جامعة البحرين
University of Bahrain
مركز ضمان الجودة والاعتماد الأكاديمي
Quality Assurance and Accreditation Center

Academic Course Specification Form

استمارة توصيف المقرر الأكاديمي

القسم الخاص بالطالب
Section Concerning the Student

1. Course Code:	BIOLS 325	**1. رمز المقرر:**
2. Course Title	Phycology	**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:	8	**7. مستوى المقرر وفقا للإطار الوطني للمؤهلات:**
8. Notional Hours:	118	**8. عدد الساعات الافتراضية:**
9. NQF Credits:	12	**9. عدد الساعات المعتمدة للمقرر وفقا للإطار الوطني للمؤهلات:**
10. Prerequisite:	BIOLS 222	**10. المتطلب السابق للمقرر:**
11. Lectures Timing & Location:		**11. وقت المحاضرة ومكانها:**
12. General Mode of Teaching and Learning	Traditional تقليدي	**12. النمط العام للتعليم والتعلّم:**

13. Course Coordinator:		**13. منسّق المقرر:**
14. Course Instructor:		**14. مدرّس المقرر:**
15. Office Hours and Location:		**15. الساعات المكتبية ومكانها:**
16. Instructor's Email:		**16. البريد الإلكتروني لمدرّس المقرر:**
17. Academic Year:		**17. السنة الأكاديمية:**
18. Semester:		**18. الفصل الدراسي:**

19. Textbook(s):	**19. الكتب الدراسية للمقرر:**
L. Graham, J.M. Graham and L.W Wilcox. Algae. 2009.	
20. References:	**20. المراجع:**
1. Philip Sze: Biology of algae, 1986 **2.** Harold C. Bold and M.J. Wynne. Introduction to the algae, structure and reproduction. 1978.	
21. Other Learning Resources Used (e.g. e-learning, field visits, periodicals, software, etc.):	**21. مصادر التعلّم الأخرى (مثال: التعلّم الإلكتروني، زيارات ميدانية، دوريات، برمجيات، إلخ....)**
22. Course Description (as published in the College Catalogue):	**22. توصيف المقرر (حسب ما ورد في دليل الكلية):**
The taxonomy, morphology, reproduction, ecology and evolution of various algal groups with special emphasis placed on the algae of Bahrain.	
23. Course Intended Learning Outcomes (3 to 5 CILOs):	**23. مخرجات التعلّم للمقرر (CILOs) (3 إلى 5 مخرجات تعلّمية):**
1. Identify the relationship between structure and function in different algal groups.	
2. Illustrate the basic pattern of morphology, anatomy, development and reproduction that characterize different algae groups.	
3. Distinguish environmental factors that influence algal distribution and abundance (i.e. algal ecology).	
4. Assess several biological techniques using algae.	
5. Develop presentation based on the course content.	
24. Course Assessment Percentages (as per Regulations of Study and Examination at the University of Bahrain):	**24. أساليب التقييم ونسبها المئوية (بحسب نظام الدراسة والامتحانات في جامعة البحرين):**

Assessment التقييم	Type النوع	Percentage النسبة	Assessment Date تاريخ التقييم
Midterm I	Individual فردي	15%	
Midterm I I	Individual فردي	15%	
Term Project	Group جماعي	10%	
Lab assignments	Pair ثنائي	20%	
Final Exam	Individual فردي	40%	
Total	**100%**		

25. Description of Topics Covered	**25. وصف الموضوعات التي ينبغي تناولها:**
Topic Title ***(e.g. chapter/experiment title)*** **الموضوع**	***Description*** **التفصيل**
Introduction to the algae	Introduction to the Algae 1.1 Defining the Algae 1.2 algal body types 1.3 Algal reproductive types 1.4 A survey of algal diversity 1.5 An overview of algal photosynthesis 1.6 Societal issues involving algae
Cyanobacteria	Cyanobacteria 6.1 Structure, motility and photosynthesis 6.2 Reproduction 6.3 Nitrogen fixation 6.4 Cyanobacteria of extreme habitats 6.5 Evolution and diversity
Euglenoids	Euglenoids 8.1 Euglenoid relationships and evolutionary history 8.2 Reproduction 8.3 Euglenoid plastids and light sensing systems 8.4 Euglenoid ecology 8.5 Euglenoid diversity
Dinoflagellates	Dinoflagellates 11.1 Evolutionary history and relationships 11.2 Dinoflagellate cell biology 11.3 Sexual reproduction and cyst formation 11.4 Ecology 11.5 Dinoflagellate diversity
Photosynthetic Stramenopiles I (Introduction and Diatoms)	Photosynthetic Stramenopiles I (Introduction and Diatoms)

	12.1 Introduction to photosynthetic Stramenopiles 12.2 Diatoms - Diatom evolutionary history -Cell division and frustules development Sexual reproduction -Diatom motility and mucilage secretion -Diatom spores and resting cells -Ecology and nutrition -Diatom collection, identification and diversity
Photosynthetic Stramenopiles III	Photosynthetic Stramenopiles III (Xanthophyceans, Phaeophyceans and their close relatives) 14.3 Phaeophyceans (Brown algae) -Phyeophycean cell Biology -Growth modes and meristems Rreproduction -Alternation of generation -pheophycean diversity and systematics
Red Algae	Red Algae 15.1 Evolutionary history of red algae 15.2 Red algal cell biology 15.3 Cell division, pit-plug formation and development 15.4 Body organization of red algae 15.5 Reproduction and life histories of red algae 15.6 red algal physiology and ecology 15.7 Diversity of red algae
Green Algae I	Green Algae I (Introduction to the green algae) 16.1 Green algal relationships 16.2 The major green algal lineages 16.3 Cellular features of Prasinophyceans 16.4 Prasinophyceans diversity
Green Algae II Green Algae III	Green Algae II (Ulvophyceans) 1.General characteristics, relationships, and fossil history of Ulvophyceans 2.Ulvophycean diversity and ecology. Green Algae III (Trebouxiophyceans) 18.1 General features of Trebouxiophyceae

	Diversity of Trebouxiophyceae
Green Algae IV Green Algae V	Green Algae IV (Chlorophyceans) 19.1 Chlorophcean relationships 19.2 General features of Chlorophyceans 19.3 Chlorophycean diversity Green Algae V (Charophyceans) 20.1 Genearl features and classification of Charophyceans 20.2 Charophycean diversity

26. Weekly Schedule			**26. الجدول الأسبوعي**	
Week **الأسبوع**	**Date** **التاريخ**	**Topics Covered** **الموضوعات المتناولة**	**CILOs** **مخرجات التعلُم للمقرر** **(CILOs)**	**Teaching/Assessment Mode and Method** **منهجية ونمط التدريس/التقييم**
1		Introduction to the Algae 1.1 Defining the Algae 1.2 algal body types 1.3 Algal reproductive types 1.4 A survey of algal diversity 1.5 An overview of algal photosynthesis 1.6 Societal issues involving algae LAB:-	*1, 2 and 3*	Traditional تقليدي
2		Introduction to the Algae 1.1 Defining the Algae 1.2 algal body types 1.3 Algal reproductive types 1.4 A survey of algal diversity 1.5 An overview of algal photosynthesis 1.6 Societal issues involving algae. **LAB**: Workshop (how to use library resources)	*1, 2 and 3*	Traditional تقليدي

3		Cyanobacteria 6.1 Structure, motility and photosynthesis 6.2 Reproduction 6.3 Nitrogen fixation 6.4 Cyanobacteria of extreme habitats 6.5 Evolution and diversity **LAB:** (cyanobacterial, Euglenoids, Dinoflagellates and Diatoms).I	*1, 2 and 3*	Traditional تقليدي
4		Cyanobacteria 6.1 Structure, motility and photosynthesis 6.2 Reproduction 6.3 Nitrogen fixation 6.4 Cyanobacteria of extreme habitats 6.5 Evolution and diversity. **LAB:** (Cyanobacterial, Euglenoids, Dinoflagellates and Diatoms).II	*1, 2 and 3*	Traditional تقليدي
5		Euglenoids 8.1 Euglenoid relationships and evolutionary history 8.2 Reproduction 8.3 Euglenoid plastids and light sensing systems 8.4 Euglenoid ecology 8.5 Euglenoid diversity. **LAB:** Determination of	*1-4*	Traditional تقليدي

		chlorophyll concentration in microalgae I		
6		Dinoflagellates 11.1 Evolutionary history and relationships 11.2 Dinoflagellate cell biology 11.3 Sexual reproduction and cyst formation 11.4 Ecology 11.5 Dinoflagellate diversity. **LAB:** Determination of chlorophyll concentration in microalgae II	*1-4*	Traditional تقليدي
7		Dinoflagellates 11.1 Evolutionary history and relationships 11.2 Dinoflagellate cell biology 11.3 Sexual reproduction and cyst formation 11.4 Ecology 11.5 Dinoflagellate diversity. **LAB:** Brown algae, red and green algae I	*1, 2 and 3*	Traditional تقليدي
8		Photosynthetic Stramenopiles I (Introduction and Diatoms) 12.1 Introduction to photosynthetic Stramenopiles 12.2 Diatoms - Diatom evolutionary history	*1, 2 and 3*	Traditional تقليدي

		-Cell division and frustules development Sexual reproduction -Diatom motility and mucilage secretion -Diatom spores and resting cells -Ecology and nutrition -Diatom collection, identification and diversity **LAB:** Brown algae, red and green algae II		
9		Photosynthetic Stramenopiles I (Introduction and Diatoms) 12.1 Introduction to photosynthetic Stramenopiles 12.2 Diatoms - Diatom evolutionary history -Cell division and frustules development Sexual reproduction -Diatom motility and mucilage secretion -Diatom spores and resting cells -Ecology and nutrition -Diatom collection, identification and diversity **LAB:** Field trip I	*1, 2 and 3*	Traditional تقليدي
10		Photosynthetic Stramenopiles III	*1, 2 and 3*	Traditional تقليدي

		(Xanthophyceans, Phaeophyceans and their close relatives) 14.3 Phaeophyceans (Brown algae) -Phyeophycean cell Biology -Growth modes and meristems Rreproduction -Alternation of generation -pheophycean diversity and systematics **LAB:** Field trip II		
11		Red Algae 15.1 Evolutionary history of red algae 15.2 Red algal cell biology 15.3 Cell division, pit-plug formation and development 15.4 Body organization of red algae 15.5 Reproduction and life histories of red algae 15.6 red algal physiology and ecology 15.7 Diversity of red algae **LAB:** Determination of cell count of Chlorella using hemocytometer I	*1-4*	Traditional تقليدي
12		Red Algae	*1-4*	Traditional تقليدي

		15.1 Evolutionary history of red algae 15.2 Red algal cell biology 15.3 Cell division, pit-plug formation and development 15.4 Body organization of red algae 15.5 Reproduction and life histories of red algae 15.6 red algal physiology and ecology 15.7 Diversity of red algae **LAB:** Determination of cell count of Chlorella using hemocytometer II		
13		Green Algae I (Introduction to the green algae) 16.1 Green algal relationships 16.2 The major green algal lineages 16.3 Cellular features of Prasinophyceans 16.4 Prasinophyceans diversity **LAB:** Oral presentation I	*1, 2 , 3 and 5*	Traditional تقليدي
14		Green Algae II (Ulvophyceans) 1.General characteristics, relationships, and fossil history of Ulvophyceans	*1, 2 , 3 and 5*	Traditional تقليدي

		2.Ulvophycean diversity and ecology. Green Algae III (Trebouxiophyceans) 18.1 General features of Trebouxiophyceae Diversity of Trebouxiophyceae **LAB:** Oral presentation II		
15		Green Algae IV (Chlorophyceans) 19.1 Chlorophcean relationships 19.2 General features of Chlorophyceans 19.3 Chlorophycean diversity Green Algae V (Charophyceans) 20.1 Genearl features and classification of Charophyceans 20.2 Charophycean diversity	*1, 2 and 3*	Traditional تقليدي
27. Academic Integrity Statement			**27. 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.			يتعيّن على الطلبة الالتزام بأعلى مستويات الصدق والأمانة والأخلاق الأكاديمية في سعيهم لتحقيق أهدافهم الأكاديمية وفقًا للوائح سلوك الطلاب والنزاهة الأكاديمية، سياسات مكافحة الانتحال، ودليل حقوق الطلبة وواجباتهم، 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 وفقًا للسياسات واللوائح المذكورة آنفا.	

28. Attendance and Absence Regulations	28. 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 Study and Examination at the University of Bahrain.	يجب على الطلبة الالتزام بالحضور المنتظم للمحاضرات الصفية والعملية، حسبما تحدده طبيعة المقرر الدراسي، ووفقا للمادة (33) من نظام الدراسة والامتحانات في جامعة البحرين.