Lab 3: Concentration of solutions
Week 4	Lab 4: Molarity(M)
Week 5	Lab 5: Normality (N)
Week 6	Lab 6: volumetric Titration Methods
Week 7	Lab 7: final Exam

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	[1] Fundamentals of general chemistry [2] Foundations of quantum chemistry: theory and practice [3] Mohi- AL- ddin al-Bakush and others. (2003). Principles of General Chemistry, Tripoli, 687 p. 4-The theoretical and practical foundations of quantitative and gravimetric chemistry	Yes
Recommended Texts	Pauling, L. (1988). General chemistry. Courier Corporation.	No
Websites		

Grading Scheme
مخطط الدرجات

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Zoology**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	ZOOL126				
ECTS Credits	**7**				
SWL (hr/sem)	**175**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Fisheries & Marine Resources		**College**	College of Agriculture	
Module Leader	Dr. Thamir K. Adday		**e-mail**	thamir.adday@uobasrah.edu.iq	
Module Leader's Acad. Title	Assistant professor		**Module Leader's Qualification**	Ph.D.	
Module Tutor	Dr. Thamir K. Adday		**e-mail**	thamir.adday@uobasrah.edu.iq	
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	1/9/2024		**Version Number**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1- Definition of zoology and its branches. 2- Knowing the structures of animals and their distinction. 3- Identify the benefits and harms of different animals.

Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Recognize the Zoology, the importance and fields 2- Definitions of different families of Kingdom Animalia 3- Summarize advantages and disadvantages of different animals 4- The Aquaculture and the dangerous animals effects 5- Describe different i systems of animals groups 6- Discuss the animals in red list and Preserving animals from extinction
Indicative Contents المحتويات الإرشادية	**Indicative Content forZoology** **Part One:** **A** Study of zoology in general and explain the importance of studying it and its various branches and the relationship of some branches of zoology to the specialization of the scientific department. . [SSWL=15 hrs] **B** Animal tissues including epithelial tissues and connective tissues and muscle tissues and nervous tissues and their scientific and practical applications for fish and other organisms. . [SSWL=15 hrs] **Part Two:** **A** Study the classification of different animals within the kingdom of protozoa and some of the divisions and genera belonging to it and the pathological ones within the direction of the department. Study of animals within the division of porosity [SSWL=15 hrs] **B** sponges, their types and applications and their use as important marine resources, identifying the division of cnidarians (coelomate) and those related to fish wealth. Identifying flatworms and the genera and those belonging to them in addition to nematodes and annelid worms, crustaceans and echinoderms. [SSWL=15 hrs] **Part Three:** Studying the benefits and harms of the various animals belonging to the animal phyla mentioned above, and identifying the dangerous species among them that harm fish and other aquatic life secreting toxins or causing pollution, or may be intermediate hosts for parasites that infect fish and reduce their productivity and consumer value [SSWL=15 hrs] Total hrs = 75 SSWL - (Exam hrs) = 77 - 2 = 75 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The course will feature interactive lectures with multimedia to engage students in definitions and taxonomy of animals. Group discussions will promote the diverse perspectives and provided the mainly information for different animals and the relationship with the others and the advantages and disadvantages. Another activities will help students to acknowledgment the animals that commercial value and any has role or affect in the environment. The course will improved the animals as intermediate hosts of many parasites and its effect of other animals and the human.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	75	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	100	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6.6
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	15% (15)	Continuous	All
	Report	1	5% (5)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Animal cell and Animal Tissues part 1
Week 2	Animal cell and Animal Tissues part 2
Week 3	Kingdom Protozoa and Phylum Porifera part 1
Week 4	Kingdom Protozoa and Phylum Porifera part 2
Week 5	Phylum Cnidaria
Week 6	1st monthly exam
Week 7	Platyhelminthes- Turbellaria, Trematoda

Week 8	Platyhelminthes- Cestoda
Week 9	Phylum Nematoda
Week 10	Phylum Annelida
Week 11	2nd monthly exam
Week 12	Phylum Arthropoda part 1
Week 13	Phylum Arthropoda part 2
Week 14	Phylum Mollusca
Week 15	Phylum Echinodermata
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: General introduction to the microscope, its importance and uses
Week 2	Lab 2: Animal epithelial and connective tissues
Week 3	Lab 3: Animal muscular and nervous tissue
Week 4	Lab 4: The kingdom of the different primary and divisions
Week 5	Lab 5: The phylum of sponges and the genera of this phylum
Week 6	Lab 6: The Cnidaria phylum, its characteristics and the genera belonging to
Week 7	Lab 7: Division of flatworms, class of flukes and flukes, their characteristics and genera
Week 8	Phylum of flatworms, classification of tapeworms, their characteristics and the
Week 9	Phylum Nematoda
Week 10	Division of annelids
Week 11	Phylum Artthropoda
Week 12	Monthly exam
Week 13	Discussing the submitted reports
Week 14	Classification of animal models belonging to students

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	General Zoology (2000) .Storer; T.I, Usinger, R.L. and Stebbins	Yes

Recommended Texts	Practical Zoology Dr. Alwan Al-Waeli and Dr. Amal Al-Khatib Practical animal biology Dr. Ahmed Hammad Al-Husseini	No
Websites	https://guides.lib.ua.edu/invertebrate_zoology	

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Ecology**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**ECOL105**				
ECTS Credits	**7**				
SWL (hr/sem)	**175**				
Module Level		1	**Semester of Delivery**		1
Administering Department		FISHERIES	**College**	College of Agriculture	
Module Leader	Dr. Mujtaba A.T. Ankush		**e-mail**	mujtaba.tahir@uobasrah.edu.iq	
Module Leader's Acad. Title		Assistant Professor	**Module Leader's Qualification**		Ph.D.
Module Tutor	Dr. Mujtaba A.T. Ankush		**e-mail**	mujtaba.tahir@uobasrah.edu.iq	
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date		01/09/2024	**Version Number**		1.0

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	**1. Understand Ecosystem Dynamics:** Explain the structure and function of ecosystems, including energy flow and nutrient cycling. **2. Analyze Species Interactions:** Evaluate various types of species interactions, such as predation, competition, and symbiosis. **3. Explore Population Ecology:** Examine population dynamics, including factors that influence population growth and regulation. **4. Assess Biodiversity and Conservation:** Discuss the importance of biodiversity, threats to ecosystems, and strategies for conservation. **5. Integrate Ecological Principles:** Apply ecological concepts to real-world environmental issues and sustainability practices.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Demonstrate an understanding of ecosystem components, dynamics, and the roles of different organisms. 2. Analyze and describe various interactions between species and their ecological implications. 3. Assess population growth patterns and the factors that influence population size and stability. 4. Recognize the significance of biodiversity and its impact on ecosystem health and resilience. 5. Utilize ecological principles to propose solutions for environmental challenges and promote sustainability.
Indicative Contents المحتويات الإرشادية	**Indicative Content for Principles of Ecology** **Part A - Introduction to Ecology** Overview of Ecosystems Introduction to ecosystem components, structure, and function, including biotic and abiotic factors. [SSWL=10 hrs] Species Interactions Examination of different types of species interactions such as predation, competition, and mutualism. [SSWL=10 hrs] **Part B - Population and Community Ecology** Population Dynamics Understanding population growth models, factors influencing population size, and carrying capacity. [SSWL=15 hrs] Community Structure Analysis of community composition, diversity, and ecological niches. [SSWL=10 hrs] **Part C - Ecosystem Dynamics**

	Energy Flow and Nutrient Cycling Exploration of energy transfer in ecosystems and the cycling of nutrients through biogeochemical cycles. [SSWL=10 hrs] Biodiversity and Conservation Study of biodiversity concepts, threats to ecosystems, and conservation strategies. [SSWL=10 hrs] **Part D - Human Impact and Sustainability** Human Influence on Ecosystems Assessment of anthropogenic effects on ecosystems, including habitat destruction and climate change. [SSWL=5 hrs] Sustainable Practices Exploring sustainable practices and their importance in ecology and conservation efforts. [SSWL=5 hrs] Total SSWL = 75 hrs SSWL - (Exam hrs) = 77 - 2 = 75 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The course will utilize a blend of interactive lectures and hands-on activities to engage students in ecological concepts. Field studies will provide real-world experience in observing ecosystems and species interactions. Group discussions will encourage critical thinking and collaborative learning, allowing students to explore complex ecological issues together. Case studies will highlight the application of ecological principles to contemporary environmental challenges. Regular assessments and feedback will guide student progress and deepen their understanding of ecological concepts.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	75	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	100	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6.6
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**175**		

Module Evaluation

تقييم المادة الدراسية

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

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to ecology and the importance of studying ecosystems.
Week 2	Overview of biotic and abiotic factors in ecosystems.
Week 3	Types of ecosystems and their characteristics.
Week 4	Species interactions: predation, competition, and mutualism.
Week 5	Population dynamics: growth models and factors affecting population size.
Week 6	Community structure: diversity, composition, and ecological niches.
Week 7	Energy flow in ecosystems: food chains and food webs.
Week 8	Nutrient cycling: biogeochemical cycles (carbon, nitrogen, phosphorus).
Week 9	Biodiversity: definitions, measurements, and significance.
Week 10	Threats to biodiversity: habitat loss, invasive species, and climate change.
Week 11	Conservation strategies: protected areas, restoration ecology, and sustainable practices.
Week 12	Human impacts on ecosystems: pollution, urbanization, and resource exploitation.
Week 13	Ecological footprint and sustainability concepts.
Week 14	Case studies of successful conservation efforts and ecological restoration.
Week 15	Review of key concepts and final assessments.
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	• Introduction to laboratory safety and procedures, familiarization with ecological research methods and tools.
Week 2	• Field study: Conducting ecosystem surveys to observe and record biotic and abiotic factors.
Week 3	• Species interaction experiments: Observing predator-prey dynamics and competition in controlled settings.
Week 4	• Population sampling techniques: Using quadrats and transects to estimate population density and diversity.
Week 5	• Energy flow analysis: Constructing food webs and energy pyramids based on collected data.
Week 6	• Nutrient cycling experiment: Investigating soil composition and the effects of different fertilizers on plant growth.
Week 7	• Final project presentations: Summarizing lab findings, methodologies, and reflections on ecological concepts learned.

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Barnes, R. S. K. and K . H. Mann (2009). Fundamentals of Aquatic Ecology, 2nd Ed. Wiley Blackwell	Yes
Recommended Texts	D. Hussein Al-Saadi, Dr. Najm al-Dahham and Laith al-Hussan. (1986). Aquatic ecology	No
Websites	https://www.nationalgeographic.com/environment/ecology/	

Grading Scheme مخطط الدرجات				
Group	**Grade**	التقدير	**Marks %**	**Definition**
Success Group (50 - 100)	**A** - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
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Fail Group (0 – 49)	**FX** – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	رياضيات			**Module Delivery**	
Module Type	Basic			☒ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	MATH111				
ECTS Credits	5				
SWL (hr/sem)	125				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Type Dept. Code		**College**	Type College Code	
Module Leader	سمير خيري لازم		**e-mail**	samir.lazim@uobasrah.edu.iq	
Module Leader's Acad. Title	Professor		**Module Leader's Qualification**	MS.c	
Module Tutor	سمير خيري لازم		**e-mail**	samir.lazim@uobasrah.edu.iq	
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	01/09/2024		**Version Number**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. تزويد الطالب بالطرق المتنوعة في المشتقة والتكامل للدوال من أجل تنمية قدراته العقلية عند حل التمارين .

	2. تمكين الطلبة من التوصل إلى حل للمشكلة والاستفادة منها في مواد علمية أخرى. 3. - تعلم كيفية التعامل مع المتجهات وتحليلها لزيادة معرفته عند التعامل مع الكميات الفيزيائية وتطبيقها في دروسه العلمية التخصصية. 4. ربط البيانات الرياضية بمعلوماته للوصول إلى حل للقضية والاستفادة منها في موضوعات علمية أخرى. 5. سيكون الطلاب بعد اجتياز هذه الدورة قادرين على فهم مبادئ الرياضيات الأساسية ويمكنهم التعامل مع المشاكل الرياضية المختلفة مما يجعلهم مؤهلين لفهم مواضيع جديدة أكثر تعقيدًا.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. فهم وتطبيق مجموعة متنوعة من الأساليب الرياضية: يتعلم الطلاب مجموعة متنوعة من الطرق والأساليب الرياضية المختلفة التي يمكن استخدامها لحل المسائل الرياضية المعقدة. 2. تطوير مهارات التفكير النقدي :يتم تعزيز مهارات التحليل والتركيب والتفكير النقدي عندما يتعلم الطلاب طرقًا رياضية متنوعة .يتم تشجيع الطلاب على التفكير بشكل منهجي والتحليل العميق للمسائل الرياضية 3. القدرة على حل المسائل الرياضية المعقدة: يتعلم الطلاب كيفية تحليل وفهم المسائل الرياضية المعقدة وتطبيق الأساليب والتقنيات الرياضية المناسبة لحلها بشكل صحيح. 4. التفكير الإبداعي والابتكار: يشجع تعلم طرق رياضية متنوعة الطلاب على التفكير الإبداعي والابتكار في مجال حل المسائل الرياضية. يتعلم الطلاب كيفية تطوير حلول جديدة وفريدة باستخدام الأساليب الرياضية.
Indicative Contents المحتويات الإرشادية	مقدمة عن الدالة – منطلق ومدى الدالة - أمثلة وتمارين حول مدى ومنطلق الدالة - غاية الدالة – غاية الدالة ان وجدت – فحص غاية يمين ويسار الدالة. [SSWL=15 hrs] غاية الدالة اللانهائية – أمثلة وتمارين - رسم الدوال بابسط صورة ممكنة - المشتقة – الصيغ العامة للأشتقاق – مشتقة الدالة البارامترية – التفاضل الضمنية. [15 hrs] تطبيقات المشتقة لأيجاد معادلة المستقيم المماس لمنحني الدالة – قاعدة السلسلة [SSWL=10 hrs] مقدمة عن التكامل- صيغ التكامل الغير محدد- التكامل المحدد - الدوال اللوغارتمية – الخواص - مشتقة وتكامل الدوال اللوغارتمية [SSWL=15 hrs] مراجعة عامة وتمارين [SSWL=6 hrs] الدوال الأسية – الخواص – مشتقة وتكامل الدوال الأسية - الدوال المثلثية – الخواص – مشتقة وتكامل الدوال المثلثية [SSWL=15 hrs] مقدمة عامة عن المتجهات – وحدة المتجه – معادلة المتجه في المستوي - المتجه في الفضاء – معادلة المتجه في الفضاء [SSWL=14 hrs] المتجه في الفضاء – معادلة المتجه في الفضاء - ضرب المتجهات – الضرب الثنائي العددي والمتجهي – الضرب الثلاثي العددي والمتجهي [SSWL=15 hrs] Total hrs = 105 = SSWL - (Exam hrs) = 109 - 4 = 105 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	الاستراتيجية الرئيسية التي سيتم اعتمادها في تقديم هذه الوحدة هي تشجيع مشاركة الطلاب في التمارين، والتي سيتم تحقيقها من خلال المشاركة في الأنشطة التعليمية التي تساهم في تطوير استراتيجيات حل المشكلات ومهارات التفكير لفهم المفاهيم الرياضية. إن استخدام استراتيجيات التدريس التي تتطلب المشاركة المعرفية في بناء المعرفة الجديدة يسلط الضوء على أهمية حل المشكلات في الرياضيات. إن استخدام مهام حل المشكلات التي تلبي طرق التفكير المختلفة التي يظهرها الطلاب، بناءً على المعرفة التي يجلبونها إلى الفصل الدراسي.

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	80	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	5.3
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**125**		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	3	15% (15)	5 and 10	LO #1, #2 and #10, #11
	Assignments	3	15% (15)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	0	0	Continuous	All
	Report	1	10%(10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		100% (100 Marks)

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	مقدمة عن الدالة – منطلق ومدى الدالة
Week 2	أمثلة وتمارين حول مدى ومنطلق الدالة
Week 3	غاية الدالة – غاية الدالة ان وجدت – فحص غاية يمين ويسار الدالة
Week 4	غاية الدالة اللانهائية – أمثلة وتمارين
Week 5	رسم الدوال بابسط صورة ممكنة
Week 6	المشتقة – الصيغ العامة للأشتقاق – مشتقة الدالة البارامترية – التفاضل الضمني
Week 7	تطبيقات المشتقة لأيجاد معادلة المستقيم المماس لمنحني الدالة – قاعدة السلسلة
Week 8	مقدمة عن التكامل- صيغ التكامل الغير محدد- التكامل المحدد

Week 9	الدوال اللوغارتمية – الخواص - مشتقة وتكامل الدوال اللوغارتمية
Week 10	الدوال الأسية – الخواص – مشتقة وتكامل الدوال الأسية
Week 11	الدوال المثلثية – الخواص – مشتقة وتكامل الدوال المثلثية
Week 12	مقدمة عامة عن المتجهات – وحدة المتجه – معادلة المتجه في المستوي
Week 13	المتجه في الفضاء – معادلة المتجه في الفضاء
Week 14	ضرب المتجهات – الضرب الثنائي العددي والمتجهي – الضرب الثلاثي العددي والمتجهي
Week 15	أسبوع التحضير قبل الامتحان النهائي

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	[1] Thomas' Calculus: Thirteenth Edition , George B. Thomas, Jr.2006 [2] التفاضل والتكامل-تاليف الدكتور علي عزيز علي وعبد الرزاق علي الجامعة المستنصرية- 1980	Yes
Recommended Texts		
Websites		

Grading Scheme
مخطط الدرجات

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Arabic Language**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UOB101**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	FISHERIES		**College**	College of Agriculture	
Module Leader	Anwar Khaled Weleed		**e-mail**	anwarwaleed@uobasrah.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	MSc	
Module Tutor			**e-mail**		
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	01/09/2024		**Version Number**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	**1. Strengthen Arabic Language Skills:** Enhance proficiency in reading, writing, speaking, and listening to facilitate effective communication in academic and everyday contexts. **2. Master Arabic Grammar and Syntax:** Understand and apply the rules of Arabic grammar and sentence structure to improve language accuracy and clarity. **3. Expand Vocabulary and Expression:** Build a diverse vocabulary relevant to various subjects and situations, enabling students to express themselves more effectively. **4. Promote Cultural Understanding:** Explore the rich cultural heritage of Arabic-speaking communities to foster a deeper appreciation of language and traditions. **5. Encourage Analytical Thinking:** Develop critical thinking skills through the analysis of Arabic texts, enhancing comprehension and interpretation of diverse materials.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Demonstrate effective communication skills in Arabic through reading, writing, speaking, and listening. 2. Apply grammatical rules and syntax to produce accurate and coherent Arabic texts. 3. Utilize an expanded vocabulary to express ideas clearly in both academic and everyday contexts. 4. Analyze and interpret cultural texts, enhancing understanding of Arabic-speaking communities and their heritage. **5.** Exhibit critical thinking skills by evaluating and discussing various Arabic texts and concepts.
Indicative Contents المحتويات الإرشادية	**Indicative Content for Arabic Language** **Part A - Importance of the Arabic Language** **The Importance of Arabic for Scientific Specializations** Exploration of the role of Arabic in scientific fields and its distinction among living languages. [SSWL=5 hrs] **Part B - Quranic Studies** **Surat Al-Kahf: Reasons for Revelation** Study of the historical and contextual reasons for the revelation of Surat Al-Kahf. [SSWL=5 hrs] **Interpretation and Memorization** Interpretation of selected verses from Surat Al-Kahf, with a focus on memorization techniques. [SSWL=5 hrs] **Part C - Arabic Grammar and Syntax** **Basic Rules of Arabic Language** Introduction to essential grammar rules, including parsing, subjects, and predicates. [SSWL=5 hrs] **Verb-like Letters and Incomplete Verbs** Study of verb-like letters and the concept of incomplete verbs. [SSWL=5 hrs]

	Objects and Numbers Understanding objects in sentences and basic rules for expressing numbers. [SSWL=5 hrs] **Part D - Common Writing Challenges** **Common Mistakes in Writing** Identification and correction of frequent writing errors in Arabic. [SSWL=5 hrs] Total SSWL = 30 hrs SSWL - (Exam hrs) = 32 - 2 = 30 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The course will utilize a combination of interactive lectures and discussions to engage students with key concepts of the Arabic language. Hands-on activities, such as group exercises and practical writing tasks, will reinforce grammar and vocabulary skills. Memorization techniques for Quranic verses will be incorporated to enhance retention and understanding. Collaborative projects will encourage peer learning and critical analysis of literary texts. Regular assessments and feedback will help track progress and improve language proficiency in reading, writing, and speaking.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ **15** اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	20	**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	20% (20)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.				
	Report	1	10% (10)	13	LO #5, #8 and #10

Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	مقدمة حول أهمية اللغة العربية للتخصصات العلمية ودورها الفريد بين اللغات الحية.
Week 2	دراسة سورة الإخلاص في جوانبها اللغوية والنحوية
Week 3	تفسير آيات مختارة من سورة الضحى ، مع التركيز على الموضوعات والمعاني.
Week 4	القواعد الأساسية للغة العربية: مقدمة في الإعراب وتركيب الجمل.
Week 5	المبتدأ والخبر.
Week 6	فهم الفاعل والمفعول به في الجمل العربية.
Week 7	إن وأخواتها
Week 8	تحليل الأفعال الناقصة واستخدامها في الجمل.
Week 9	تحليل قصيدة مالك بن الريب .
Week 10	تحديد وتصحيح الأخطاء الكتابية الشائعة في اللغة العربية.
Week 11	تمارين عملية لتعزيز مهارات النحو والمفردات.
Week 12	نقاشات جماعية حول تفسير الآيات القرآنية وأهميتها اليوم.
Week 13	مهام كتابة لتطبيق قواعد النحو وتعزيز مهارات التأليف.
Week 14	مراجعة المفاهيم الرئيسية التي تم تناولها في الدورة والاستعداد للتقييمات النهائية.
Week 15	التقييمات النهائية لتقييم الكفاءة في القراءة والكتابة وفهم اللغة العربية.
Week 16	الأسبوع التحضيري الذي يسبق الامتحان النهائي

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

Week 7	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	النجار ، فهمي قطب الدين (2013) قواعد اللغة العربية الميسرة	Yes
Recommended Texts	نظرات فاحصة في قواعد رسم الكتابة العربية وضوابط اللغة وطريقة تدوين تاريخ الأدب العربي - موقع العلامة محمد بهجة الأثري	No
Websites	https://www.edraak.org/programs/course/ag101-v2019_t2/	

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Computer Basics**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☒ **Practical** ☐ **Seminar**	
Module Code	**UOB103**				
ECTS Credits	**3**				
SWL (hr/sem)	**75**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	FISHERIES		**College**	College of Agriculture	
Module Leader	Dr. Mujtaba A.T. Ankush		**e-mail**	mujtaba.tahir@uobasrah.edu.iq	
Module Leader's Acad. Title	Assistant Professor		**Module Leader's Qualification**	Ph.D.	
Module Tutor	Dr. Mujtaba A.T. Ankush		**e-mail**	mujtaba.tahir@uobasrah.edu.iq	
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	01/09/2024		**Version Number**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	**1. Basic Computer Literacy** **2. Utilize the computer for fundamental tasks.** **3. Identify and discuss the hardware components of the computer system.** **4. Create documents using a word processor and create presentations.** **5. Conduct research on the Internet.** 6. **An introduction to Artificial Intelligence.**
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Ability to identify and explain the main components of a computer system and their functions. 2. Effective navigation and utilization of basic features of various operating systems. 3. Proficiency in producing well-formatted documents using word processing software, including editing and formatting tools. 4. Capability to perform basic data analysis and calculations using spreadsheet applications, including creating charts and graphs. 5. Competence in conducting effective online research, evaluating sources, and using digital communication tools responsibly.
Indicative Contents المحتويات الإرشادية	**Indicative Content for Computer Applications** Part A - Introduction to Computers Overview of Computer Components Introduction to hardware and software, types of computers, and their uses. [SSWL=5 hrs] Operating Systems Functions of operating systems, basic navigation, and file management techniques. [SSWL=10 hrs] Part B - Application Software Proficiency Word Processing Creating and formatting documents, using editing tools, and incorporating tables and images. [SSWL=10 hrs] Spreadsheets Data entry, basic formulas and functions, and creating charts and graphs for data analysis. [SSWL=10 hrs] Part C - Presentation and Internet Skills Presentation Software Designing effective presentations, incorporating multimedia elements, and presentation best practices. [SSWL=5 hrs] Internet Skills Effective web browsing, search techniques, evaluating online sources, and using digital communication tools. [SSWL=5 hrs]

	Total SSWL = 45 hrs SSWL - (Exam hrs) = 47 - 2 = 45 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The course will employ interactive lectures with multimedia presentations to introduce key concepts in computer applications. Hands-on lab sessions will provide practical experience with software tools, enhancing skills in word processing, spreadsheets, and presentations. Group projects will encourage collaboration and problem-solving, while guided tutorials will offer personalized support. Online discussion forums will facilitate peer interaction and knowledge sharing. Reflective exercises will help students connect course material to real-world applications, and regular quizzes will assess understanding and reinforce learning. Timely feedback on assignments will support continuous improvement and skill development.

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	55	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	3.6
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**100**		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	1	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	15% (15)	Continuous	All
	Report	1	5% (5)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	2hr	50% (50)	16	All

Total assessment	100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to Computer: Concepts of Hardware and Software with their components; Concept of Computing, Data and Information; Connecting input/output devices, and peripherals to CPU.
Week 2	Computer Components: Computer Portions, Hardware Parts, I/O Units, Memory Types.
Week 3	Computer Components (Cont.): Basic CPU Components, Computer Ports, Personal Computer, Personal Computer (Features and Types)
Week 4	Operating System and Graphical User Interface GUI: Operating System; Basics of Common Operating Systems; The User Interface, Using Mouse Techniques.
Week 5	Operating System and Graphical User Interface GUI (Cont.): Use of Common Icons, Status Bar, Using Menu and Menu-selection, Concept of Folders and Directories, Opening and closing of different Windows; Creating Shortcuts.
Week 6	Word Processing: Word Processing Basics; Basic Features of Word Processors, Opening and Closing of documents, Text creation and Manipulation; Formatting Text and Paragraphs, Using Templates for Document Creation.
Week 7	Word Processing (Cont.): Creating and Managing Tables, Utilizing Styles and Themes, Spell Check and Grammar Tools, Using Headers and Footers.
Week 8	Spreadsheet: Introduction to Spreadsheet Software, Creating and Formatting Worksheets, Sorting and Filtering Data, Using Formulas and Functions.
Week 9	Spreadsheet (Cont.): Using Formulas and Functions, Using Pivot Tables for Data Analysis, Data Validation and Error Checking, Data Visualization: Creating Charts and Graphs.
Week 10	Presentation Software: Introduction to Presentation Software, Overview of Popular Presentation Tools, Creating a New Presentation, Using Templates and Themes, Inserting and Formatting Text and Images, Transition and Animation Effects.
Week 11	Presentation Software (Cont.): Using Speaker Notes and Timers, Advanced Features: Hyperlinks and Action Buttons, Troubleshooting Common Presentation Issues, Future Trends in Presentation Technology.
Week 12	Introduction to Internet and Web Browsers: Computer networks Basic; LAN, WAN; Concept of Internet and its Applications; Connecting to internet.

Week 13	Introduction to Internet and Web Browsers (Cont.): World Wide Web; Web Browsing software's, Search Engines; Understanding URL; Domain name; IP Address.
Week 14	Communications and Emails: Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails; Using Emails; Document collaboration.
Week 15	Introduction to Cloud Computing and Services: Definition of Cloud Computing and its concept, Cloud-Based Office Suites (Office 365 and Google Workspace), Google Docs, Google Sheets, Google Drive, Google Meet.
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	1. Assembling and disassembling a basic PC: Students can physically connect components like RAM, hard drives, etc. 2. Identifying different ports and connectors on a computer. 3. Installing a simple software program
Week 2	1. Hands-on exploration of computer hardware: opening a computer case and identifying components (CPU, GPU, RAM, etc.). 2. Using software tools to check memory usage and system information. 3. Comparing different types of storage devices (HDD, SSD).
Week 3	1. Connecting various peripherals (printers, scanners, external drives) to different computer ports (USB, HDMI, etc.). 2. Benchmarking a PC's performance using readily available tools. 3. Troubleshooting basic hardware issues (e.g., a device not being recognized).
Week 4	1. Navigating the operating system (Windows, macOS, or Linux) using the mouse and keyboard. 2. Customizing the desktop environment (changing wallpaper, icons, etc.). 3. Using file management tools to create, rename, and delete folders and files.
Week 5	1. Creating and organizing folders and files within a directory structure. 2. Creating and using shortcuts to frequently accessed programs and files. 3. Customizing the taskbar and system tray for quick access to applications.
Week 6	1. Creating a simple document, formatting text (font, size, color), and inserting paragraphs. 2. Using built-in templates to create resumes, letters, and other documents. 3. Experimenting with different paragraph formatting options (alignment, indentation, line spacing).
Week 7	1. Creating and formatting tables to organize data. 2. Applying different styles and themes to documents to enhance their appearance. 3. Using spell check and grammar tools to identify and correct errors. 4. Adding headers and footers to documents for page numbering and branding.
Week 8	1. Creating a simple spreadsheet and entering data. 2. Formatting cells (number format, alignment, borders). 3. Sorting and filtering data to extract specific information. 4. Using basic formulas (SUM, AVERAGE, etc.) to perform calculations.
Week 9	1. Creating and using more complex formulas (IF, VLOOKUP, etc.). 2. Creating pivot tables to summarize and analyze data. 3. Using data validation rules to prevent errors. 4. Creating charts and graphs to visualize data trends.

Week 10	1. Creating a new presentation using a pre-designed template. 2. Inserting and formatting text and images. 3. Adding transitions and animations to slides.
Week 11	1. Adding speaker notes to slides to aid in presentation delivery. 2. Setting timers for each slide to manage presentation time. 3. Adding hyperlinks and action buttons to create interactive presentations. 4. Troubleshooting common presentation issues (e.g., video not playing).
Week 12	1. Connecting to a local network and accessing shared resources. 2. Using different web browsers to access the internet. 3. Performing searches using different search engines. 4. Identifying the components of a URL and understanding their purpose.
Week 13	1. Analyzing the structure of a URL and identifying its components (protocol, domain name, path). 2. Using online tools to look up the IP address of a website. 3. Comparing the features of different web browsers.
Week 14	1. Creating a new email account. 2. Sending and receiving emails with attachments. 3. Using email features like CC, BCC, and reply-to-all. 4. Collaborating on documents using cloud-based platforms.
Week 15	1. Creating and editing documents using Google Docs or Microsoft Word Online. 2. Creating and editing spreadsheets using Google Sheets or Microsoft Excel Online. 3. Storing and sharing files using Google Drive or OneDrive. 4. Conducting a video conference using Google Meet or Microsoft Teams.
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Graham Brown, David Watson, "Cambridge IGCSE Information and Communication Technology", 3rd Edition (2020) Alan Evans, Kendall Martin, Mary Anne Poatsy, "Technology In Action Complete", 16th Edition (2020). Ahmed Banafa, "Introduction to Artificial Intelligence (AI)", 1st Edition (2024). Microsoft Office 2019 Step by Step 1st Edition by Curtis Frye & Joan Lambert الخضر علي الخضر بحاث, "أساسيات الحاسوب" 2016 الدكتور عادل عبد النور, "مدخل إلى عالم الذكاء الاصطناعي" 2005	Yes
Recommended Texts	Introduction to computers (computer basics), prepared by: Abdullah Al-Shahrani	No
Websites	https://www.dawliatraining.com/training-packages-single/1025 https://edu.gcfglobal.org/en/tr_ar-misc/what-is-a-computer-/1/	

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Biodiversity**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**BIOD113**				
ECTS Credits	**5**				
SWL (hr/sem)	**125**				
Module Level		1	**Semester of Delivery**		2
Administering Department		FISHERIES	**College**	College of Agriculture	
Module Leader	Dr. Jassim Mohsen Abed		**e-mail**	jassim.abd@uobasrah.edu.iq	
Module Leader's Acad. Title		Professor	**Module Leader's Qualification**		Ph.D.
Module Tutor			**e-mail**		
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date		01/09/2024	**Version Number**		1.0

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	**1. Understand Biodiversity Concepts:** Define and explain key concepts related to biodiversity, including species richness, genetic diversity, and ecosystem diversity. **2. Assess Biodiversity Importance:** Evaluate the ecological, economic, and cultural significance of biodiversity in sustaining ecosystems and human life. **3. Identify Threats to Biodiversity:** Analyze the major threats to biodiversity, including habitat loss, climate change, pollution, and invasive species. **4. Explore Conservation Strategies:** Investigate various strategies for conserving biodiversity, including protected areas, restoration efforts, and sustainable practices. **5. Apply Biodiversity Principles:** Utilize knowledge of biodiversity to propose solutions for conservation challenges and promote sustainable management of natural resources.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Demonstrate an understanding of key concepts related to biodiversity, including definitions and metrics of biodiversity. 2. Analyze the ecological, economic, and cultural importance of biodiversity to ecosystems and human societies. 3. Identify and evaluate the major threats to biodiversity and their impacts on ecosystems. 4. Examine various conservation strategies and their effectiveness in protecting biodiversity. 5. Apply biodiversity principles to real-world scenarios, proposing informed solutions to conservation challenges. 6. Communicate the importance of biodiversity and conservation efforts to diverse audiences effectively.
Indicative Contents المحتويات الإرشادية	**Indicative Content for Biodiversity** Part A - Introduction to Biodiversity Overview of Biodiversity Introduction to the concepts of biodiversity, including species richness, genetic diversity, and ecosystem diversity. [SSWL=10 hrs] Importance of Biodiversity Examination of the ecological, economic, and cultural significance of biodiversity for ecosystems and human societies. [SSWL=10 hrs] Part B - Threats to Biodiversity Major Threats Analysis of threats to biodiversity, including habitat loss, climate change, invasive species, and pollution. [SSWL=5 hrs] Impact Assessment

	Understanding the effects of biodiversity loss on ecosystems and human well-being. [SSWL=5 hrs] Part C - Conservation Strategies Conservation Methods Study of various conservation strategies, including protected areas, restoration ecology, and community-based conservation. [SSWL=5 hrs] Sustainable Management Exploration of sustainable practices for managing natural resources and promoting biodiversity conservation. [SSWL=5 hrs] Total SSWL = 30 hrs SSWL - (Exam hrs) = 32 - 2= 30 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The course will employ a mix of interactive lectures and group discussions to engage students with key biodiversity concepts. Hands-on activities, such as field studies and species identification exercises, will provide practical experience in assessing biodiversity. Case studies will illustrate real-world conservation challenges and strategies, fostering critical thinking. Collaborative projects will encourage teamwork and the application of knowledge to propose solutions for biodiversity issues. Regular assessments and feedback will support student learning and understanding of the material.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	30	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	95	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6.3
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**125**		

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

Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	20% (20)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.				
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to biodiversity: definitions, significance, and key concepts.
Week 2	Overview of species richness, genetic diversity, and ecosystem diversity.
Week 3	Ecological importance of biodiversity for ecosystem functioning.
Week 4	Economic benefits of biodiversity and its role in human well-being.
Week 5	Cultural significance of biodiversity in different societies.
Week 6	Major threats to biodiversity: habitat loss and fragmentation.
Week 7	Climate change and its impact on biodiversity.
Week 8	Invasive species: effects on native ecosystems and species.
Week 9	Pollution and its effects on biodiversity and ecosystem health.
Week 10	Conservation strategies: protected areas and reserves.
Week 11	Restoration ecology: principles and case studies.
Week 12	Community-based conservation approaches and their effectiveness.
Week 13	Sustainable practices in biodiversity management.
Week 14	Policy frameworks for biodiversity conservation.
Week 15	Current trends and challenges in biodiversity conservation.
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	
Week 2	

Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Edward O. Wilson, Frances M. Pete (1988). Biodiversity, National Academies Press.	Yes
Recommended Texts		No
Websites	https://education.nationalgeographic.org/resource/biodiversity/	

Grading Scheme
مخطط الدرجات

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Laboratory Techniques in Fisheries**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**LATE119**				
ECTS Credits	**6**				
SWL (hr/sem)	**150**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	FISHERIES		**College**	College of Agriculture	
Module Leader	Dr. Habeeb M.H. Alsudani		**e-mail**	habeebalsudani@uobasrah.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	Ph.D.	
Module Tutor	Dr. Habeeb M.H. Alsudani		**e-mail**	habeebalsudani@uobasrah.edu.iq	
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	01/09/2024		**Version Number**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. **Understand Laboratory Safety Protocols**: Familiarize students with essential safety procedures and practices in a fisheries laboratory setting. 2. **Master Sampling Techniques**: Equip students with the skills to effectively collect and handle biological samples from aquatic environments. 3. **Analyze Water Quality Parameters**: Teach students how to measure and interpret key water quality indicators relevant to fish health and habitat conditions. 4. **Identify Fish Species**: Provide students with the tools and knowledge to accurately identify various fish species and assess their biological characteristics. 5. **Apply Laboratory Techniques in Fish Health Assessment**: Enable students to conduct health assessments and diagnostic tests on fish populations, including disease detection and management.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Demonstrate proficiency in laboratory safety protocols and best practices in a fisheries laboratory. 2. Execute effective sampling techniques for collecting and handling biological specimens from aquatic environments. 3. Analyze and interpret water quality parameters, understanding their impact on fish health and habitat. 4. Accurately identify various fish species and assess their biological traits using appropriate techniques. 5. Conduct health assessments on fish populations, including disease detection and management strategies.
Indicative Contents المحتويات الإرشادية	**Indicative Content for Laboratory Techniques in Fisheries** **Part A - Introduction to Fisheries Laboratory** **Overview of Fisheries Laboratory Techniques** **Introduction to the role of laboratory techniques in fisheries science and management. [SSWL=5 hrs]** **Laboratory Safety Protocols** **Essential safety procedures, protocol adherence, and emergency response in the lab. [SSWL=5 hrs]** **Part B - Sampling and Collection Techniques** **Fish Sampling Methods** Techniques for collecting fish samples from various aquatic environments (e.g., nets, traps). [SSWL=10 hrs] **Handling Biological Samples** Best practices for handling, storing, and preserving biological specimens. [SSWL=5 hrs]

	Part C - Water Quality Analysis **Water Quality Parameters** Understanding key parameters (pH, dissolved oxygen, temperature, turbidity) and their importance in fisheries. [SSWL=5 hrs] **Laboratory Techniques for Water Analysis** Practical exercises in measuring and analyzing water quality using various tools and methods. [SSWL=5 hrs] **Part D - Fish Identification and Health Assessment** **Fish Species Identification** Techniques for identifying local fish species based on morphological characteristics. [SSWL=5 hrs] **Health Assessment Techniques** Methods for assessing fish health, including visual inspections and diagnostic tests. [SSWL=5 hrs] **Part E - Data Analysis and Interpretation** **Data Collection and Management** Best practices for recording, managing, and analyzing data collected from laboratory work. [SSWL=5 hrs] **Reporting and Presenting Findings** Techniques for effectively reporting and presenting laboratory results and assessments. [SSWL=5 hrs] Total SSWL = 45 hrs SSWL - (Exam hrs) = 47 - 2 = 45 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The course will incorporate a variety of teaching strategies to enhance learning in laboratory techniques for fisheries. Interactive lectures will introduce key concepts and techniques, while hands-on practical sessions will provide students with real-world experience in the lab. Group activities will encourage collaboration and peer learning, allowing students to share insights and techniques. Case studies will be utilized to illustrate the application of laboratory methods in fisheries management. Regular assessments and feedback will help gauge understanding and facilitate continuous improvement in practical skills and knowledge.

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	105	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	7
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**150**		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	1	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	15% (15)	Continuous	All
	Report	1	5% (5)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Overview of the course, importance of laboratory work in fisheries science.
Week 2	Essential safety measures, equipment handling, and emergency procedures.
Week 3	Techniques for collecting fish samples, including nets and traps.
Week 4	Best practices for preserving and storing biological specimens.
Week 5	Introduction to key water quality indicators and their significance in fisheries.
Week 6	Measuring pH, dissolved oxygen, temperature, and turbidity in water samples.
Week 7	Techniques for identifying local fish species based on morphology.
Week 8	Methods for visual inspections and health diagnostics in fish populations.
Week 9	Best practices for recording and managing laboratory data effectively.

Week 10	Interpreting results from water quality tests and understanding their implications.
Week 11	Techniques for compiling and presenting laboratory results clearly and effectively.
Week 12	Examination of real-world applications of laboratory techniques in fisheries management.
Week 13	Hands-on practice to reinforce key laboratory techniques learned throughout the course.
Week 14	Students present findings from their practical work or case studies.
Week 15	Comprehensive review of key concepts, techniques, and final evaluations.
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	• Introduction to lab safety and procedures, focusing on fisheries laboratory techniques.
Week 2	• Hands-on practice in fish sampling methods using nets and traps.
Week 3	• Techniques for handling and preserving biological samples collected from aquatic environments.
Week 4	• Water quality testing: measuring pH, dissolved oxygen, and temperature using appropriate instruments.
Week 5	• Conducting turbidity tests and understanding their significance in fish habitats.
Week 6	• Identification of local fish species through morphological characteristics and field guides.
Week 7	• Performing health assessments on fish populations, including visual inspections.

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Hasegawa, H. (1987). Laboratory manual on analytical methods and procedures for fish and fish products.	online
Recommended Texts		online
Websites	https://fish.faperta.ugm.ac.id/aquaculture-laboratory/	

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Climate Change and Biosustainability**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**CLBO112**				
ECTS Credits	7				
SWL (hr/sem)	**150**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	FISHERIES		**College**	College of Agriculture	
Module Leader	Dr. Amjad Kadhem Risen		**e-mail**	amjed.rasen@uobasrah.edu.iq	
Module Leader's Acad. Title	Professor		**Module Leader's Qualification**	Ph.D.	
Module Tutor	Dr. Amjad Kadhem Risen		**e-mail**	amjed.rasen@uobasrah.edu.iq	
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	01/09/2024		**Version Number**	1.0	

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	**1. Understand Climate Change Fundamentals:** Explain the basic concepts of climate change, including its causes and effects on the environment and society. **2. Explore Biosustainability Principles:** Define biosustainability and its importance in promoting ecological balance and resource management. **3. Assess Impacts of Climate Change:** Evaluate the social, economic, and environmental impacts of climate change on ecosystems and human communities. **4. Identify Mitigation and Adaptation Strategies:** Investigate various strategies to mitigate climate change effects and adapt to changing environmental conditions. **5. Promote Sustainable Practices:** Encourage the adoption of sustainable practices in daily life and community initiatives to foster environmental stewardship.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Demonstrate an understanding of the fundamental concepts of climate change and its primary causes. 2. Analyze the impacts of climate change on ecosystems, biodiversity, and human societies. 3. Evaluate biosustainability principles and their role in promoting ecological balance. 4. Identify and assess various strategies for mitigating climate change and adapting to its effects. 5. Propose actionable sustainable practices for individuals and communities to address climate change challenges.
Indicative Contents المحتويات الإرشادية	**Indicative Content for Climate Change and Biosustainability** **Part A - Introduction to Climate Change** Overview of Climate Change Introduction to climate change concepts, causes (natural and anthropogenic), and historical context. [SSWL=15 hrs] Impacts of Climate Change Examination of environmental, social, and economic impacts, including effects on ecosystems and human health. [SSWL=15 hrs] **Part B - Biosustainability Principles** Understanding Biosustainability Definition and key principles of biosustainability, including resource management and ecological balance. [SSWL=10 hrs] Sustainable Practices Exploration of sustainable practices in agriculture, energy use, and waste management. [SSWL=10 hrs] **Part C - Mitigation Strategies**

	Mitigation Approaches Overview of strategies to reduce greenhouse gas emissions, including renewable energy and carbon capture. [SSWL=10 hrs] Policy and Legislation Examination of international agreements and local policies aimed at combating climate change. [SSWL=5 hrs] **Part D - Adaptation Strategies** Adaptation Measures Assessment of adaptation strategies for communities and ecosystems to cope with climate change impacts. [SSWL=5 hrs] Case Studies Analysis of successful adaptation projects around the world and lessons learned. [SSWL=5 hrs] Total SSWL = 75 hrs SSWL - (Exam hrs) = 77 - 2= 75 hr (Time table hrs x 15 weeks)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The course will employ a combination of interactive lectures and multimedia presentations to introduce key concepts of climate change and biosustainability. Hands-on activities, such as case studies and group projects, will encourage collaboration and critical thinking. Field trips to local sustainability initiatives will provide practical insights into real-world applications. Discussions and debates will foster engagement and deepen understanding of complex issues. Regular assessments and feedback will ensure students can apply their knowledge effectively and develop actionable solutions to climate challenges.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	75	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	100	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6.6
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**175**		

Module Evaluation تقييم المادة الدراسية

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

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to climate change: definitions, historical context, and key concepts.
Week 2	Causes of climate change: natural vs. anthropogenic factors.
Week 3	Overview of greenhouse gases and their role in climate change.
Week 4	Impacts of climate change on ecosystems and biodiversity.
Week 5	Social and economic consequences of climate change.
Week 6	Climate change and human health: risks and vulnerabilities.
Week 7	Introduction to biosustainability: definitions and principles.
Week 8	Resource management strategies for sustainable practices.
Week 9	Sustainable agriculture: practices and innovations.
Week 10	Renewable energy sources and their role in sustainability.
Week 11	Waste management strategies for a sustainable future.
Week 12	Mitigation strategies: reducing greenhouse gas emissions.
Week 13	Policy frameworks and international agreements on climate change.
Week 14	Adaptation strategies for communities facing climate change impacts.
Week 15	Case studies of successful adaptation and sustainability initiatives.
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered

Week 1	• Introduction to lab safety and procedures, focusing on climate change research methods and data collection techniques.
Week 2	• Data collection on local climate conditions: measuring temperature, humidity, and precipitation using field instruments.
Week 3	• Analysis of carbon footprints: calculating individual or community carbon footprints and exploring reduction strategies.
Week 4	• Study of local ecosystems: field surveys to observe biodiversity and assess the impact of climate change on specific habitats.
Week 5	• Investigation of sustainable practices: hands-on projects such as composting, recycling, and energy conservation techniques.
Week 6	• Case study analysis: evaluating the effectiveness of local sustainability initiatives and their impact on climate resilience.
Week 7	• Final presentations: summarizing lab findings and proposing actionable solutions for enhancing sustainability in the community.

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Lobell, D. (2008). Prioritizing Climate Change Adaptation Needs for Food Security: Policy Brief, Centre on Food Security and the environment, Stanford University	Yes
Recommended Texts	Wikipedia, (2015). Climate Change and Agriculture. Online	Yes
Websites	https://wmo.int/news/media-centre/climate-change-undermines-nearly-all-sustainable-development-goals	

Grading Scheme
مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	**A** - Excellent	امتياز	90 - 100	Outstanding Performance
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