

وصف البرنامج الأكاديمي

اسم الجامعة: جامعة العلوم العراقية

الكلية: كلية العلوم

القسم العلمي: علوم الحياة

اسم البرنامج الأكاديمي أو المهني: بكالوريوس علوم في علوم الحياة

النظام الدراسي: نظام بولونيا

تاريخ اعداد الوصف: 2026/9/19

تاريخ ملء الملف: 2026/9/19

اللجنة المركزية لضمان الجودة لمسار بولونيا

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اسم العضو: م.م. هالة اياد

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اسم العضو: م.د. ولاء عصام

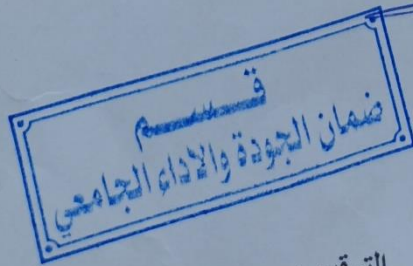
التوقيع:

اسم رئيس اللجنة: م.د. إيمان قاسم جبر

دقق الملف من قبل:

قسم ضمان الجودة والإداء الجامعي

اسم مدير قسم ضمان الجودة والإداء الجامعي:



التوقيع:

التاريخ: ٢٠٢٦/٩/٢٠

Iraqi University of Science / College of Science

جامعة العلوم العراقية / كلية العلوم



First Cycle – Bachelor's Degree (B.Sc.) Department of
Biology
College of Sciences



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1. **Mission & Vision Statement**

Vision Statement

The Department of Biology seeks to we seek to prepare highly qualified graduates who are qualified to work in the fields of life sciences in its various branches.

Mission Statement

It aims to provide students spread with awareness and knowledge in the fields of life sciences by providing the country with researchers and professors capable of dealing with the recent changes and developments taking place in the world and contributing to the development of our scientific, health, industrial and environmental institutions in solving the problems that hinder their progress.

2. Program Specification

Program code:	BcS.BIO	ECTS	240
Duration:	4 levels, 8 Semesters	Method of Attendance:	Full Time

The **Biology program** is designed to provide students with comprehensive scientific knowledge and practical laboratory skills required for professional and academic careers in diverse fields of life sciences. The program aligns with national and international accreditation standards, ensuring that graduates acquire the scientific competencies expected by academic institutions, research centers, healthcare facilities, and industry sectors related to biological sciences.

The program follows a structured and progressive curriculum that integrates theoretical foundations with practical application. **Level 1** establishes essential scientific competencies in general biology, chemistry, biophysics, mathematics, and biostatistics, alongside introductory computer skills and scientific research methods. This level provides students with a strong foundation for advanced study. **Level 2** focuses on core disciplinary subjects, including cell biology, genetics, microbiology, and biochemistry, with an emphasis on conceptual understanding and laboratory-based learning.

At **Levels 3 and 4**, students develop advanced knowledge and practical skills in specialized areas such as molecular biology, immunology, biotechnology, histology, medical microbiology, ecology, and biodiversity. The program emphasizes the development of scientific analysis, data interpretation, and the application of modern laboratory techniques, while reinforcing principles of biosafety, laboratory management, and quality assurance. Graduates are trained to operate in accordance with national regulations and internationally recognized standards governing biological laboratories and research environments.

Practical training and research activities are emphasized throughout the program. Laboratory sessions are integrated into theoretical courses or offered as dedicated practical modules, supported by research seminars, workshops, and tutorials. A compulsory field training course at **Level 1** introduces students to professional laboratory environments, while optional field training courses at **Levels 2, 3, and 4** provide extended experiential learning opportunities. The program culminates at **Level 4** with an independent graduation research project, enabling students to apply theoretical knowledge and practical skills to real-world problems in life sciences.

Graduates of the Life Sciences program will possess industry-relevant and research-oriented competencies, enabling them to contribute effectively to

scientific research, healthcare services, environmental management, and educational sectors in both public and private institutions, while adhering to professional ethics and legal frameworks.

Program Goal

Biology of Sciences is a field that applies biological, chemical, and physical principles to the study of living organisms and biological systems at the molecular, cellular, organismal, and ecological levels. Professionals in this field require a broad range of scientific, analytical, and laboratory competencies to effectively understand, analyze, and apply biological knowledge in research, healthcare, environmental, and industrial contexts. Accordingly, the essential competencies for graduates of the **Department of Biology of Sciences** include:

1. **Foundational Biological Knowledge:** Ability to apply core concepts in biology, including cell biology, genetics, microbiology, biochemistry, and physiology, across diverse life science applications.
2. **Laboratory and Experimental Skills:** Proficiency in performing standard and advanced laboratory techniques, including sample preparation, microscopy, biochemical assays, molecular techniques, and data recording, in accordance with laboratory safety standards.
3. **Scientific Research and Methodology:** Capability to apply the scientific method, design experiments, formulate hypotheses, collect and analyze biological data, and interpret experimental results.
4. **Molecular and Cellular Analysis:** Skills in understanding and analyzing molecular and cellular processes, including gene expression, protein function, cellular signaling, and metabolic pathways.
5. **Microbiology and Immunology Competence:** Ability to identify, culture, and analyze microorganisms, understand host–pathogen interactions, and apply basic immunological principles in laboratory and applied settings.
6. **Biotechnology and Applied Life Sciences:** Understanding and application of biotechnology principles, including recombinant DNA techniques, bioprocessing, and biological product development.
7. **Environmental and Ecological Awareness:** Competence in analyzing biological systems within environmental and ecological contexts, including

biodiversity, ecosystems, conservation, and environmental sustainability.

8. **Data Analysis and Biostatistics:** Ability to analyze biological data using statistical methods and basic computational tools, and to present scientific findings accurately and effectively.
9. **Biosafety, Ethics, and Regulatory Compliance:** Understanding of biosafety practices, ethical principles, and legal frameworks governing biological research, laboratory work, and the use of living organisms.
10. **Critical Thinking and Problem-Solving:** Capability to evaluate scientific literature, assess biological problems, and propose evidence-based solutions.
11. **Communication and Teamwork Skills:** Ability to communicate scientific information clearly in written and oral forms and to work effectively within multidisciplinary scientific teams.

Summary:

A **Life Sciences specialist** is equipped with comprehensive knowledge and practical skills in biological systems, laboratory techniques, experimental design, data analysis, biosafety, and scientific research. These competencies collectively prepare graduates to investigate biological phenomena, conduct laboratory and field-based studies, analyze and interpret scientific data, and contribute effectively to research, healthcare, environmental management, and biotechnological applications, while adhering to ethical standards and regulatory requirements.

3. Program Student Learning Outcomes

The **Department Biology of Sciences** emphasizes that professionals must possess not only strong scientific and technical knowledge but also a set of generic competencies that enable them to perform effectively in diverse, dynamic, and multidisciplinary scientific environments. The essential generic competencies include:

1. **Analytical Thinking:** The ability to observe, analyze, and evaluate complex biological phenomena, experimental results, and scientific problems, and to develop evidence-based conclusions and solutions.

2. **Continuous Learning:** Commitment to staying up to date with advances in biological sciences, laboratory techniques, scientific technologies, and emerging research findings is essential for professional competence.
3. **Adaptability:** Ability to respond effectively to scientific developments, technological innovations, changing research priorities, and diverse working environments.
4. **Creativity and Innovation:** Creative thinking supports the development of innovative research approaches, experimental designs, and practical applications in biological and life science fields.
5. **Teamwork:** Effective collaboration with researchers, laboratory staff, healthcare professionals, and interdisciplinary teams is vital for successful scientific and applied projects.
6. **Communication Skills:** Clear and accurate communication of scientific concepts, experimental data, and research findings to both scientific and non-scientific audiences in written and oral formats.
7. **Project Management:** Competence in planning, organizing, and managing research activities, laboratory work, and scientific projects to ensure efficient use of time, resources, and materials.
8. **Time Management:** Ability to prioritize tasks, manage laboratory schedules, and meet research and project deadlines while maintaining quality and safety standards.
9. **Leadership:** Capability to guide, supervise, and motivate research teams or laboratory groups, and to contribute effectively to decision-making processes in scientific environments.

10. **Applied Scientific Solutions Design:** The ability to design, develop, and implement scientific and laboratory-based solutions that address specific research, healthcare, environmental, or industrial challenges.

Conclusion:

Sciences of Biology professionals require a balanced combination of scientific, technical, and generic competencies to perform effectively in their roles. Analytical thinking, continuous learning, adaptability, creativity, teamwork, effective communication, project management, time management, leadership, and the ability to design applied scientific solutions are essential attributes. These competencies enhance professional performance, support scientific innovation, and ensure the effective advancement of research, healthcare, environmental management, and applied biological sciences within the field of biology.

4. Academic Staff

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5. Credits, Grading and GPA

Credits

University of Technology 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 30 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	تقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 – 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C – Good	جيد	70 – 79	Sound work with notable errors
	D - Satisfactory	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:

$$\text{CGPA} = [(1^{\text{st}} \text{ module score} \times \text{ECTS}) + (2^{\text{nd}} \text{ module score} \times \text{ECTS}) + \dots] / 240$$

1. رؤية البرنامج				
يتصور البرنامج نفسه كمبادرة أكاديمية رائدة في مجال علوم الحياة، سعيًا لأن يكون رؤية واقعية وعملية في الوقت نفسه. يهدف إلى تعزيز بيئة تعليمية تشجع على الابتكار والتفكير النقدي وتطبيق النتائج على أرض الواقع في فهم الظواهر البيولوجية وآثارها. تتماشى هذه الرؤية مع التزام البرنامج بتقديم تجربة تعليمية استثنائية تمكن الطلاب من تحقيق أقصى إمكاناتهم الأكاديمية والمهنية.				
2. رسالة البرنامج				
تتمثل رسالة البرنامج في توفير تجربة تعليمية شاملة ومتقدمة في مجال علوم الحياة، بهدف تزويد الطلاب بالمعرفة والمهارات اللازمة لفهم الظواهر البيولوجية بعمق. بالإضافة إلى ذلك، يسعى البرنامج لتعزيز قدرات تفكير الطلاب النقدي، ومهارات حل المشكلات، ومهارات البحث العلمي عبر مختلف المجالات في علوم الحياة. من خلال رسالته، يسعى البرنامج إلى تهيئة الطلاب للنجاح في المجال الأكاديمي والمهني في مجال علوم الحياة.				
3. أهداف البرنامج				
1. تطوير مفاهيم عميقة في مجال علوم الحياة، وتعزيز فهم الطلاب للمبادئ الأساسية والمتقدمة في هذا المجال. 2. تنمية مهارات التفكير النقدي لدى الطلاب وتعزيز قدرتهم على تحليل البيانات وتقييم الأدلة العلمية.				
3. تعزيز مهارات حل المشكلات والابتكار في سياقات متعددة ضمن علوم الحياة، وتشجيع الطلاب على التفكير الإبداعي.				
4. توفير تجارب عملية وعلمية تطبيقية تعزز فهم الطلاب وتطبيق ما تعلموه في الحياة العملية.				
5. تعزيز مهارات البحث العلمي والتحليل النوعي والكمي لدى الطلاب، مما يمكنهم من المساهمة في إثراء المعرفة في مجالات علوم الحياة.				
6. تعزيز الوعي بأهمية الأخلاقيات المهنية والمسؤولية الاجتماعية لدى الطلاب، وتحفيزهم على تبني مواقف أخلاقية في ممارسة مهنهم.				
4. الاعتماد البرامجي				
لا يوجد				
5. المؤثرات الخارجية الأخرى				
لا يوجد				
6. هيكلية البرنامج				
هيكل البرنامج	عدد المقررات	وحدة دراسية	النسبة المئوية	ملاحظات *
متطلبات المؤسسة	48	90		مقرر أساسي
متطلبات الكلية	نعم			
متطلبات القسم	نعم			
التدريب الصيفي	يوجد			

7. وصف البرنامج				السنة / المستوى
الساعات المعتمدة		اسم المقرر أو المساق	رمز المقرر أو المساق	
عملي	نظري	علم الحيوان	BIO11001	2023-2024 / الأول
عملي	نظري	اساسيات الاحياء المجهرية	BIO11002	
عملي	نظري	فيزياء حيائية	BIO11003	
-	نظري	إحصاء حياتي	CS11007	
-	نظري	لغة إنكليزية	QU01	
-	نظري	حقوق الانسان والديمقراطية	QU02	
عملي	نظري	علم النبات	BIO12004	
عملي	نظري	كيمياء عامة	BIO12005	
-	نظري	السلامة والامن البايولوجي	BIO12006	
عملي	نظري	علم الأرض	BIO12007	
-	نظري	اللغة العربية	QU04	
عملي	نظري	حاسوب	QU06	
عملي	نظري	حشرات	BIO21013	2023-2024 / الثاني
عملي	نظري	تثريح نبات	BIO21016	
عملي	نظري	احياء مجهرية 1	BIO21014	
عملي	نظري	لافقریات	BIO21015	
عملي	نظري	1مجامع نباتية	BIO21018	
عملي	نظري	كيمياء حيائية1	BIO21017	
عملي	نظري	حاسبات 1	-	
-	نظري	لغة إنكليزية	-	

عملي	نظري	تصنيف حشرات	BIO22119	
عملي	نظري	تصنيف نبات	BIO22122	
عملي	نظري	احياء مجهرية 2	BIO22120	
عملي	نظري	طفيليات	BIO22023	
عملي	نظري	لافقریات 2	BIO22121	
عملي	نظري	كيمياء حيائية 2	-	
عملي	نظري	حاسبات 2	-	
عملي	نظري	علم الخلية	BIO31129	الثالث / 2024-2023
عملي	نظري	بيئة	BIO31049	
عملي	نظري	علم الانسجة	BIO31028	
عملي	نظري	فطريات	BIO31027	
عملي	نظري	نباتات طبية	BIO31030	
عملي	نظري	مناعة	BIO31037	
عملي	نظري	فسلجة احياء مجهرية	BIO31026	
عملي	نظري	علم الوراثة	BIO32031	
عملي	نظري	ثلوث	BIO32135	
عملي	نظري	فسلجة نبات	BIO32032	
عملي	نظري	تصنيف فطريات	BIO32133	
عملي	نظري	فسلجة حيوان	BIO32034	
عملي	نظري	احياء مجهرية مياه وتربة	BIO32035	
عملي	نظري	تحليلات مرضية	BIO32036	
-	نظري	لغة إنكليزية	-	
عملي	نظري	بايولوجي جزئي	BIO41038	الرابع / 2024-2023
عملي	نظري	فطريات طبية	BIO41039	
عملي	نظري	بكتريا مرضية	BIO41040	
عملي	نظري	حبلیات	BIO41041	

عملية	نظري	احياء مجهرية غذائية	BIO41042
عملية	نظري	غدد صم	BIO41043
عملية	نظري	وراثة احياء مجهرية	BIO42044
عملية	نظري	فايروسات	BIO42045
عملية	نظري	تطور	BIO42045
عملية	نظري	احياء مجهرية صناعية	BIO42046
عملية	نظري	مضادات حيائية	BIO42047
-	نظري	لغة إنكليزية	-
عملية	نظري	مشروع بحث	BIO42048

1. مخرجات التعلم المتوقعة للبرنامج	
المعرفة	
نتيجة التعلم رقم 1	بيان نتيجة التعلم رقم 1
تهدف إلى تعزيز المعرفة والفهم في مجال العلوم الحياتية، من خلال توفير فهم شامل للمفاهيم الأساسية والمبادئ البيولوجية.	يركز على تعزيز معرفة الطلاب وفهمهم للمبادئ البيولوجية الرئيسية، مثل الهيكل والوظيفة الخلوية، وعلم الأحياء الجزيئي، والوراثة، والبيئة، والتطور.
المهارات	
نتيجة التعلم 2: تعزيز مهارات التفكير النقدي وحل المشكلات من خلال العمل في المختبر، وتحليل البيانات، والاستقصاء العلمي.	البيان الخاص بنتيجة التعلم 2: تعزيز قدرة الطلاب على تطبيق المعرفة النظرية في المواقف العملية، وتحليل البيانات التجريبية، واستخلاص استنتاجات صحيحة.
نتيجة التعلم 3: تطوير مهارات الاتصال الفعالة، سواء كانت كتابية أو شفوية، للتعبير عن المفاهيم العلمية، والافتراضات، والنتائج.	البيان الخاص بنتيجة التعلم 3: تمكين الطلاب من توصيل المعلومات العلمية بوضوح وفعالية، من خلال العروض التقديمية، والتقارير، والمناقشات.
القيم	

مخرجات التعلم 4: يعزز الناتج الرابع الوعي الأخلاقي والمسؤولية بين الطلاب في إجراء البحوث العلمية ومعالجة القضايا الاجتماعية المتعلقة بعلم الأحياء.	البيان الخاص بنتيجة التعلم 4 : يهدف هذا البيان إلى تطوير قدرة الطلاب على التفكير الأخلاقي واتخاذ القرارات الأخلاقية في مجال البحوث العلمية والممارسات المتعلقة بعلم الحياة.
مخرجات التعلم 5: التنمية القدرات على العمل الجماعي والتعاون في البيئة العلمية والمهنية، وتعزيز المساهمة الإيجابية في الفرق المتعددة التخصصات.	تهدف هذه النتيجة إلى زرع مهارات العمل الجماعي بين الطلاب، مع تعزيز قدرتهم على التعاون بفعالية مع الآخرين في بيئات مهنية وعلمية متنوعة، مما يزيد من مساهماتهم في الفرق متعددة التخصصات.

استراتيجيات التعلم والتعليم

تتضمن استراتيجيات التعليم والتعلم مجموعة من الأساليب المتبعة في تنفيذ البرنامج بفعالية. تشمل هذه الاستراتيجيات:

1. المحاضرات: التعليم التقليدي في الفصول الدراسية يشمل العروض التقديمية من قبل المحاضرين لنقل المعرفة والمفاهيم النظرية.
2. المختبرات: جلسات عملية حيث يشارك الطلاب في التجارب العملية وجمع البيانات وتحليلها تحت إشراف المحاضرين.
3. النقاشات الجماعية: أنشطة تعلم تعاونية تشجع الطلاب على تبادل الأفكار ومناقشة المواضيع وحل المشكلات بشكل جماعي.
4. دراسات الحالة: سيناريوهات حقيقية أو أمثلة تُستخدم لتوضيح المفاهيم النظرية وتحفيز التفكير النقدي بين الطلاب.
5. الرحلات الميدانية: زيارات إلى مواقع ذات صلة أو مواقع لتوفير تعريف عملي وتجربة مباشرة في مجال علوم الحياة.
6. مشاريع البحث: فرص للطلاب لإجراء بحوث مستقلة وجمع البيانات وتقديم نتائجهم، مما يعزز فهمًا أعمق للتحقيق العلمي.
7. العروض: مهام تتطلب من الطلاب التعبير عن فهمهم للمواضيع من خلال العروض الشفهية، مما يعزز مهارات التواصل لديهم.
8. ورش العمل والندوات: جلسات تفاعلية يقودها خبراء أو متحدثون ضيوف لاستكشاف مواضيع محددة بعمق وتسهيل المناقشات بين الطلاب.
9. الموارد عبر الإنترنت: استخدام المنصات الرقمية والمواقع التعليمية والأدوات المتعددة الوسائط لتكملة التعلم في الفصول الدراسية وتوفير موارد إضافية للطلاب.

10. التقييم: مجموعة متنوعة من أساليب التقييم، بما في ذلك الاختبارات والامتحانات والمقالات والمشاريع، لقياس فهم الطلاب

واستيعابهم لمواد الدورة.

هذه الاستراتيجيات مصممة لتلبية أنماط التعلم المتنوعة، وتعزيز المشاركة الفعالة، وتسهيل اكتساب المعرفة والمهارات اللازمة للنجاح في مجال علوم الحياة.

طرائق التقييم

تُستخدم طرق التقييم في كل مرحلة من مراحل البرنامج لتقييم تقدم الطلاب وضمان فعالية العملية التعليمية. تشمل هذه الطرق:

1. التقييم المستمر: تقييم مستمر من خلال الاختبارات الصغيرة، والواجبات، ومشاركة الطلاب في الصف لمراقبة فهمهم ومشاركتهم في المواد الدراسية.
2. الامتحانات: تقييمات رسمية تُجرى بشكل دوري، مثل الامتحانات الفصلية والنهائية، لقياس استيعاب الطلاب للمفاهيم الرئيسية واحتفاظهم بالمعرفة.
3. التقييم العملي: تقييم أداء الطلاب في الجلسات التجريبية، والعمل الميداني، والتمارين العملية لتقييم مهاراتهم العملية وتطبيق معرفتهم النظرية.
4. المشاريع والواجبات: تقييم قدرة الطلاب على إجراء البحوث، وتحليل البيانات، وتقديم النتائج من خلال تقارير مكتوبة، أو عروض تقديمية، أو مشاريع.
5. التقييم من قبل الأقران: تقييم من الزملاء، حيث يقدم الطلاب تعليقات على أعمال بعضهم البعض أو عروضهم، مما يعزز التعاون والتفكير الذاتي.
6. التقييم بناءً على الملف: مراجعة لملفات الطلاب، والتي قد تتضمن عينات من أعمالهم، وتفكيرهم، وتقييم ذاتي، لإظهار تقدمهم في التعلم وإنجازاتهم مع مرور الوقت.
7. التقييم بناءً على الأداء: تقييم أداء الطلاب في المهام أو الأنشطة الخاصة بمجال علوم الحياة، مثل إجراء التجارب، وتحليل العينات البيولوجية، أو تقديم النتائج.
8. آليات التغذية الراجعة: تقديم ملاحظات بناءة من قبل المدرسين أو الزملاء أو المرشدين لتوجيه تعلم الطلاب وتحسينه طوال البرنامج.

Al-Iraqia Science University -College of Science

Department of Biology

First Cycle – Bachelor's degree (B.Sc.) – Biology

بكالوريوس علوم - علوم الحياة

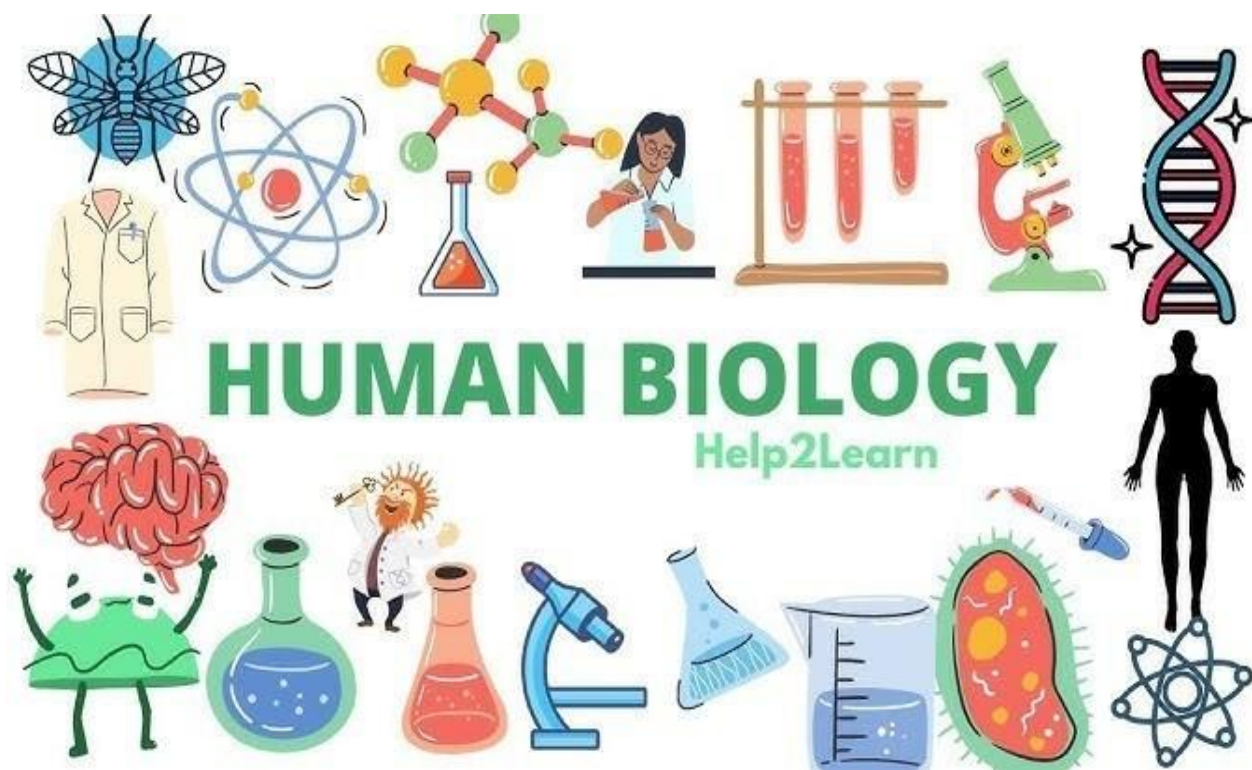


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1. Mission & Vision Statement

Vision Statement

The Department of Biology vision is to be a leading center of excellence in biological sciences, dedicated to advancing knowledge and understanding of the natural world. We strive to inspire curiosity and critical thinking, and to foster a deep appreciation for the complexity and diversity of life. Our department is committed to innovative research, education, and outreach, and to preparing the next generation of scientists, educators, and leaders in the field. We seek to promote interdisciplinary collaboration and to make meaningful contributions to society through our work in areas such as Botany, Zoology, Ecology, and Microbiology.

Mission Statement

The Department of Biology mission is to provide a rigorous and comprehensive education in biological sciences, grounded in scientific inquiry and critical thinking. The academic staff are committed to advancing knowledge and solving real-world problems through innovative research that spans from molecules to ecosystems. The department seeks to inspire and engage students at all levels, and to prepare them for a wide range of careers in academia, industry, government, and beyond. Our department values diversity, inclusivity, and equity, and we are dedicated to creating an environment that fosters intellectual curiosity, creativity, and collaboration. The Department of biology aims to be a

resource for our community, and to promote scientific literacy and informed decision-making on issues related to biology.

2. Program Specification

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

Biology is a very broad topic, and the College of Science at the University of Baghdad, as the hub of Iraq's most diversified biology teaching organization, is well positioned to fulfill its mission. The focus of the Biology program is on the entire organism, and how everything is connected, whether it's macromolecules that make organism's bodies or communities distributed in a particular environment.

All students will have a broad knowledge in basic sciences such as General Biology, Chemistry, Biophysics, Mathematics, and Computer skills at the end of the first level. At Levels 2, 3 and 4 students will span over a variety of specialized modules enable them to gain a comprehensive; yet, detailed knowledge located in four different disciplines; Microbiology, Botany, Ecology, and Zoology. This empowers our students with breadth of interests and skill offering an opportunity to enter labour market. Moreover, at Level 4 all students conduct a research project, which might be field- or laboratory-based project.

3. Program Goals

- Develop a deep understanding of fundamental biological concepts and principles, including the structure and function of cells, genetics and inheritance, evolution and biodiversity, ecology and environmental interactions, and physiology and behavior.
- Develop critical thinking and problem-solving skills, including the ability to analyze scientific data, design and conduct experiments, evaluate scientific arguments, and apply knowledge to solve real-world problems.
- Develop laboratory and research skills, including the ability to use scientific instruments and techniques, collect and analyze data, and communicate scientific findings.
- Develop effective communication skills, including the ability to write clear, concise, and accurate scientific reports, present scientific findings to diverse audiences, and collaborate effectively with others.

- e. Develop an understanding of the interdisciplinary nature of biology and its connections to other fields, such as chemistry, physics, mathematics, and computer science.

4. Student Learning Outcomes

- a. Identify and classify living organisms and their internal structures.
- b. Recognise the evolutionary and genetic relationships of living organisms.
- c. Knowledge of the physiology of living organisms and the most important metabolic pathways through which they gain or consume energy.
- d. Comprehend the relationships that govern living organisms in their living environments.
- e. Develop thinking skills and scientific research in the various fields of life sciences: microbiology, zoology, botany, and ecology.

5. Academic Staff

1-dr.Basima Muhsin sarhan /PhD Inorganic chemistry

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Mobile: 07709835767

2-Dr. Selma Thabet :biostatic Ph.D. in Econometric Prof.

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3-Dr. Sajeda dawood salman PhD.Arabic language

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8-Asst. lecturer :.Mustafa Talib muhaidi: Cellular and molecular Biology MSc.

Email:

Mobile:

9-lecturer :.Zaidan jasim khalaf, physical chemistry PhD.

Email:

Mobile:

10.lecturer :.Bilal Emad Obaid, Law department PhD.

Email:

Mobile:07718372480

11-Asst.lecturer :.Batool nafea mahmood, English MSC.

Email:

Mobile:

6. Credits, Grading and GPA

Credits

University of Baghdad 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	الدرجة	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	أفـ	90 - 100	Outstanding Performance
	B - Very Good	جيد جداً	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	مقبول	60 - 69	Fair but with major shortcomings
	E - Sufficient	مفتول	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:

$$CGPA = [(1st\ module\ score \times ECTS) + (2nd\ module\ score \times ECTS) + ...] / 240$$

13. خطة تطوير البرنامج

1. التحليل الوضعي: من خلال التقييم الشامل لأداء البرنامج الحالي والتعرف على نقاط القوة والضعف فيه، وذلك من خلال مراجعة البيانات الأكاديمية واستطلاع آراء الطلاب والأعضاء الأكاديميين وأصحاب العمل.
2. وضع الأهداف: من خلال تحديد الأهداف التي نرغب في تحقيقها من خلال عملية التطوير، وضمان توجيه جميع الجهود نحو تحقيق هذه الأهداف بشكل فعال.
3. تطوير المناهج: وذلك بالعمل على تحديث المناهج الدراسية وتطويرها بما يعكس أحدث التطورات في مجال العلوم الحياة، وضمان توفير تجارب تعلم متنوعة وملهمة للطلاب.
4. تعزيز البحث والتطوير: ينبغي توفير الدعم والموارد اللازمة لأعضاء هيئة التدريس للمساهمة في البحث العلمي وتطوير مجالاتهم الأكاديمية والمهنية.
5. بناء الشراكات: يجب بناء شراكات قوية مع الصناعة والمجتمع المحلي لضمان توجيه برنامج العلوم الحياة نحو تلبية احتياجات سوق العمل والمجتمع.
6. تقديم الدعم الأكاديمي: يتطلب التطوير المهني لأعضاء هيئة التدريس تقديم الدعم اللازم لهم من خلال ورش العمل والبرامج التدريبية لتطوير مهاراتهم التعليمية والبحثية.
7. المتابعة والتقييم: ينبغي وضع نظاماً فعالاً لمتابعة تنفيذ الخطة وتقييم نتائجها، والتعديل عليها حسب الحاجة لضمان تحقيق الأهداف المحددة بشكل مستمر.

14.التطوير المهني
توجيه أعضاء هيئة التدريس الجدد
يتضمن توجيه أعضاء هيئة التدريس الجدد عملية منظمة مصممة لدعمهم وتوجيههم أثناء تكيفهم بأدوارهم داخل المؤسسة والقسم الأكاديمي. تتضمن هذه العملية عادة تعيين أعضاء هيئة تدريس ذوي خبرة كمرشدين لتقديم الإرشاد والدعم والنصائح لأعضاء هيئة التدريس الجدد، سواء كانوا زائرين أو بدوام كامل أو جزئي. يمكن أن يتضمن التوجيه عقد اجتماعات منتظمة ومشاركة الموارد وأفضل الممارسات، وتقديم ملاحظات حول الأنشطة التعليمية والبحثية، ومساعدة في النمو المهني وتطوير الحياة المهنية. بالإضافة إلى ذلك، يمكن أن يساعد المرشدون أعضاء هيئة التدريس الجدد في الاندماج في المجتمع الأكاديمي، وفهم السياسات والإجراءات المؤسسية، وتأسيس علاقات إيجابية مع الزملاء والطلاب. بشكل عام، يلعب التوجيه دوراً حاسماً في مساعدة أعضاء هيئة التدريس الجدد على التكيف مع أدوارهم الجديدة والازدهار في حياتهم الأكاديمية.

- التطوير المهني لأعضاء هيئة التدريس
- التطوير المهني لأعضاء هيئة التدريس يهدف إلى تعزيز قدراتهم التعليمية والبحثية والخدمية، وتحسين أدائهم في القيام بمهامهم الأكاديمية بشكل أفضل. هناك بعض الخطوات التي يمكن اتخاذها لتحقيق التطوير المهني لأعضاء هيئة التدريس:
1. برامج التدريب وورش العمل: تنظيم برامج تدريبية وورش عمل متخصصة تتناسب مع احتياجات أعضاء هيئة التدريس، والتي تغطي مجموعة متنوعة من المواضيع مثل تطوير مهارات التدريس، وإدارة الوقت، والبحث العلمي، واستخدام التكنولوجيا في التعليم.
 2. التوجيه والإرشاد الأكاديمي: تقديم الدعم والإرشاد لأعضاء هيئة التدريس في مسارات تطويرهم المهني، بما في ذلك تحديد الأهداف المهنية ووضع خطط لتحقيقها، وتوجيههم في اختيار البرامج التدريبية المناسبة والمشاركة في الفعاليات الأكاديمية.
 3. تعزيز مهارات التدريس: توفير الدعم لأعضاء هيئة التدريس لتطوير مهارات التدريس والتواصل مع الطلاب، مثل تقديم الدورات التدريبية حول استراتيجيات التدريس الفعالة وتقييم الطلاب.
 4. التشجيع على البحث العلمي: توفير الدعم المالي والموارد اللازمة لأعضاء هيئة التدريس للمشاركة في الأبحاث العلمية ونشر النتائج في المجلات العلمية ذات التأثير، بالإضافة إلى تقديم المساعدة في كتابة الطلبات للحصول على التمويل البحثي.
 5. التطوير الإداري والقيادي: تقديم فرص لتطوير مهارات الإدارة والقيادة لأعضاء هيئة التدريس الذين يسعون لتولي مواقع إدارية في الجامعة، من خلال دورات التدريب والمشاركة في اللجان الإدارية.

16. معيار القبول
1- القبول المركزي 2- معدل الطالب ضمن قوائم القبول المركزي باستثناء أبناء التدريسيين (القبول حسب الرغبة) لتوزيعهم على الأقسام.

17. مخطط مهارات البرنامج															
مخرجات التعلم المطلوبة من البرنامج															
القيم				المهارات				المعرفة				اساسي أم اختياري	اسم المقرر	رمز المقرر	السنة / المستوى
ج4	ج3	ج2	ج1	ب4	ب3	ب2	ب1	أ4	أ3	أ2	أ1				
	✓	✓	✓				✓		✓		✓	أساسي	علم الحيوان	BIO11001	/2024- الاول 2023
	✓	✓	✓				✓				✓	أساسي	اساسيات الاحياء المجهرية	BIO11002	
	✓	✓	✓				✓		✓		✓	أساسي	فيزياء حيائية	BIO11003	
	✓	✓	✓				✓				✓	أساسي	إحصاء حياتي	CS11007	
	✓	✓	✓			✓	✓		✓	✓	✓	أساسي	لغة إنكليزية	QU01	
	✓	✓	✓			✓	✓	✓	✓	✓		أساسي	حقوق الانسان والديمقراطية	QU02	
	✓	✓	✓				✓				✓	أساسي	علم النبات	BIO12004	
			✓				✓	✓			✓	أساسي	كيمياء عامة	BIO12005	
		✓	✓				✓				✓	أساسي	سلامة وامن بايلوجي	BIO12006	

		✓	✓			✓	✓			✓	✓	أساسي	علم ارض	BIO12007
		✓	✓			✓	✓			✓	✓	أساسي	حاسبات	QU04

		✓	✓				✓	✓		✓	✓	اساسي	لغة عربية	QU06	
		✓	✓		✓	✓	✓				✓	أساسي	حشرات	BIO21013	الثاني / 2024-2023
		✓	✓		✓	✓	✓				✓	أساسي	تشرح نبات	BIO21016	
		✓	✓		✓	✓	✓				✓	أساسي	احياء مجهرية 1	BIO21014	
		✓	✓		✓	✓	✓				✓	أساسي	لافقریات	BIO21015	
		✓	✓		✓	✓	✓				✓	أساسي	مجاميع نباتية	BIO21018	
		✓	✓		✓	✓	✓				✓	أساسي	كيمياء حياتية1	BIO21017	
		✓	✓		✓	✓	✓				✓	أساسي	حاسبات 1	-	
		✓	✓		✓	✓	✓				✓	أساسي	لغة إنكليزية	-	
		✓	✓		✓	✓	✓				✓	أساسي	تصنيف حشرات	BIO22119	
		✓	✓		✓	✓	✓				✓	أساسي	تصنيف نبات	BIO22122	
		✓	✓		✓	✓	✓				✓	أساسي	احياء مجهرية 2	BIO22120	
		✓	✓		✓	✓	✓				✓	أساسي	طفيليات	BIO22023	
		✓	✓		✓	✓	✓				✓	أساسي	لافقریات 2	BIO22121	

		✓	✓		✓	✓	✓				✓	أساسي	كيمياء حيائية 2	-	
		✓	✓		✓	✓	✓				✓	أساسي	حاسبات 2	-	
		✓	✓		✓	✓	✓				✓	أساسي	علم الخلية	BIO31129	الثالث / 2024-2023
		✓	✓		✓	✓	✓				✓	أساسي	بيئة	BIO31049	
		✓	✓		✓	✓	✓				✓	أساسي	علم الانسجة	BIO31028	
		✓	✓		✓	✓	✓				✓	أساسي	فطريات	BIO31027	
		✓	✓		✓	✓	✓				✓	أساسي	نباتات طبية	BIO31030	
		✓	✓		✓	✓	✓				✓	أساسي	مناعة	BIO31037	
		✓	✓		✓	✓	✓				✓	أساسي	فسلجة احياء مجهرية	BIO31026	
		✓	✓		✓	✓	✓				✓	أساسي	علم الوراثة	BIO32031	
		✓	✓		✓	✓	✓				✓	أساسي	ثلاث	BIO32135	
		✓	✓		✓	✓	✓				✓	أساسي	فسلجة نبات	BIO32032	
		✓	✓		✓	✓	✓				✓	أساسي	تصنيف فطريات	BIO32133	
		✓	✓		✓	✓	✓				✓	أساسي	فسلجة حيوان	BIO32034	
		✓	✓		✓	✓	✓				✓	أساسي	احياء مجهرية مياه وتربة	BIO32035	

		✓	✓		✓	✓	✓				✓	أساسي	تحليلات مرضية	BIO32036	
		✓	✓		✓	✓	✓				✓	أساسي	لغة إنكليزية	-	

		✓	✓		✓	✓	✓				✓	أساسي	بايولوجي جزيئي	BIO41038	الرابع/2024-2023
		✓	✓		✓	✓	✓				✓	أساسي	فطريات طبية	BIO41039	
		✓	✓		✓	✓	✓				✓	أساسي	بكتريا مرضية	BIO41040	
		✓	✓		✓	✓	✓				✓	أساسي	حبلبات	BIO41041	
		✓	✓		✓	✓	✓				✓	أساسي	احياء مجهرية غذائية	BIO41042	
		✓	✓		✓	✓	✓				✓	أساسي	غدد صم	BIO41043	
		✓	✓		✓	✓	✓				✓	أساسي	وراثة احياء مجهرية	BIO42044	
		✓	✓		✓	✓	✓				✓	أساسي	فايروسات	BIO42045	
		✓	✓		✓	✓	✓				✓	أساسي	تطور	BIO42045	
		✓	✓		✓	✓	✓				✓	أساسي	احياء مجهرية صناعية	BIO42046	
		✓	✓		✓	✓	✓				✓	أساسي	مضادات حيائية	BIO42047	
		✓	✓		✓	✓	✓				✓	أساسي	لغة إنكليزية	-	
		✓	✓		✓	✓	✓				✓	أساسي	مشروع بحث	BIO42048	



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



Module Information				
معلومات المادة الدراسية				
Module Title	Zoology		Module Delivery	
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	Zoo 101			
ECTS Credits	8			
SWL (hr/sem)	200			
Module Level	1	Semester of Delivery		1
Administering Department	Type Dept. Code	College	Type College Code	
Module Leader	Mustasa Talib Muhaidi		e-mail	
Module Leader's Acad. Title	Assistant lecturer		Module Leader's Qualification	MSC
Module Tutor	Mustasa Talib Muhaidi		e-mail	
Peer Reviewer Name	Name		e-mail	E-mail
Scientific Committee Approval Date	07/06/2023		Version Number	1.0

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



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	By the end of this lecture unit, students should: 1. Anatomy : The study of the internal structure of animals 2. Cytology : The study of cell structure, its organelles, and their functions 3. Morphology : The study of the form and structure of animals 4. Physiology : The study of the functions and various organs in animals 5. Taxonomy : The study of the classification and the naming of organisms. 6. Histology : The study of the structure and functions of tissues 7. Genetics : The study of heredity and its variations
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. This course will provide students with an opportunity to gain information regarding animal classification and 2. systematic, animal structure and function relationships, evolution between 3. within major animal groups, human evolution 4. and animal reproduction 5. and development.
Indicative Contents المحتويات الإرشادية	Each module is assessed by written examinations and coursework (practical reports, field course reports, essays, problem sheets, exercises and tests).

Learning and Teaching Strategies واستراتيجيات التعلم والتعليم

Strategies	We use a mixture of teaching styles - lectures, tutorials, classroom activities and laboratory work.
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Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	144	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	56	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



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	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction; Biology
Week 2	Characters of living organism ,elements of life
Week 3 Week 4	Structure and function of cells
Week 5	Cell membrane and exchange throw the cell membrane
Week 6	Cell energy
Week 7 Week 8	Respiration and glycolysis
Week 9	TCA cycle oxidative phosphorylation
Week 10	Animal nutrition
Week 11	Animal circulation
Week 12	Animal excretion
Week 13	Neurons
Week 14 Week 15	Animal hormones



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



Delivery Plan (Weekly Lab. Syllabus)

المنهاج الأسبوعي للمختبري

	Material Covered
Week 1	Lab 1: microscopic
Week 2	Lab 2: animal cells
Week 3	Lab 3: animal tissue
Week 4	Lab 4: connective tissue
Week 5	Lab 5: proper connective tissue
Week 6	Lab 6: muscular tissue
Week 7	Lab 7: exam
Week 8	Lab 8: phylum Animalia
Week 9	Lab 9: Platyhelminthes
Week 10	Lab 10: nematodes
Week 11 Week 12	Lab 11: Lab 12 : arthropoda
Week 13	Lab 13 : mullusca
Week 14	Lab 14 : actinodermata
Week 15	Lab 15 : chordata

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Text-book of zoology by Schmeil, O. (Otto), 1860-1943	No
Recommended Texts	Textbook of General Zoology (Classic Reprint) Hardcover – August 24, 2018 by Winterton Conway Curtis (Author)	No
Websites	https://www.biodiversitylibrary.org/page/18953385	



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



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
كلية العلوم / قسم علوم الحياة



Module Information			
معلومات المادة الدراسية			
Module Title	Fundamentals of microbiology		Module Delivery
Module Type	Core		☒ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	Fun 102		
ECTS Credits	8		
SWL (hr/sem)	200		
Module Level	1	Semester of Delivery	
Administering Department	Biology	College	SCI
Module Leader	Mustasa Talib Muhaidi		e-mail
Module Leader's Acad. Title	Assistant lecturer	Module Leader's Qualification	MSC
Module Tutor	Mustasa Talib Muhaidi		e-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

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



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

كلية العلوم الطبية



Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	1. To introduce students to the fundamentals of microbiology and its significance in various fields. 2. To develop an understanding of microbial diversity, structure, and function. 3. To explore the principles of microbial growth, metabolism, and genetics. 4. To enhance knowledge of microbial interactions, pathogenesis, and host-microbe relationships. 5. To promote critical thinking and problem-solving skills in the context of microbiology.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	By the end of this module, students should be able to: 1. Explain the fundamental principles and concepts of microbiology. 2. Identify and classify different types of microorganisms based on their characteristics and properties. 3. Describe the mechanisms of microbial growth, metabolism, and reproduction. 4. Analyze and evaluate microbial interactions, including symbiotic and pathogenic relationships. 5. Apply knowledge of microbiology to real-world scenarios and problem-solving.
Indicative Contents المحتويات الإرشادية	1. Read and understand relevant textbook chapters and scientific articles on microbiology. 2. Engage in active note-taking and summarizing key concepts from lectures and readings. 3. Participate in group discussions and debates on microbiological topics to enhance understanding and critical thinking. 4. Utilize online resources, such as interactive tutorials and educational videos, to reinforce learning. 5. Engage in hands-on laboratory activities and experiments to apply theoretical knowledge and develop practical skills in microbiology.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	1. Lectures: Instructor-led lectures to introduce and explain key concepts and principles of microbiology. 2. Group Discussions: Facilitate student engagement and critical thinking through group discussions on microbiological topics, encouraging debate and sharing of perspectives. 3. Laboratory Work: Hands-on experiments and practical activities in the laboratory to reinforce theoretical concepts and develop skills in microbial techniques and analysis. 4. Case Studies: Analyzing real-life cases and scenarios to apply microbiological principles and problem-solving skills. 5. Interactive Learning: Utilizing interactive technology, such as online quizzes and simulations, to enhance student participation and understanding.
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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعاً

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	144	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	56	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	200		

Delivery Plan (Weekly Syllabus) المنهاج الأسبوعي النظري

	Material Covered
Week 1	Introduction to Microbiology: History, Scope, and Importance
Week 2	Microbial Diversity and Classification
Week 3	Microscopy and Staining Techniques
Week 4	Microbial Cell Structure and Function
Week 5	Microbial Metabolism and Energetics
Week 6	Microbial Growth and Reproduction
Week 7	Control of Microbial Growth: Physical Methods
Week 8	Control of Microbial Growth: Chemical Methods
Week 9	Microbial Genetics: DNA Structure and Replication
Week 10	Microbial Genetics: Gene Expression and Regulation
Week 11	Microbial Genetics: Mutation and Genetic Transfer
Week 12	Microbial Interactions: Mutualism and Commensalism
Week 13	Microbial Interactions: Pathogenesis and Host-Microbe Relationships
Week 14	Microbial Diseases: Bacterial Infections
Week 15	Microbial Diseases: Viral Infections
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الأسبوعي للمختبر

	Material Covered
Week 1	Lab 1: Introduction to Microscopy and Staining Techniques
Week 2	Lab 2: Culturing and Isolation of Microorganisms
Week 3	Lab 3: Microbial Cell Structure and Morphology
Week 4	Lab 4: Microbial Metabolic Pathways
Week 5	Lab 5: Microbial Growth and Reproduction
Week 6	Lab 6: Control of Microbial Growth: Physical Methods
Week 7	Lab 7: Control of Microbial Growth: Chemical Methods
Week 8	Lab 8: Microbial Genetics: DNA Extraction and PCR
Week 9	Lab 9: Microbial Genetics: Gene Expression and Regulation
Week 10	Lab 10: Microbial Genetics: Genetic Transfer Techniques
Week 11	Lab 11: Microbial Interactions: Culturing Symbiotic Microorganisms
Week 12	Lab 12: Microbial Interactions: Pathogenicity Testing
Week 13	Lab 13: Microbial Diseases: Bacterial Identification
Week 14	Lab 14: Microbial Diseases: Viral Identification
Week 15	Lab 15: Research Project - Independent research project on a specific aspect of microbiology, such as a case study or investigation.

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Tortora, G. J., Funke, B. R., & Case, C. L. (2019). Microbiology: An Introduction. Pearson.	Yes
Recommended Texts	Prescott, L. M., Harley, J. P., & Klein, D. A. (2017). Microbiology. McGraw-Hill Education.	No



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



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 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 #7, #10
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #8
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #9
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



Module Information			
معلومات المادة الدراسية			
Module Title	Biophysics		Module Delivery
Module Type	Core		☒ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	Phy 103		
ECTS Credits	6		
SWL (hr/sem)	150		
Module Level	1 1	Semester of Delivery	
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Zaidan Jasim Khalaf	e-mail	E-mail
Module Leader's Acad. Title	Assistant Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Zaidan Jasim Khalaf	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

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



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	1- Review in detail several important modern physical science concepts, models, laws, tools and techniques that can be applied to addressing real biological questions. 2-Using of the Physical science methods providing enormous breakthroughs in our understanding of fundamental biology - stemming from the early development of optical microscopy in understanding the cellular nature of life, through to complex structural biology techniques to elucidate the shape of vital biomolecules including proteins and DNA. 3- Introduce the key biological macromolecules, the forces that are involved in maintaining their structure and how structure is determined. 4- Discuss key physical science developments that have involved methods to study single cells in their native context, single- molecule biophysical methods that permit dynamic and mechanistic information to be extracted with unprecedented precision, and ground-breaking developments in areas of super-resolution imaging and biosensing. 5- Discuss tools and techniques that, broadly, permit the detection and characterization of biological material using non-visible electromagnetic radiation, and methods used to manipulate and quantify biological forces, with particular emphasis throughout placed on real applications. Examples of such tools discussed include electron microscopy, nuclear magnetic resonance spectroscopy and atomic force microscopy. We will also discuss optical and magnetic tweezers for single biological molecule manipulation, ion channel measurements in living cells and core physics concepts of fundamental biological processes which are interrogated using these modern instruments.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	The module will focus on a number of concepts, models, laws, tools and techniques of physical science that underpin biophysical methods. It will address a broad range of challenging biological questions. During this module students will: 1-Comprehend the use of physical concepts and laws to produce models of biological systems, and quantitatively analyse these models. 2-Critically analyse the validity of assumptions made in these models and assess their impact on the validity of the results. 3-Understand the physical basis of experimental techniques used to study the biological systems introduced and explain the key results. 4-Assess the key features and biological significance of the systems introduced. 5-Demonstrate an understanding of the key physical principles behind several important biological processes underpinning living matter. 6-Apply modern biophysical tools and techniques to real applications
Indicative Contents المحتويات الإرشادية	The characterization of molecular structure, the measurement of molecular properties, and the observation of molecular behavior presents an enormous challenge for biological scientists. A wide range of biophysical techniques have been developed to study molecules in crystals, in solution, in cells, and in organisms. These biophysical



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



techniques provide information about the electronic structure, size, shape, dynamics, polarity, and modes of interaction of biological molecules. Some of the most exciting techniques provide images of cells, subcellular structures, and even individual molecules. It is now possible, for example, to directly observe the biological behavior and physical properties of single protein or DNA molecules within a living cell and determine how the behavior of the single molecule influences the biological function of the organism.

Much biophysical research involves either the development of novel techniques to investigate the structure, properties, and biological functions of biomolecules or the application of these techniques to monitor how the structure and dynamics of biomolecules enables specific biological functions. Information about specific biophysical techniques is provided here.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies

Some suggestions are sketched concerning the positive impact the introductory lecture on biophysics could have on the undergraduate students. The basic idea is that, especially with this occasion, the teachers have the opportunity to emphasize the role, importance and impact of biophysics on the approach of living matter. The introductory lecture should be a very impressive and challenging one, aiming to attract the students towards this fascinated field of life sciences. However, these suggestions do not preclude the possibilities offered by the other lectures to make short incursions into the past or present life of biophysicists and to emphasize their remarkable scientific achievements.

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	94	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	56	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



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
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	20% (20)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction - Pressure And Hydrostatic Pressure
Week 2	Introduction And Basic Concepts In Kinematics
Week 3	Torques And Levers In Human Body
Week 4	Basic Concepts Of Electricity
Week 5	Electricity In The Nervous System
Week 6	Excited Nerve Cell Electricity
Week 7	Electrocardiography - Ecg Signal
Week 8	Introduction To Fluid Dynamic
Week 9	Circulatory System And Haemodynamic
Week 10	Introduction To Optics And Vision
Week 11	Eye Anatomy And Vision Process
Week 12	Emmetropia Vs Vision Defects
Week 13	Sound Interaction With Matter And Sonography
Week 14	Biological Effects Of Ionizing Radiation
Week 15	Sound Wave In Media
Week 16	



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Lab 1: Determining solution concentrations using a refractometer and a polarimeter
Week 2	Lab 2: Fermat's principle, the law of light refraction, the law of light reflection
Week 3	Lab 3: Phenomenon of the total internal reflection of light
Week 4	Lab 4: Operation principle of the refractometer
Week 5	Lab 5: Applications of polarimetry in diagnostics
Week 6	Lab 6: Types of concentrations: weight to weight, weight to volume, molar and normal
Week 7	Lab 7: Optical birefringence

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Leake MC: Biophysics: tools and techniques (CRC Press, 1st Ed, 2016) Leake MC: Single-Molecule Cellular Biophysics (CUP, 1st Ed, 2013)	Yes
Recommended Texts	Alberts A et al: Molecular Biology of the Cell (Garland Science, 6th Ed, 2014)	No
Websites	https://www.nature.com/subjects/biophysical-methods#:~:text=Biophysical%20methods%20are%20techniques%20to,molecule%20methods%20and%20molecular%20modelling.	

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



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



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.

العلاقة مع المواد الدراسية الأخرى			
	المعهد	-	الفصل الدراسي
	المقرر المشترك	-	الفصل الدراسي



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



معلومات المادة الدراسية				
Module Delivery		Biostatistics		عنوان المقرر
☒ Theory ☒ Lecture ☐ Lab ☒ Tutorial ☐ Practical ☐ Seminar		Core		نوع المقرر
		Sta 111		رمز المقرر
		4		عدد الوحدات
		100		عدد الساعات
2	Semester of Delivery		1	مستوى المقرر
Type College Code		College	Type Dept. Code	Administering Department
Selma@baghdadcollege.edu.iq		e-mail	Selma Thabet	Module Leader
Ph.D.	Module Leader's Qualification		Professor	Module Leader's Acad. Title
Selma@baghdadcollege.edu.iq		e-mail	Selma Thabet	Module Tutor
E-mail		e-mail	Name	Peer Reviewer Name
1.0	Version Number		01/06/2023	Scientific Committee Approval Date



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية كلية العلوم / قسم علوم الحياة



أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

- التعرف على المفاهيم الأساسية للإحصاء والاحصاء الحياتي - التعرف على علاقة الاحصاء والاحصاء الحياتي بالعلوم الأخرى وخاصة العلوم البيولوجية. - التعرف على كيفية جمع البيانات للدراسة التي سجرها الباحث دراسته. - معرفة تطبيقات الاحصاء والاحصاء الحياتي في مختلف العلوم. - القدرة على استخدام الإحصاء في حل المعضلات الحيائية والبيئية.	أهداف المادة الدراسية
أ- المعرفة والفهم 1- اكتساب الخبرة والمعرفة في جمع البيانات الاحصائية. 2- حلول المشاكل الجداول الاحصائية. 3- إيجاد مقاييس التشتت المركزية. ب-- المهارات الخاصة بالموضوع ب1- التدريب الصيفي ب2- تقارير علمية ب3- بحوث تخرج ج- مهارات التفكير ج1- تطوير قدرة الطالب للعمل على أداء الواجبات وتسليمها في الموعد المقرر. ج2- التفكير المنطقي والاحصائي في إيجاد النتائج الاحصائية لدراسة المشكلة ومدى تأثير الظواهر على تلك الدراسة. ج3- تطوير قدرة الطالب على الحوار والمناقشة.	مخرجات التعلم للمادة الدراسية

استراتيجيات التعلم والتعليم

➤ إدارة المحاضرة على نحو يشعر بأهمية الوقت. ➤ تشجيع الإجابات الصحيحة ومناقشة الإجابات الخاطئة بدلا من اعتماد العقاب فيها . ➤ تكليف الطالب ببعض الأنشطة والواجبات الجماعية. ➤ تخصيص نسبة من الدرجة للأنشطة الجماعية. ➤ المشاركة الفاعلة في قاعة الدرس دليل الالتزام الطالب وتحمله المسؤولية. ➤ الالتزام بالموعد المحدد في تقديم الواجبات والبحوث.	استراتيجيات
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الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	52	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	48	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		



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Module Evaluation					
تَقْيِيم المَادَّة الدِّرَاسِيَّة					
نتيْجَة التعلّم	اسبوع	الوزن (الدرجة)	الوقت / العدد		
LO #1, #2 and #10, #11	5 and 10	10% (10)	2	اختبارات	التقْيِيم التكويني
LO #3, #4 and #6, #7	2 and 12	10% (10)	2	مهام	
All	Continuous	10% (10)	1	مشاريع	
LO #5, #8 and #10	13	10% (10)	1	تقرير	
LO #1 - #7	7	10% (10)	2hr	اختبار مصف الفصل	التقْيِيم الملخص
All	16	50% (50)	3hr	اختبار نها ئ	
		100% (100 Marks)	Total assessment		

Delivery Plan (Weekly Syllabus)	
المناهج الاسبوع النظري	
Material Covered	الاسبوع
المقدمة في الاحصاء , تعريف الاحصاء و الاحصاء الحياتي.	الاول
علاقة الاحصاء والاحصاء الحياتي بالعلوم البيولوجية.	الثاني
تقسيم علم الاحصاء والمعامل و الرموز الاحصائية.	الثالث
بعض المفاهيم الاحصائية .	الرابع
طرق جمع البيانات , مصادر جمع البيانات, والاستمارات الاحصائية.	الخامس
طرق عرض وتلخيص البيانات : العرض الجدول للبيانات, التوزيع التكراري, التوزيع الهندس للبيانات.	السادس
الخطوات العامة لتكوين جدول توزيع تكراري.	السابع
المقاييس الاحصائية: مقاييس النزعة المركزية او مقاييس التمرکز او المتوسط	الثامن
1- (المتوسط الحسابي , المتوسط الفرضي , المتوسط الحسابي المرجح او الموزون)	
مقاييس النزعة المركزية: الوسيط , المنوال (للبيانات المبوبة و الغير مبوبة).	التاسع
مقاييس التشتت : مقاييس التشتت (المدى , الانحراف المتوسط) لبيانات المبوبة , والبيانات الغير مبوبة.	العاش
التباين , الانحراف المعياري, الخطأ القياسي.	الحادي عشر
تعريف معامل الارتباط , حساب معدل الارتباط , معامل الارتباط البسيط و الرتب.	الثاني عشر
تعريف معامل الانحدار , حساب معامل الانحدار	الثالث عشر
مبادئ الاحتمالية : الاحتمال الشرطي والاحتمال التوافقي .	الرابع عشر
التحليل الاحصائي, الوحدة التجريبية, المعاملات التكرارات.	الخامس عشر



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Learning and Teaching Resources

مصادر التعلم والتدريس

متوفرة بالمكتبة	Text	
نعم	1- الإحصاء تأليف محمود حسن وأمير المشهداني - جامعة بغداد	المصادر المطلوبة
نعم	1- مبادئ الإحصائية، تأليف د. عبد العزيز ف. م. هيك، ١٩٦٦، دار النهضة العربية، بيروت	المصادر الموصى بها
	www. Freescience.info/math	رابط على الانترنت

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.

	Material Covered
Week 1	Lab 1: Isolation and Enumeration of Soil Microorganism
Week 2	Lab 2: Isolation of Soil bacteria
Week 3	Lab 3: Isolation of spore-forming bacteria
Week 4	Lab 4: Isolation of bacteria producing antibiotics from soil
Week 5	Lab 5: Isolation of Molds and Yeasts
Week 6	Lab 6: Isolation of molds producing antibiotics
Week 7	Lab 7: Isolation and Enumeration of water Microorganism
Week 8	Detection of fecal- pollution
Week 9	Membrane Filter Technique
Week 10	Isolation and enumeration of Fecal streptococci
Week 11	Isolation of <i>Clostridium perfringens</i> from water
Week 12	Isolation and identification of <i>Salmonella</i> & <i>Shigella</i>
Week 13	Isolation of Vibrio's from water
Week 14	Bacteriological tests of recreational water
Week 15	Exam



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Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Principle of microbiology	Yes
Recommended Texts	1. Microbial Ecology: Fundamentals and Applications (4th Edition) 4th Edition	No
Websites		

Grading Scheme

مخطط الدرجات

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

معلومات المادة الدراسية

Module Title	English Language / First Year		Module Delivery	
Module Type	Basic		☒ Theory ☒ Lecture ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	UOB102			
ECTS Credits	2			
SWL (hr/sem)	50			
Module Level	UG 1	Semester of Delivery	2	
Administering Department	Biology	College	Science	
Module Leader	Batool Nafea	e-mail		
Module Leader's Acad. Title	Professor	Module Leader's Qualification	MSC	
Module Tutor	Batool Nafea	e-mail		
Peer Reviewer Name		e-mail		
Scientific Committee Approval Date	9/11/2023	Version Number	1.0	

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتوى الإرشادي



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



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



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

استراتيجيات التعلم والتعليم

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

الحمل الدراي للطلاب محسوب ل ٥١ اسبوعا

Structured SWL (h/sem) الحمل الدراي المنتظم للطلاب خلال الفصل	33	Structured SWL (h/w) الحمل الدراي المنتظم للطلاب أسبوعا	2
Unstructured SWL (h/sem) الحمل الدراي غي المنتظم للطلاب خلال الفصل	17	Unstructured SWL (h/w) الحمل الدراي غي المنتظم للطلاب أسبوعا	1.3
Total SWL (h/sem) الحمل الدراي للطلاب خلال الفصل	50		

Module Evaluation

تقيّم المادة الدراسية

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



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Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

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



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	salt, please? How would you like your coffee? This is delicious! p37
Week 5	The way I live p32 Present Simple I/you/we/they I like ice-cream. I don't like tennis. Do you like football? p33 Where do you work? Do you live in Dundee? p34 In Brazil they speak Portuguese. p36 a and an a waiter, an actor, an Italian restaurant p34 Adjective + noun an American car Spanish oranges p37
Week 6	Every day p40 Present Simple he/she He gets up at 6.00. He has lunch in his office. p42 She lives in a small house. p44 Questions and negatives What time does he have breakfast? He doesn't live in London. p43 Adverbs of frequency He always works late. He never goes out. p42
Week 7	Mid-term Exam
Week 8	My favourites p48 Question words who, where, why, how p48 Pronouns Subject/Object/Possessive I/me/my we/us/our they/them/ their p49 this and that I like this wine. Who's that? p50
Week 9	Where I live p56 There is/are ... There's an old sofa. Are there any armchairs? There are some books. p57 Prepositions in, on, under, next to p58
Week 10	Times past p64 was/were born When were you born?



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	I was born in 1996. p65 Past Simple – irregular verbs went, came, saw She went shopping. p68
Week 11	We had a great time! p72 Past Simple – regular and irregular played, got, watched, did p72 Questions What did you do? Did you go out? p73 Negatives They didn't go to work. p73 ago I went to Rome ten years ago. p78
Week 12	I can do that! p80 can/can't He can speak French. I can't draw. Can she run fast? p80 Adverbs I can cook a little bit. I can't cook at all. really well, fluently p82 Requests and offers Can you tell me the time? Can I help you? p83
Week 13	Please and thank you p88 I'd like ... I'd like some ham. How much would you like? p88 some and any I'd like some cheese. Do you have any Emmental? I don't have any apple juice. p89 like and would like I like Coke. I like going to the cinema. I'd like to go out. p91
Week 14	Here and now p96 Present Continuous She's wearing a T-shirt. What's he doing? p97 Present Simple and Present Continuous He lives in London. They're staying in a hotel. p98
Week 15	It's time to go! p104



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	Future plans <i>They're going on holiday.</i> <i>Which countries are you going to visit?</i> <i>I'm leaving on Tuesday.</i> <i>What are you doing this evening?</i> p104 Revision Question words – <i>when, where, who, how</i> p106 Tenses – present, past, and future tenses p110
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

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

Grading Scheme

مخطط الدرجات

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

Module Title	DEMOCRACY & HUMAN RIGHTS			Module Delivery	
Module Type	Support			☒ Theory ☒ Tutorial.	
Module Code	UOB104				
ECTS Credits	2				
SWL (hr/sem)	50				
Module Level		1	Semester of Delivery		1
Administering Department		Biology	College	Science	
Module Leader	Bilal Amad obaid			e-mail	
Module Leader's Acad. Title		lecturer	Module Leader's Qualification		phD
Module Tutor	Bilal Amad obaid			e-mail	
Peer Reviewer Name		Dr.Sabah Alwachi	e-mail	sabahalwachi@yahoo.com	
Scientific Committee Approval Date		9/11/2023	Version Number		1.0

Relation with other Modules

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

هذاف انمادة انذراسيت ونتائج التعميم وانمحنيتات الإرشاديت



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



Module Aims أهداف انمادة انذراسيت	1. This course deals with the basic concept of human rights& democracy 2. Clarifying and training students on the most important principles of human rights and democracy. 3. Organizing discussions and presentations on the most vital and basic topics affecting community building, related to human rights and democracy. 4. Adopting teamwork with students to develop their cognitive abilities and create a spirit of cooperation, initiative, creativity and exchange of views in an effort to build the foundations of peaceful community coexistence. 5. Providing society with conscious youth aware of the importance of its role in building society, its unity and cohesion through spreading the culture of human rights and establishing the rules of correct democracy. 6. Human rights guarantee the protection and respect of an individual's interests, even when he or she is not a majority. In a democratic climate, sustainable democratic power cannot be conceived without respecting, protecting and fulfilling human rights. Through their combined influence, they allow the individual a life based on the freedom of self-determination and collective. That is why the protection and realization of human rights truly form the basis of the democratic project.
Module Learning Outcomes مخرجات التعلم نهامة انذراسيت	Cognitive goals. 1. Educate students and inform them about the importance of human rights and democracy. 2. Recognize and understand the methods of teamwork for the exchange of ideas and creative discussions 3. Developing students' performance through guidance in preparing mini-research on modern vocabulary on vital topics related to human rights and democracy. 4. Providing students with creative development abilities in modern proposals and creative developmental ideas by discussing awareness videos presented on electronic classes. 5. Developing the skills of sharing opinions and ideas and respecting other's opinion. 6. Objective Skills : 7. Basic knowledge in the principles of human rights and democracy. 8. Building the innovative personality of knowledge through online research and the transfer and exchange of information. 9. Discuss the various properties about everything related to human rights and their importance in our daily lives. 10. Identify everything related to democracy and the foundations of the



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	performance of the electoral process and its importance in building the nation. 11. Identify the capacitor and inductor phasor relationship with respect to voltage and current.
Indicative Contents المحتويات الإرشادية	- Developing the student's analytical and critical skills regarding the reality and future of human rights and democracy - Training the student on the importance of active participation in aspects of public life, such as promoting respect for the principles of public human rights and active participation in political and cultural life. - Enable students to understand the importance of education and its role in spreading the culture of human rights and democracy in building a civilized society based on good governance, the most important component of which is belief in human rights, education and active participation in governance through free and fair elections.
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The main strategy that will be adopted in delivering this module is to encourage students' participation in the discussions, dialogues and group work lectures & exercises, while at the same time refining and expanding their critical thinking skills. There are many teaching and learning methods used, and the most important of these methods are: Theoretical lecture, discussion and dialogue, panel discussions on certain topics, theoretical student research Library and electronic activities (which helps students to reach the following results: 1- The scientific ability to distinguish between correct information and wrong information. 2- Ease of scientific drafting and ease of correction. 3. Ability to memorize and guess. 4- The ability to link concepts and principles with reality. 5. Ability to invoke, link, interpret.



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Student Workload (SWL)

نحتم اندراسي نهطاب

Structured SWL (h/sem) نحتم اندراسي المنتظم نهطاب خلال الفصل	33	Structured SWL (h/w) نحتم اندراسي المنتظم نهطاب اسبوعيا	2
Unstructured SWL (h/sem) نحتم اندراسي غير المنتظم نهطاب خلال الفصل	17	Unstructured SWL (h/w) نحتم اندراسي غير المنتظم نهطاب اسبوعيا	1.25
Total SWL (h/sem) نحتم اندراسي الكلي نهطاب خلال الفصل	50		

Module Evaluation

نقيم المادة اندراسيت

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

Delivery Plan (Weekly Syllabus)

نمناهج الاسبوعي انتظري مادة انديمقراطيت و تحقيق الانسان

	Material Covered
Week 1	Familiarity with the concept of human rights and the definitions approaching it, discussing, dismantling and criticizing them in a scientific way in order to reach the most accurate and objective. - Definition of right, of human, of the concept of human rights. Human rights qualities, Types of human rights Human Rights Categories
Week 2	The historical development of human rights: Orcagina Reforms 1- Urnamo Law.2- The law of Ishtar Bit. 3- The law of the Kingdom of Eshnuna.4- Code of Hammurabi.
Week 3	Human rights in other ancient civilizations: 1- Indian and Chinese civilization 2- Pharaonic civilization of Egypt 3- Greek civilization 4- Roman civilization
Week 4	Human rights in heavenly laws Human Rights in Judaism, Human rights in Christianity, Human Rights in Islam.



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Week 5	Human rights in Renaissance - modern and contemporary societies Introducing the student to the most important UN document in the field of human rights, which was approved and approved by the Assembly on January 10, 1948 Universal Declaration of Human Rights 1948.
Week 6	Non-governmental organizations defending human rights: Amnesty International, b. International Committee of the Red Cross. Arab Organization for Human Rights.
Week 7	Definition of the phenomenon of administrative corruption, Types of administrative corruption, Causes of administrative corruption. The repercussions of the phenomenon of administrative corruption on human rights and society. Successful treatments to combat corruption and protect society from it.
Week 8	Introduction - Historical development of the concept of <u>democracy</u> , definition of democracy, freedom. The difference between freedom and democracy, The relationship between the rights and public freedoms of individuals and democracy, Islamic views in a democratic system of government , Shura and Democratic System
Week 9	Specifications and duties of the Islamic ruler reading, The era of Imam Ali "peace be upon him" to his governor over Egypt: Specifications of the Islamic ruler: First: The moral and doctrinal components of the ruler Second: The general culture of the Islamic ruler, Third: Acumen and good choice: -Fourth: Direct relationship with people: Fourth: Direct relationship with people. Duties of the Islamic ruler: First: Social Reform: Second: Achieving security and defense Third: The architecture of the country "economic development"
Week 10	Forms of democracy: (1): Direct democracy ,(2): Semi-direct democracy , (3): Parliamentary democracy (parliamentary representation)4): Liberal Democracy (5): consociation Democracy, (6): Delegated Democracy.
Week 11	Conditions for the success of the elements and pillars of the democratic system General conditions for the success of the democratic system: 1. Respect for human rights, 2. Political pluralism 3. Peaceful transfer of power 4. Political equality 5. Respect the principle of the majority 6. Existence of the rule of law.
Week 12	Components or elements of democracy: 1 – Citizenship 2- Political participation 3. Elections 4. MPs and Responsibility 5. Opposition 6- Separation of government and parliament 7- Constitutional legitimacy
Week 13	The concept of elections and their legal adaptation: First: The concept of election Second: Legal adaptation of the Election, Third: Conditions of Election, Fourth: Concepts of Elections, Fifth: Types of Electoral Systems. Assessing the Democratic System, Pros and advantages of the democratic system, Disadvantages and disadvantages of the democratic system, Implementing the democratic system in Iraq.
Week 14	Lobbyists: First: the concept and definition. Second: Types of pressure groups. Third: The methods of pressure groups that they use to achieve their goals. Fourth: Lobbying and Democracy.
Week 15	Preparatory Week
Week 16	Final Exam



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
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Learning and Teaching Resources

مصادر التعلم والآنترنت

	Text	Available in the Library?
Required Texts	Martyrdom verses from the Holy Quran Mohammed Al-Tarawneh et al., International Humanitarian Law, ICRC, Amman, 2005 Diamond Larry, Democracy: Its Development and Ways to Enhance It, translated by Fawzia Naji, Dar Al-Mamoun for Translation, Iraq, 2005.	Yes
Recommended Texts	journal.un.org Hadi, Riad Azabz. (2005). Human rights (evolving contents and protection) (Baghdad).	Yes
Websites	Universal Declaration of Human Rights United Nations https://sc.uobaghdad.edu.iq/?page_id=8415 https://www.youtube.com/@ansamalobidimanageroofhuman2891	

APPENDIX:

GRADING SCHEME

مخطط اندرجات

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

Note:

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



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



Module Information

معلومات المادة الدراسية

Module Title	microbiology		Module Delivery	
Module Type	core		☒ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code				
ECTS Credits	5			
SWL (hr/sem)	125			
Module Level	1	Semester of Delivery		
Administering Department	Biology	College	SCI	
Module Leader	Eman Qassim Jebur		e-mail	Emanqassim 43@gmail.com
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D.	
Module Tutor	Eman Qassim Jebur		e-mail	Emanqassim 43@gmail.com
Peer Reviewer Name	Name	e-mail	E-mail	
Scientific Committee Approval Date	20/09/2026	Version Number	1.0	



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
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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. Studying the prevention, diagnosis and control of infections and specific diseases. 2. Ensuring food and drink is safe to consume.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	By the end of this module, students should be able to: 1. Students will gain knowledge about the different cell organelles of microorganisms and their detailed functions. 2. Students will also study the growth and control of microbes as well as different bacteriological techniques involved in microbiology. 3. Students will learn about the biomolecules by studying their structures and types.
Indicative Contents المحتويات الإرشادية	1. Read and understand relevant textbook chapters and scientific articles on microbiology. 2. Engage in active note-taking and summarizing key concepts from lectures and readings. 3. Participate in group discussions and debates on microbiological topics to enhance understanding and critical thinking. 4. Utilize online resources, such as interactive tutorials and educational videos, to reinforce learning. 5. Engage in hands-on laboratory activities and experiments to apply theoretical knowledge and develop practical skills in microbiology.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم

Strategies	1. Lectures: Instructor-led lectures to introduce and explain key concepts and principles of microbiology. 2. Group Discussions: Facilitate student engagement and critical thinking through group discussions on microbiological topics, encouraging debate and sharing of perspectives. 3. Laboratory Work: Hands-on experiments and practical activities in the laboratory to reinforce theoretical concepts and develop skills in microbial techniques and analysis. 4. Case Studies: Analyzing real-life cases and scenarios to apply microbiological principles and problem-solving skills. 5. Interactive Learning: Utilizing interactive technology, such as online quizzes and simulations, to enhance student participation and understanding.
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الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعاً **Student Workload (SWL)**



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Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	75	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	46	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

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

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
Week 1	The role and importance of microorganisms in the environment and human health
Week 2	Cell Structure and Function(Differences between prokaryotic and eukaryotic cells Structure and function of microbial cell components (cell wall, membrane, cytoplasm, ribosomes,)
Week 3	Microbial Genetics DNA replication, transcription, and translation in microbesGene expression and regulation Horizontal gene transfer (transformation, transduction, conjugation)Mutation and repair mechanisms
Week 4	Microbial Metabolism/ Energy production (aerobic and anaerobic respiration) Nutritional types of microorganisms (autotrophs, heterotrophs, etc.)
Week 5	Microbial physiology
Week 6	Microbial Ecology and Interactions
Week 7	Immunology
Week 8	Pathogenic Microbiology
Week 9	Antimicrobial Agents and Resistance
Week 10	Applied Microbiology
Week 11	Bacteriology
Week 12	Virology
Week 13	Mycology
Week 14	Parasitology



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Week 15	Phages
Week 16	Preparatory week before the final Exam

المناهج الاسبوعي للمختبر (Weekly Lab. Syllabus) Delivery Plan

	Material Covered
Week 1	Lab 1: General instructions
Week 2	Lab 2: Instrument and equipment's used in microbiology lab
Week 3	Lab 3: Sterilization
Week 4	Lab 4: Culture media
Week 5	Lab 5: Shapes and size of bacteria
Week 6	Lab 6: Simple staining
Week 7	Lab 7: Differential staining
Week 8	Lab 8: Gram stain
Week 9	Lab 9: Acid fast stain
Week 10	Lab 10: Capsule stain
Week 11	Lab 11: Endospore stain
Week 12	Lab 12: Flagella stain
Week 13	Lab 13: Antimicrobial sensitivity testing
Week 14	Lab 14: isolation of bacteria from different environmental sources
Week 15	Lab 15: Research Project - Independent research project on a specific aspect of microbiology

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Jawetz, Melnick, & Adelberg's Medical Microbiology (26 th edition 2016)	Yes
Recommended Texts	Prescott, L. M., Harley, J. P., & Klein, D. A. (2017). Microbiology. McGraw-Hill Education.	No
Websites	https://www.asm.org/MicrobeLibrary	

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



MODULE DESCRIPTION FORM

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كلية العلوم / قسم علوم الحياة



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
كلية العلوم / قسم علوم الحياة



Module Information			
معلومات المادة الدراسية			
Module Title	Entomology		Module Delivery
Module Type	core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	Ent 201		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	2	Semester of Delivery	
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Nameer Abdalkhadher	e-mail	nameer19621962@baghdadcollege.edu.iq
Module Leader's Acad. Title	Assistant lecturer	Module Leader's Qualification	MSC
Module Tutor	Nameer Abdalkhadher	e-mail	nameer19621962@baghdadcollege.edu.iq
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	Principle of entomology serves as ideal text for courses in general entomology with laboratory sections written for student who have completed an introductory course in biology , it provides an in- depth treatment of insect anatomy covered , morphology and physiology .
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	It enhance our understanding of the common insects are discussed as
Indicative Contents المحتويات الإرشادية	Entomology should be balanced treatment of the subject still hold and is reflected in the retention of the format of earlier edition its arrangement evaluation and anatomy and physiology reproduction and development , evaluation and diversity has again undergone great reworking mainly because the last decade has seen the uncovering of significant new fossil evidence and the application of molecular and cladistic analysis to extant group and as result idea both on the relationships of insects to other orthopodes too purpose it provide a description of external structure which remain the principle basis on which insects can be classified and identified , while stressing diversity with reference to mouth parts and appendages modification anatomy and physiology deal with homeostatic system that keep insect in tune.
	Anatomy is preparation would not have been possible but for my colleagues too numerous to mention who provided information and answerd specific question that improved the books content and currency , anatomy deal with all insects body and appendages , with their environment enabling them to develop and reproductive optimally , and dissection integument its influence on success of insects , examine sensory whose form and function are greatly influence of cuticulare nature , also include muscle structure and function and all external system , reproduction and embryonic development

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

Student Workload (SWL)			
الحمل الدراسي للطلاب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	94	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	31	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	2
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب 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	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction – of entomology
Week 2	Insect definition
Week 3	Position of insect classification from animal science
Week 4	Importance of insect and their dispersal
Week 5	The external view of insects
Week 6	Internal anatomy
Week 7	The digestive system
Week 8	The excretion system
Week 9	The respirator system
Week 10	Circulatory system
Week 11	Reproductive system
Week 12	Nerves system
Week 13	Sensory organs
Week 14	Empo process
Week 15	reproduction
Week 16	Exam

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

Week 1	Lab 1: Introduction of entomology
Week 2	Lab 2 : method of collection and killing insects
Week 3	Lab 3: insect body region
Week 4	Lab 4: head appendages . , antenna , mouth parts
Week 5	Lab 5: thorax appendages , wing , leg
Week 6	Lab 6: external anatomy of the abdomen and its function
Week 7	Lab 7: internal anatomy
Week 8	Lab 8: digestive system
Week 9	Lab 9: excretion system
Week 10	Lab 10: respiratory system
Week 11	Lab 11: circulatory system
Week 12	Lab 12: reproductive system
Week 13	Lab 13: insect development
Week 14	Lab 14: insects life cycle
Week 15	Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Entomology	Yes
Recommended Texts	Principle of general entomology	No
Websites		

Grading Scheme

مخطط الدرجات

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

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Module Information

معلومات المادة الدراسية

Module Title	Invertebrates			Module Delivery	
Module Type	Supplementary			☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	Inv 203				
ECTS Credits	2				
SWL (hr/sem)	125				
Module Level		2	Semester of Delivery		
Administering Department		Biology	College	Science	
Module Leader	Hala Ayad Noori		e-mail	hayad93@baghdadcollege.edu.iq	
Module Leader's Acad. Title		Ass. Lecturer	Module Leader's Qualification		MSc
Module Tutor	Hala ayad noori		e-mail	hayad93@baghdadcollege.edu.iq	
Peer Reviewer Name		Hala ayad Noori	e-mail	hayad93@baghdadcollege.edu.iq	
Scientific Committee Approval Date		20/09/2026	Version Number		1.0



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



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. The course will cover Invertebrates, which is the science that studies the animals without backbone. 2. Introduce students to the difference between invertebrates and vertebrates. 3. Study the link between vertebrates and invertebrates. 4. describe invertebrates as organisms that do not have a vertebral column, 5. describe the characteristics of organisms belonging to the following phyla: Protozoa, Porifera, Cnidaria , Platyhelminthes and Nematoda, Annelida, Arthropoda, Mollusca, , and Echinodermata, 6. classify organisms into phyla based on given descriptions.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. After completing the student's university studies. 2. Reviews basic scientific concepts and knowledge in invertebrate science. 3. Explain the taxonomic, morphological and biosynthetic characteristics of invertebrate animals 4. Examination of understanding and familiarity with the science of invertebrates. 5. Shows the relationship between the structural infrastructure of an invertebrate animal and the characteristics of the surroundings it inhabits. 6. Explain the relationships between invertebrate animals and their environment, and explain the outcome of these relationships. 7. Analyze the changes in the environment related to invertebrate animals based on a sound scientific background. 8. Know the morphological and taxonomic characteristics of invertebrates in the laboratory 9. records with the classification of invertebrate animals from their different environments in the mid-ocean information and experience it. 10. Employ the scientific and laboratory skills and knowledge he acquired during his study of this science in interaction



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية كلية العلوم / قسم علوم الحياة



	surrounding objects. 11. Raising awareness in his community about invertebrate animals and their impact on the environment and the creatures around them. 12. The available recent technologies that establish and develop the concepts of this science
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Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	Learn more about invertebrates with our teaching wiki page below! We'll take a look at what they are and some of the examples of invertebrates! Animals that do not have a vertebral column (also known as a backbone or spine) are known as invertebrates. They come in all shapes and sizes, some invertebrates are microscopic, other invertebrates, like the giant squid, can definitely be seen with the naked eye
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Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ أسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	94	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	31	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	6
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب 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	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



Total assessment	100% (100 Marks)		
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Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction, Animal Classification, Taxonomic Categories
Week 2	The Importance of Invertebrates,
Week 3	Phylum: Protozoa, Characteristics of Protozoan Phyla, Form and Function
Week 4	Nutrition, Osmoregulation and Excretion, Reproduction
Week 5	Encystment and Excystment, Classification of Protozoa, Class Flagellata:
Week 6	Example of Class Flagellata, Order Euglenodina, Euglena
Week 7	Example of Class Flagellata, Order Opalinina
Week 8	Class Sarcodina: Example of Class: Sarcodina Amoeba
Week 9	Example of Class: Ciliata Paramecium
Week 10	Phylum: Porifera Introduction, Characteristics of Phylum Porifera
Week 11	Respiratory and Excretory organs, Reproduction
Week 12	Classification of Phylum Porifera
Week 13	Phylum: Cnidaria (Coelentrata), Characteristics of Phylum Cnidaria
Week 14	Classification of Cnidaria, Examples: Hydra, Nutrition Hydra, Respiration and Excretion in Hydra, Reproduction in Hydra, Example Obelia, Example Aurelia
Week 15	Phylum: Platyhelminthes, Characteristics of Phylum Platyhelminthes, Example: Planaria
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	TAXONOMY System for organizing, classifying, naming living things • Kingdom • Phylum or Division • Class • Order • Family • Genus • Species • Amoeba proteus or Amoeba proteus



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية كلية العلوم / قسم علوم الحياة



Week 2	Classification, Classification: 1- Class: Flagellata Vesicular nucleus, Flagella, pellicle, ectoplasm / endoplasm, Rep. fission (Sarcodina 2- Vesicular nucleus, pseudopodia, no pellicle, ectoplasm / endoplasm Rep. fission Ciliata 3- Compact nucleus, 2nuclei(macro & micro) Cilia, pellicle 4- Sporozoa (parasitic) Protozoa Class: C
Week 3	Phylum Porifera, Characteristics of Porifera
Week 4	Classification of Porifera 1- Class: Calcarea - Order: Homocoela – Leucosolenia - Order: Heterocoela- Grantia Hexactinellidae :Class 2- Euplectlla spicules 3- Class: Demospongia) more than 90 % of sponges) -Order: Monaxonida – Spongilla, Ephydatia, Chalina
Week 5	Phylum: Cnidaria (Coelenterata) , Characteristics, Polyp & Medusa
Week 6	Platyhelminthes Flat Worms, Classification: 1- Class: Turbellaria- free living worms. 2- Trematoda (flukes) – parasitic. 3- Cestodes (tapeworms) – parasitic.
Week 7	Phylum: Nematodes, Nematodes classification,

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	An introduction to The Invertebrates	NO
Recommended Texts	Biology	No
	Invertebrates (Jacobe E.Safra&Jorge Aguila)	
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



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



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 2		Module Delivery
Module Type	S		☒ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	UOB		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	1 1	Semester of Delivery	
Administering Department		College	
Module Leader	Sajeda Dawood salman	e-mail	Momkolko85@gmail.com
Module Leader's Acad. Title	professor	Module Leader's Qualification	phD
Module Tutor	Sajeda Dawood salman	e-mail	Momkolko85@gmail.com
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	20/9/2026	Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	Arabic 1 UOB101	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	تدريس اللغة العربية بهدف إلى تحقيق الأهداف التالية: 1- تعليم اللغة العربية بقواعدها الصحيحة كما وردت في القرآن الكريم . 2- تطوير مهارات الاستماع والتحدث والقراءة والكتابة باللغة العربية الفصحى . 3- تنمية الملكة اللغوية وقدرات التفكير والتحليل عن طريق دراسة الأدب والشعر والنثر . 4- تجاوز الكثير من الأخطاء الشائعة في لغتنا العربية وفي لغة البحث الأكاديمي ولغة الحوار والتخاطب . 5- معرفة الفروق اللغوية بين الكلمات المتشابهة واختلاف معانيها في القرآن الكريم . 6- بيان الظواهر اللغوية التي تميزت بها لغتنا العربية عن باقي اللغات الأخرى مثل الترادف والتضاد والاشتراك اللفظي والتعريب وغيرها . 7- تطوير مهارات الكتابة بصورة صحيحة وتجاوز الأخطاء التي تقع في كتابة الهمزة والضاد والطاء والتاء المربوطة والهاء والتاء الطويلة وغيرها .
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	تدريس اللغة العربية ينتج عدة مخرجات، منها: 1- تحسين مهارات القراءة والكتابة. 2- تطوير مهارات التحدث والاستماع. 3- تعزيز المعرفة بالثقافة العربية. 4- تنمية المهارات التفكيرية. 5- إبراز الهوية العربية.
Indicative Contents المحتويات الإرشادية	تعريف الطلاب بأهمية اللغة العربية وتعريف الطلاب بالفروق بين علم النحو والصرف والصوت (4 ساعة) تعريف الطلاب بالجملة الفعلية والجملة الاسمية بيان عناصر كل جملة بدءاً بالفعل من حيث اللزوم والتعدي (4 ساعة) الفعل من حيث الزمن ماضي ومضارع وأمر، حالات بناء الفعل الماضي (4 ساعة) حالات الفعل المضارع من حيث: رفع ونصب الفعل المضارع وعلاماته (4 ساعة) حالات الفعل المضارع من حيث: جزم الفعل المضارع وعلاماته (4 ساعة) حالات الفعل المضارع من حيث: بناء الفعل المضارع وعلاماته (4 ساعة) حالات بناء فعل الأمر (4 ساعة) الفاعل وأنواعه وعلاماته (4 ساعة) المفعول به وأنواعه وعلاماته (4 ساعة) المبتدأ وأنواعه (4 ساعة) الخبر وأنواعه وتقديم الخبر على المبتدأ (4 ساعة) الأسماء الخمسة (4 ساعة) العدد (4 ساعة) الإملاء: (4 ساعة) كتابة الهمزة الأولية والوسطية والمتطرفة الفرق بين التاء المربوطة والهاء والتاء الطويلة الإملاء: (4 ساعة) الطاء والضاد والفرق بينهما من حيث المعنى والنطق مجموعة من الأخطاء الشائعة وبيان الصواب فيها علامات الترقيم.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	توجد العديد من الاستراتيجيات التي يمكن استخدامها في تدريس اللغة العربية، ومن بينها: 1- استخدام المواد التعليمية المناسبة: يجب على المعلم اختيار المواد التعليمية التي تناسب مستوى الطلاب وتحقق

	أهداف التعلم.
	2- تشجيع الطلاب على المشاركة: يجب على المعلم تشجيع الطلاب على المشاركة في الحصص والتحدث باللغة العربية.
	3- استخدام التكنولوجيا: يمكن استخدام التكنولوجيا في تدريس اللغة العربية، مثل استخدام برامج التعلم عبر الإنترنت والأفلام والأغاني الشعرية.
	4- تقديم دروس متنوعة: يجب على المعلم تقديم دروس متنوعة لزيادة اهتمام الطلاب وتحفيزهم لتحسين مهاراتهم في اللغة.
	5- إظهار أهمية الثقافة: يجب على المعلم إظهار أهمية الثقافة العربية وتعريف الطلاب بالتقاليد والعادات العربية.
	6- تحفيز التفاعل: يجب على المعلم تحفيز التفاعل بين الطلاب وتشجيعهم على التواصل مع بعضهم البعض باللغة العربية.
	7- استخدام المناهج المناسبة: يجب على المدارس اختيار المناهج التي تناسب مستوى الطلاب وتحقق أهداف التعلم في تدريس اللغة العربية.

Student Workload (SWL)			
الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	17	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	1.1
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	50		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (10)	1and 5	L.N; 1, 2, 4, and 5
	Assignments	2	10% (10)	3 and 7	L.N; 3, 4, 6 and 7
	Projects				
	Report	1	10% (10)	13	L.N; 8, 9 and 11.
Summative assessment	Midterm Exam	2hr	10% (10)	7	L.N; 1 – 7.
	Final Exam	3hr	50% (50)	16	All.
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

Material Covered	
تعريف الطلاب بأهمية اللغة العربية وتعريف الطلاب بالفروق بين علم النحو والصرف والصوت	الأسبوع 1
تعريف الطلاب بالجملة الفعلية والجملة الاسمية بيان عناصر كل جملة بدأ بالفعل من حيث اللزوم والتعدي	الأسبوع 2
الفعل من حيث الزمن ماضي ومضارع وأمر، حالات بناء الفعل الماضي	الأسبوع 3
حالات الفعل المضارع من حيث :رفع ونصب الفعل المضارع وعلاماته	الأسبوع 4
حالات الفعل المضارع من حيث : جزم الفعل المضارع وعلاماته	الأسبوع 5
حالات الفعل المضارع من حيث : بناء الفعل المضارع وعلاماته	الأسبوع 6
حالات بناء فعل الأمر	الأسبوع 7
الفاعل وأنواعه وعلاماته	الأسبوع 8
المفعول به وأنواعه وعلاماته	الأسبوع 9
المبتدأ وأنواعه	الأسبوع 10
الخبر وأنواعه وتقديم الخبر على المبتدأ	الأسبوع 11
الأسماء الخمسة	الأسبوع 12
العدد	الأسبوع 13
الإملاء : كتابة الهمزة الأولية والوسطية والمتطرفة الفرق بين التاء المربوطة والتاء الطويلة	الأسبوع 14
الإملاء : الطاء والضاد والفرق بينهما من حيث المعنى والنطق مجموعة من الأخطاء الشائعة وبيان الصواب فيها علامات الترقيم.	الأسبوع 15
أسبوع تحضير قبل الامتحان النهائي	الأسبوع 16

Learning and Teaching Resources

مصادر التعلم والتدريس

Text	Available in the Library?
Required Texts	نعم (النحو الوافي) تأليف عباس حسن .
Recommended Texts	نعم (التطبيق النحوي) تأليف عبده الراجحي .
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 works 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
كلية العلوم / قسم علوم الحياة



Module Information				
معلومات المادة الدراسية				
Module Title	BioChemistry		Module Delivery	
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	Bio 205			
ECTS Credits	3			
SWL (hr/sem)	75			
Module Level	2	Semester of Delivery		1
Administering Department	Type Dept. Code	College	Type College Code	
Module Leader	Name: basima mohsin sarhan		e-mail	E-mail basima.m.s@baghdadcollege.edu.iq
Module Leader's Acad. Title	Professor		Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)		e-mail	E-mail
Peer Reviewer Name	Name		e-mail	E-mail
Scientific Committee Approval Date	01/09/2026		Version Number	1.0

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



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



Module Aims, Learning Outcomes and Indicative Contents

اهداف المادة الدراسية ونتائج التعلم و المحتويات الارشادية

Module Objectives اهداف المادة الدراسية	7. To develop problem solving skills and understanding of Biochemical reactions through the application of mechanism of reaction such as their effect on human body. 8. To understand carbocation carbanion and Free radical from a given reaction 9. This course deals with the basic concept of organic reactions. 10. This is the basic subject for all organic and inorganic reactions. 11. To understand Markovnikov's Rule and Anti-Markovnikov rules. 12. To perform Quantitative and Qualitative Organic analysis.
Module Learning Outcomes مخرجات التعلم المادة الدراسية	Important: Write at least 6 Learning Outcomes, better to be equal to the number of study weeks. 11. Recognize how organic reaction works in peroxide and gaseous media. 12. List the various terms associated with organic reactions. 3. Summarize what is meant by a Free radical. 13. Discuss the reaction and involvement of atoms in organic reaction. 14. Describe melting point, boiling point, sublimation. 15. Define Saytzeff Rule. 16. Identify the Organic reaction of Alkane and their applications. 17. Discuss the operations of fermentation in alcohols. 18. Discuss the various physical properties of alkane, alkene, and alkyne. 19. Explain the Markovnikov Rule and Saytzeff Rule laws used in Organic reaction 20. Identify the Tautomerism and effect relationship with respect to acid and base.
Indicative Contents المحتويات الارشادية	Indicative content includes the following. Part A - Atomic Theory Molecular Orbitals – Electron and Quantum numbers definitions, anions and cations and Free radical, Combining resistive reactions in different rule and law, Introduction to organic synthesis and analysis. [15 hrs] Structure of Organic Molecules Nomenclature of Organic Compound Alkanes Cycloalkanes Alkenes Dienes Alkynes and Alkyl Halides. [15 hrs] Alcohols Polyhydric alcohols Ethers and Epoxides. [10 hrs] Ethers and Epoxides Thiols and Thioethers Organic Reaction Mechanisms Isomerism and Stereochemistry [15 hrs] Revision problem classes [6 hrs] Part B – Analogue Electronics

Learning and Teaching Strategies

لنجد [h]jld [h]jld فلما لللق

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

نموذج وصف المادة الدراسية
كلية العلوم / قسم علوم الحياة



Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ 15 اسبوعاً

Structured SWL (h/sem)	2	51	Structured SWL (h/w)	d #10,6#11
الحمل الدراسي المنتظم للطالب خلال الفصل	2		حمل الدراسي المنتظم للطالب اسبوعياً	d #6, #7
Unstructured SWL (h/sem)	1	24	Unstructured SWL (h/w)	2
الحمل الدراسي غير المنتظم للطالب خلال الفصل	1		حمل الدراسي غير المنتظم للطالب اسبوعياً	d #10
Total SWL (h/sem)	hr	10% (10)	75	LO #1 - #7
الحمل الدراسي الكلي للطالب خلال الفصل	hr	50% (50)	16	All
Total assessment		100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction , Biochemical methods
Week 2	General Aspect on the chemistry of the cell , Molecular Genetics
Week 3	Proteins , Chemistry of amino acids and Peptides
Week 4	Structural Organisation
Week 5	Function of Proteins
Week 6	Carbohydrate , Classification , Reaction
Week 7	Lipids , Classification , Reaction
Week 8	Vitamins , Classification
Week 9	Nucleic Acids , Bases , Nucleosides and Nucleotide of nucleic acids
Week 10	Structural Organisation of DNA , RNA
Week 11	Role of Nucleic acids in protein Synthesis
Week 12	Enzymes , Structure and Functions
Week 13	Kinetic of Enzyme , Coenzymes
Week 14	Bioenergetics , Production and Transfer of chemical energy
Week 15	Compound of high energy , coupled reactions and Biological Oxidation

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Lab 1: Identification and classification of carbohydrate
Week 2	Lab 2: Colorimetric determination of carbohydrates
Week 3	Lab 3: Optical properties of carbohydrates
Week 4	Lab 4: Structural elucidation for carbohydrates
Week 5	Lab 5: carbohydrates Periodate oxidation
Week 6	Lab 6: carbohydrates methylation
Week 7	Lab 7: carbohydrates acetylation
Week 8	Lab 8: carbohydrates reduction , hydrolysis
Week 9	Lab 9: Isolation and chromatographic separation of carbohydrate (Lactose /Milk)



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية كلية
العلوم / قسم علوم الحياة



Week 10	Lab 10: Starch /Patato , Glycogen /Liver
Week 11	Lab 11: galactose /brain , Fructose /Grape
Week 12	Lab 12: Identification and classification of proteins
Week 13	Lab 13: physical and chemical properties of lipids
Week 14	Lab 14: Sequence determination (N and C) terminals identification
Week 15	Lab 15: effect of PH , Ttration , Hydrolysis and heavy metals on proteins

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	1- Priniciples of Biochemistry by Lehninger 2- Biochemistry by By Stryer 2002 3- Priniciples of Biochemistry by LIPPENCOTT 2002 4- Priniciples of Biochemistry by Mathews 2020 5- Biochemical calucalation by segal 1976	Yes
Recommended Texts	Biochemistry by Delvin 2020	Yes
Websites	https://download-scientific-pdf-ebooks.com/993-1-library-books	

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



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية كلية
العلوم / قسم علوم الحياة



Module Information			
معلومات المادة الدراسية			
Module Title	Anatomy plant		Module Delivery
Module Type	core		☒ Theory
Module Code	Pla 204		☒ Lecture
ECTS Credits	5		☒ Lab
SWL (hr/sem)	125		☐ Tutorial
			☐ Practical
			☐ Seminar
Module Level	2	Semester of Delivery	1
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Name: Mohammwd Nseif Jassam	e-mail	E-mail: maonss19951995@gmail.com
Module Leader's Acad. Title	Ass. Lecturer	Module Leader's Qualification	Ph.D.
Module Tutor	Mohammwd Nseif Jassam	e-mail	E-mail: maonss19951995@gmail.com
Peer Reviewer Name	Mohammwd Nseif Jassam	e-mail	E-mail: maonss19951995@gmail.com
Scientific Committee Approval Date	20/09/2026	Version Number	1.0

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



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية كلية
العلوم / قسم علوم الحياة



Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتثات الإرشادة	
Module Objectives أهداف المادة الدراسية	1. The study of plant anatomy seeks to clarify the differences in the composition of plant tissues that occur as a result of the different plant environment 2. This course deals with all types of plant tissues in each part of the plant 3. Students learned to prepare anatomical sections from plant parts 4. Developing skills in distinguishing between plant tissues through the use of a microscope.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Important: Write at least 6 Learning Outcomes, better to be equal to the number of study weeks. 1. Recognizing the concept of plant anatomy and its relationship to other sciences 2. Identify the divisions of plant tissues 3. Develop a list of different terms related to plant anatomy. 4. Description of plant tissues in terms of cell shape and location. 5. Identify the function of each tissue in the plant. 6. Discuss the differences in plant tissues of plant parts between plants of different environments. 7. Learn to draw anatomical sections of plant tissues. 8. Discuss the relationship between plant anatomy and other sciences. 9. Learn about the use of a microscope in examining anatomical sections of plant tissues. 10. Learn how to prepare anatomical sections from plant parts.
Indicative Contents المحتثات الإرشادة	Indicative content includes the following. Plant anatomy is one of the sciences specialized in studying plant tissues and determining the differences in the nature of the tissue depending on the nature of the environmental conditions in which the plant lives. It also studies its relationship to other sciences, such as ecology, cellular science, plant taxonomy, and others. In plant anatomy, scientists classify tissues into two main divisions: meristematic tissues and permanent tissues. The classification was based on the basis of origin, location within the plant, and physiological function. Explains the basic theories that show the origin of the developing meristematic peaks The indicative content of plant anatomy includes the study of the types of tissues, their function, and their location in the plant, as well as the study of the differences between the tissues of plant parts such as the root, stem, leaf, flower, seed, and fruit. And study the effects of the environment on the tissues
Learning and Teaching Strategies	
استراتيجيات التعلم والتعليم	



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية كلية
العلوم / قسم علوم الحياة



Strategies

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

Module Evaluation

تقويم 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	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem)	94	Structured SWL (h/w)	6
الحمل الدراسي المنتظم للطلاب خلال الفصل		الحمل الدراسي المنتظم للطلاب أسبوعيا	
Unstructured SWL (h/sem)	31	Unstructured SWL (h/w)	2
الحمل الدراسي غير المنتظم للطلاب خلال الفصل		الحمل الدراسي غير المنتظم للطلاب أسبوعيا	
Total SWL (h/sem)	125		
الحمل الدراسي الكلي للطلاب خلال الفصل			

Delivery Plan (Weekly Syllabus)

المنهاج الأسبوعي النظري

Material Covered

Week 1	Introduction – define anatomy
Week 2	The relationship of plant anatomy with other sciences
Week 3	Meristematic tissues
Week 4	Several theories have been to explain the mode of growth found in shoot apical meristem
Week 5	Permanent tissues
Week 6	Dermal tissue system
Week 7	Ground tissue) Collenchyma tissue . Sclerenchyma(



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية كلية
العلوم / قسم علوم الحياة



Week 8	Vascular tissue system
Week 9	Xylem
Week 10	Phloem
Week 11	Vascular bundles
Week 12	Plant secretory tissue
Week 13	PLANT ORGANS :: Root
Week 14	Stem
Week 15	Leaf
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الأسبوعي للمختبر

	Material Covered
Week 1	Lab 1: Plant cell
Week 2	Lab 2: Pits
Week 3	Lab 3: Intercellular space
Week 4	Lab 4: Living Components of Pant Cell
Week 5	Lab 5: Non-protoplasmic components (non-living)
Week 6	Lab 6: Tissues Plant
Week 7	Lab 7: Maristematic Tissues
Week 8	Permanent tissue
Week 9	Stomata
Week 10	Epidermal hairs (Trichomes)
Week 11	Parenchyma tissue
Week 12	Collenchyma tissue
Week 13	Sclerenchyma tissue
Week 14	Vascular Tissue system
Week 15	Xylem and Phloem
Week 16	Preparatory week before the final Exam



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية كلية
العلوم / قسم علوم الحياة



Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Anatomy of Flowering Plant Esau's Plant Anatomy	Yes
Recommended Texts	Plant Anatomy An Applied Approach	No
Websites	http://www.mediafire.com/.../e7l4l1ygv.../Plant+Anatomy.rar	

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جداً	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	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 كلية
العلوم / قسم علوم الحياة



Module Information			
معلومات المادة الدراسية			
Module Title	Ecology		Module Delivery
Module Type	core		☒ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code			
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	1	Semester of Delivery	1
Administering Department	Biology	College	SCI
Module Leader	Mohammed Nseif Jassam	e-mail	E-mail: : maonss19951995@gmail.com
Module Leader's Acad. Title	Lecturel	Module Leader's Qualification	Ph.D.microbiology
Module Tutor	Mohammed Nseif Jassam	e-mail	E-mail: : maonss19951995@gmail.com
Peer Reviewer Name	Mohammed Nseif Jassam	e-mail	E-mail: maonss19951995@gmail.com
Scientific Committee Approval Date	20/09/2026	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.knowledgeof students of Ecology and relationship with other sciences • Ensuring on importance of ecology and how conservation of environment.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	By the end of this module, students should be able to: 1. Students will gain knowledge about relationship of ecology with other sciences 2. Students will also study concepts of ecology as well as their compenants., 3. Students will learn about the ecosystem by studying their structures and types.



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية كلية
العلوم / قسم علوم الحياة



Indicative Contents المحتانيات الإرشادية	1. Read and understand relevant textbook chapters and scientific articles on ecology. 2. Engage in active note-taking and summarizing key concepts from lectures and readings. 3. Participate in group discussions and debates on microbiological topics to enhance understanding and critical thinking. 4. Utilize online resources, such as interactive tutorials and educational videos, to reinforce learning. 5. Engage in hands-on laboratory activities and experiments to apply theoretical knowledge and develop practical skills in ecology.
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Learning and Teaching Strategies

اساليب اتاجات التعلم والتعلم

Strategies	1. Lectures: Instructor-led lectures to introduce and explain key concepts and principles of ecology. 2. Group Discussions: Facilitate student engagement and critical thinking through group discussions on ecological topics, encouraging debate and sharing of perspectives. 3. Laboratory Work: Hands-on experiments and practical activities in the laboratory to reinforce theoretical concepts and develop skills in ecological techniques and analysis. 4. Case Studies: Analyzing real-life cases and scenarios to apply ecological principles and problem-solving skills. 5. Interactive Learning: Utilizing interactive technology, such as online quizzes and simulations, to enhance student participation and understanding.
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Student Workload (SWL)

الحمل الدرا : للطلاب محسوب ل ١٥ أسبوعا

Structured SWL (h/sem) الحمل الدرا : المنتظم للطلاب خلال الفصل	64	Structured SWL (h/w) الحمل الدرا : المنتظم للطلاب أسبوعا	6
Unstructured SWL (h/sem) الحمل الدرا : غ المنتظم للطلاب خلال الفصل	60	Unstructured SWL (h/w) الحمل الدرا : غ المنتظم للطلاب أسبوعا	4
Total SWL (h/sem) الحمل الدرا : ال' للطلاب خلال الفصل	125		

Module Evaluation

تقيم المادة الدراسية

	Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	5 and 10	LO #1, #2 and #7, #10
	Assignments	2	2 and 12	LO #3, #4 and #6, #8
	Projects / Lab.	1	Continuous	All



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية كلية
العلوم / قسم علوم الحياة



	Report	1	10% (10)	13	LO #5, #8 and #9
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي □ للمخت ٧.

	Material Covered
Week 1	Lab 1: General introduction of ecology
Week 2	Lab 2: Instrument and equipment's used in ecology lab
Week 3	Lab 3: Physical factors and chemical factors
Week 4	Lab 4: Measurement methods of Temperature of Air and waters
Week 5	Lab 5: Humidity (definition, types, methods of measurements
Week 6	Lab 6: Wind, types, measure ment
Week 7	Lab 7: measurement of light in air and water
Week 8	Lab 8: Rains, atmospheric pressure
Week 9	Lab 9: measurements of ph
Week 10	Lab 10: measurements of water flow
Week 11	Lab 11: measurement of soil texture
Week 12	Lab 12: measurement of carbonate in soil
Week 13	Lab 13: measurement of productivity in ecosystem
Week 14	Lab 14: month exam
Week 15	Lab 15: Research Project - Independent research project on a specific aspect of ecology



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية كلية
العلوم / قسم علوم الحياة



Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي □ النظري

Week	Material Covered
Week 1	Introduction in ecology and terms
Week 2	Compenants of Ecosystem , Function, and types
Week 3	Structure of ecosystem (Biotic and A biotic factors
Week 4	Food chain, Food webs (defines, structure and types)
Week 5	Ecological Pyramids (definition, types)
Week 6	Ecological community interactions
Week 7	Habitat, types of habitats
Week 8	Biogeochemical cycles, types
Week 10	Carbon cycle
Week 11	Nitrogen cycle
Week 12	Autotrophs, heterotrophs, Decomposers
Week 13	Population, distribution of population,
Week 14	Month exam
Week 15	Limiting factors, Lows of limiting factors
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources

مصادر التعلم والتدرّس

	Text	Available in the Library?
Required Texts	Environment, fifth adition 2005, by Peter Raven and Linda Berg.	Yes
Recommended Texts	Ecology, second adition 2008, by Hussain Ali Alsaadi	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	جذ جدا	80 - 89	Above average with some errors
	C - Good	جذ	70 - 79	Sound work with notable errors
Fail Group	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
	FX – Fail	راسب (قذ المعالجة)	(45-49)	More work required but credit awarded

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية كلية
العلوم / قسم علوم الحياة



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

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