



Academic Course Specification Form

استمارة توصيف المقرر الأكاديمي

القسم الخاص بالطالب Section Concerning the Student

1. Course Code:	BIOLS233	1. رمز المقرر:
2. Course Title	Invertebrate Zoology	2. اسم المقرر:
3. College:	Science	3. الكلية:
4. Department:	Biology	4. القسم:
5. Academic Program:	Bachelor of Science in Biology	5. البرنامج الأكاديمي:
6. Course Credits:	2-2-3	6. عدد الساعات المعتمدة:
7. Course NQF Level:	6	7. مستوى المقرر وفقاً للإطار الوطني للمؤهلات:
8. Notional Hours:	127	8. عدد الساعات الافتراضية:
9. NQF Credits:	13	9. عدد الساعات المعتمدة للمقرر وفقاً للإطار الوطني للمؤهلات:
10. European Credit Transfer System (ECTS) credits	6.5	10. عدد الساعات للمقرر بالنظام الأوروبي
11. Prerequisite:	BIOLS103	11. المتطلب السابق للمقرر:
12. Lectures Timing & Location:		12. وقت المحاضرة ومكانها:

13. General Mode of Teaching and Learning	Traditional تقليدي	13. النمط العام للتعليم والتعلم:
14. Course Coordinator:		14. منسق المقرر:
15. Course Instructor:		15. مدرّس المقرر:
16. Office Hours and Location:		16. الساعات المكتبية ومكانها:
17. Instructor's Email:		17. البريد الإلكتروني لمدرّس المقرر:
18. Academic Year:		18. السنة الأكاديمية:
19. Semester:		19. الفصل الدراسي:
20. Textbook(s):	20. الكتب الدراسية للمقرر:	
Integrated Principles of Zoology 19th edition by Hickman et al 2024		
21. References:	21. المراجع:	
1. References form the library (http://www.ac-knowledge.net/uobv3/): <u>Invertebrate zoology : a functional evolutionary approach 7th ed.</u> Ruppert, Edward E, 2004 : QL362 .R76 <u>Progress in invertebrate zoology</u> Mani, M. S., 2004 : QL362 .M36 <u>Invertebrates : protozoa to echinodermata</u> Verma, Ashok, 2005: QL362 .V46 Ruppert, Fox and Barnes (2004) Invertebrate Zoology, 7th edition, Thomson, Brooks/Cole. Anderson (2002), Invertebrate Zoology, 2nd edition, Wallace and Taylor. <u>Invertebrate zoology : a laboratory manual 5th ed.</u> Wallace, Robert L., 1997 : QL362.W33		
2. Other Learning Resources Used (e.g. e-learning, field visits, periodicals, software, etc.):	22. مصادر التعلم الأخرى (مثال: التعلم الإلكتروني، زيارات ميدانية، دوريات، برمجيات، إلخ....)	
Field trips if possible Videos Access to invertebrate zoology course related to the text book Digital Zoology on line by Jon Houseman version 2 and access the same on line.		
3. Course Description (as published in the College Catalogue):	23. توصيف المقرر (حسب ما ورد في دليل الكلية):	
Classification, biology, diversity, structural features and phylogeny of both lower and higher taxonomic groups of invertebrates.		
4. Course Intended Learning Outcomes (3 to 5 CILOs):	24. مخرجات التعلم للمقرر (CILOs) (3 إلى 5 مخرجات تعليمية):	
1. Identify the major groups of invertebrates, including the parasites.		

2. Critically classify major phylogenetic groups of invertebrates.			
3. Discuss the core principles of functional, physiological, and reproductive biology, and ecological importance of the major invertebrate phyla.			
4. Conduct microscopic examinations and dissections of structural features identified in the pre-prepared histological slides.			
5. Identify the structural features of live specimens of major lower and higher invertebrate groups.			
5. Course Assessment Percentages (as per Regulations of Study and Examination at the University of Bahrain):		25. أساليب التقييم ونسبها المئوية (بحسب نظام الدراسة والامتحانات في جامعة البحرين):	
Assessment التقييم	Type النوع	Percentage النسبة	Assessment Date تاريخ التقييم
Midterm-I	Individual فردى	15%	
Midterm-II	Individual فردى	15%	
Lab exam- I	Individual فردى	15%	
Lab exam-II	Individual فردى	10%	
Lab Quiz	Individual فردى	5%	
Theory Quiz	Individual فردى	5%	
Final	Individual فردى	40%	
Total	100%		
6. Description of Topics Covered		26. وصف الموضوعات التي ينبغي تناولها:	
Topic Title (e.g. chapter/experiment title) الموضوع		Description التفصيل	
1-Introduction to Invertebrate Phyla		Invertebrate diversity and an overview of the phylogeny and body plans which exhibit at least 30 organizational levels ranging from simple to complex.	
2-Invertebrate Phyla and Phylogeny		Classification and phylogeny including representative of non-coelomate and coelomate phyla; nonsymmetrical, radially symmetrical, and bilaterally symmetrical phyla; protostomes and deuterostomes. A brief note on the phylogenetic consequences	
3-Phylum: Porifera		Unique features of the phylum; Animals that are sessile, at the cellular level of organization, having epithelial without basement membranes; a canal system of body plan; classification of the phylum, morphology, physiology and general biology	

	including ecological interaction and importance.
4- Phylum: Cnidaria	Diploblastic metazoans with radial symmetry and tissue level of organization. Unique features of the phylum; Classification of the phylum, morphology, physiology and general biology including ecological interaction and importance.
5- Phylum: Ctenophora	Diploblastic metazoans with bi- radial symmetry and tissue level of organization; Unique features of the phylum; Classification of the phylum, morphology, physiology and general biology including ecological interaction and importance.
6- Phylum: Platyhelminthes	Bilaterally symmetrical animals, Triploblastic Acoelomate, free living or parasitic worms; Unique features of the phylum; Classification of the phylum, morphology, physiology and general biology including ecological interaction and importance. As parasites of humans and other domestic animals are also covered including their lifecycles and hosts.
7- Pseudocoelomate Protostomes Phylum Acanthocephala and Phylum Rotifers	This group of invertebrates comprise different phyla sharing a number of common characters. Unique features of the phylum; Classification of the phylum, morphology, physiology and general biology including ecological interaction and importance as parasites of humans and other domestic animals are covered.
8- Pseudocoelomate Ecdysozoa Phylum Nematodes	Un-segmented parasitic as well as free living worms. Unique features of the phylum; Classification of the phylum, morphology, physiology and general biology including ecological interaction and importance as parasites of humans and other domestic animals are covered.
9- Annelida and its relatives: Phylum: Sipuncula	Bilaterally symmetrical, coelomate un-segmented marine worms. Unique features of the phylum; Classification of the phylum, morphology, physiology and general biology including ecological interaction and importance.
10- Annelida and its relatives: Phylum: Annelida	Metamerically segmented coelomate. Unique features of the phylum; Classification, morphology, physiology and general biology including ecological interaction and importance.
11-Phylum: Mollusca: Gastropoda	Unsegmented coelomate with haemocoelic body cavity, head foot and other unique features such the presence of shell. this phylum constitutes one of the most

	conspicuous of the invertebrates with over 70,000 species. The major division of the phylum identified and classified in all unique features of each class with emphasis on detail biology of the following classes: Bivalvia, Gastropoda and Cephalopda. The unique evolutionary features and classification of the Gastropods. Morphological, Physiological processes and ecological importance are covered.			
12-Phylum: Mollusca: Bivalvia	The unique evolutionary features and classification of the Bivlavia. Morphological, Physiological processes and ecological importance are covered.			
13-Phylum Mollusca: Cephalopoda	The unique evolutionary features and classification of the Cephalopoda. Morphological, Physiological processes and ecological importance are covered.			
14- Introduction to the Arthropoda	Animals that have exoskeleton, jointed segmented appendages among other unique features. The phylum sub-phyla and classes are covered in terms of the diversity. The sub-phyla included: Hexapoda; Myriapoda; Crustacea and Chelicerata.			
15- Phylum: Arthropoda Subphylum: Crustacea	Marine arthropods with biramous limbs and other unique features. This subphylum is very large (75, 000 species) and evolutionary they are considered at a higher level of organization. Unique features of the sub- phylum; Classification, morphology, physiology and general biology including ecological interaction and importance			
7. Weekly Schedule		27. الجدول الأسبوعي		
Week الأسبوع	Date التاريخ	Topics Covered الموضوعات المتناولة	CILOs مخرجات التعلم للمقرر (CILOs)	Teaching/Assessment Mode and Method منهجية ونمط التدريس/التقييم
1		Introduction to Invertebrate Phyla	1,2 and 3	Traditional تقليدي
2		Invertebrate Phyla and Phylogeny Lab	1,2 and 3	Traditional تقليدي
3		Porifera Lab	1,2, 3 and 4	Traditional تقليدي
4		Cnidaria and Ctenophora	1,2, 3 and 4	Traditional تقليدي

5		Cnidaria and Ctenophora Lab	1,2, 3 and 4	تقليدي Traditional
6		Platyhelminthes Lab	1,2, 3 and 4	تقليدي Traditional
7		Pseudocoelomate Protostomes , Acanthocephala and Rotifers Lab	1,2, 3 and 4	تقليدي Traditional
8		Pseudocoelomate Ecdysozoa, Nematodes Lab	1,2, 3,4 and 5	تقليدي Traditional
9		Annelida and their relatives: Sipuncula Lab	1,2, 3,4 and 5	تقليدي Traditional
10		Annelida and their relatives: Annelida Lab	1,2, 3,4 and 5	تقليدي Traditional
11		Mollusca Lab	1,2, 3,4 and 5	تقليدي Traditional
12		Mollusca	1,2, 3,4 and 5	تقليدي Traditional
13		Mollusca	1,2, 3,4 and 5	تقليدي Traditional
14		Introduction to Arthropod phyla Lab	1,2, 3,4 and 5	تقليدي Traditional
15		Introduction to Arthropod phyla Lab	1,2, 3,4 and 5	تقليدي Traditional
16				
8. Academic Integrity Statement			28. بيان النزاهة الأكاديمية	
Students are to observe the highest level of honesty and academic ethics in pursuit of their academic goals as per UOB Regulations of Student Conduct and Academic Integrity, Anti-plagiarism Policies , and Students' Rights and Responsibilities Handbook . The consequences for cheating, plagiarism, unauthorized collaboration, and other forms of academic dishonesty can be very serious and will be dealt with as per the aforementioned policies and regulations.			يتعين على الطلبة الالتزام بأعلى مستويات الصدق والأمانة والأخلاق الأكاديمية في سعيهم لتحقيق أهدافهم الأكاديمية وفقاً للوائح سلوك الطلاب والنزاهة الأكاديمية، سياسات مكافحة الانتحال ، ودليل حقوق الطلبة واجباتهم ، المعمول بها في جامعة البحرين. يمكن لعواقب الغش والسرقة الأدبية والتعاون غير المصرح به وغيرها من أشكال عدم الأمانة الأكاديمية أن تكون خطيرة للغاية وسيتم التعامل معها وفقاً للسياسات واللوائح المذكورة آنفاً.	
9. Attendance and Absence Regulations			29. نظام الحضور والغياب	
Students are required to adhere to regular attendance for class lectures and practical sessions, as determined by the nature of the course, as per Article (33) of Regulations of البحرين .			يجب على الطلبة الالتزام بالحضور المنتظم للمحاضرات الصفية والعملية، حسبما تحدده طبيعة المقرر الدراسي، ووفقاً للمادة (33) من نظام الدراسة والامتحانات في جامعة البحرين .	

