



مركز الاعتماد
وإضمان الجودة
ACCREDITATION & QUALITY ASSURANCE CENTER



The University of Jordan

Accreditation & Quality Assurance Center

Course Syllabus

Course Name:
Advanced Marine Biology

1	Course title	Advanced Marine Biology
2	Course number	0354762
3	Credit hours (theory, practical)	(3,0)
	Contact hours (theory, practical)	(3,0)
4	Prerequisites/requisites	-
5	Program title	M.Sc. of Biological Sciences
6	Program code	0354
7	Awarding institution	The University of Jordan
8	Faculty	Sciences
9	Department	Biological Sciences
10	Level of course	Graduate
11	Year of study and semester (s)	Elective course
12	Final Qualification	M.Sc.
13	Other department (s) involved in teaching the course	None
14	Language of Instruction	English
15	Date of production/revision	Jan 2020/May 2020

16. Course Coordinator:

Dr. Mamoon M.D. Al-Rshaidat
 Office: Biological Sciences Building, oom 314
 Office Hours: Sunday & Tuesday 2:30-3:20
 Phone Number: Ext. 22210
 Email: m.rshaidat@ju.edu.jo

17. Other instructors:

N/A

18. Course Description:

As stated in the approved MSc. study plan.

0304762 Advanced Marine Biology

The course discusses the unity and diversity of marine systems with special emphasis on marine production of plankton, benthos and nekton. It also discusses the role of detritus as a food source as well as the utilization of marine production by man and the strategies for survival of marine organisms .

19. Course aims and outcomes:

A- Aims:	
The course aims at:	
<ol style="list-style-type: none"> 1. Having the students understand the concepts in marine communities and their ecology 2. Familiarize the students with the main divisions of the marine environment and their main characteristics 3. Familiarize the students with the main primary producers 4. Introduce the students to the main marine systems and the organisms associated with them 5. Introduce the students to the marine resources and concepts of marine ecoservices 6. Familiarize the students with the human impacts on the marine environment and basics of planing and management in conservation strategies. 	
B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to ...	
1.	Demonstrate knowledge about the biological aspects of, and come to appreciate, marine environments
2.	Describe the main characteristics of the marine environment and the adaptations of the marine organisms
2.	Describe the main marine ecosystems
3.	Describe marine communities
4.	Demonstrate the importance of primary producers and their impact on biogeochemical cycles
5.	Demonstrate knowledge about main marine resources and what ecosystem services they provide.
6.	Describe human impacts on the marine environment and the strategies for conservation.

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Course Introduction, The Science of Marine Biology	1.	M. Al-Rshaidat			-
Searching Scientific Literature and the art of presenting science	2.	M. Al-Rshaidat			E-Learning handout
Water and Ocean Structure	3.	M. Al-Rshaidat			Chp 6
Ocean Chemistry	4.	M. Al-Rshaidat			Chp 7
Circulation of the Atmosphere - 8.5 & 8.6 not included	5.	M. Al-Rshaidat			Chp 8
Circulation of the Ocean	6.	M. Al-Rshaidat			Chp 9
Coasts	7.	M. Al-Rshaidat			Chp 12
Midterm Exam	8.	M. Al-Rshaidat			
Life in the Ocean	9.	M. Al-Rshaidat			Chp 13
Primary Producers	10.	M. Al-Rshaidat			Chp 14
Marine Communities	11.	M. Al-Rshaidat			Chp 16
Continue...	12.	M. Al-Rshaidat			
Marine Resources Deadline for Handling Term papers	13.	M. Al-Rshaidat			Chp 17
Ocean and the Environment	14.	M. Al-Rshaidat			Chp 18
Student Presentation	15.	M. Al-Rshaidat			

21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

This course will be taught in lecture class format. Composed of two 1.5-hour lectures each week. Lectures will be presented in blocks of key topics. Attendance at lectures is critical for obtaining a full understanding of the subject content (note that *students who do not attend lectures will have a reduced likelihood of passing the exams*).

A topical chapter from the text book will be selected and students will be required to read the chapter prior to attending a lecture discussion. In addition, student led discussions about hot spot topics in marine ecology will be required, where the key features of a selected scientific paper will be covered.

As part of the assessment for this course, students will also be required to submit a research topic, including literature review and present an oral presentation during the class. A short tutorial focused on writing the literature review and oral presentations will be provided during the first half of the semester and attendance is essential for successful completion of this major component of the assessment. During the oral presentation of the students for their topics, all other students are required to come up with questions, playing the role of the evaluators.

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Evaluation criteria #1: Punctuality and commitments to deadlines

This evaluation will be based on assignments given to students, with a primary purpose of teaching them the value of deadlines and the ability to organize their schedule to fulfill these deadlines. This includes preparation for chapters to be presented by students, summary of their research projects, submission of the final draft of the written research proposal and submission of the error free power point presentation

Evaluation criteria #2: Written exam

Based on essay questions of the comprehensive, application, analytical, and knowledge type criteria. Two exams will be evaluated ; Midterm exam (30%) and Final Exam (50%)

Evaluation criteria #3: Research Proposal / Literature Review

Each student is requested to come up with a research proposal topic in marine ecology, and try to give an introduction to the topic, search for literature, and finally design an experiment to test their hypothesis, and finally, present the topic orally in front of their peers. The main intended learning outcome of this task is contribute to the development of the following attributes:

1. Enhance analytical thinking ability of the student
2. Disciplinary knowledge and its appropriate application
3. Enhance enquiry-oriented approach
4. Enhance the professional skills and their appropriate application, such as communication skills, innovation, and initiative
5. Enhance student's ability to design research methods to test hypothesis.

Evaluation criteria #4: Oral Presentations

Evaluation based on the oral presentation of each student's research project to their peers and people from diverse scientific backgrounds, and convince them with the importance of the topic in discussion and its impact on marine environments. In addition to enhancing the student's ability to communicate their scientific knowledge to their peers through the presentation of the topic from the literature review.

Evaluation criteria #5: Peer Review of Oral Presentations

Part of the student evaluation will be based on the ability of the student to peer review the oral presentations of their peers. Where each student is required to ask their peers a key question about their oral presentation. This question will be part of each student's evaluation for their own performance.

23. Course Policies:**A- Attendance policies:**

Attendance is required, and students missing some of the 1-hour classes or the 3-hour laboratories will jeopardize their successful completion of the course, due to the discussion nature of the course and the key elements discussed during the course that cannot be found in the textbook. Also, students are required to refer to Student Handbook (pages 133-134) for questions related to attendance and absence.

B- Absences from exams and handing in assignments on time:

According to the University of Jordan regulations, refer to student handbook (pages 133-134)

C- Health and safety procedures:

Not emphasised in this course due to the lack of practical component.

D- Honesty policy regarding cheating, plagiarism, misbehavior:

According to The University of Jordan regulations. Students shall refer to Student Handbook (pages 63-71) for questions related to cheating and plagiarism.

E- Grading policy:

Mid-term exam/Assignments/Discussions	40%
Participation and Oral Presentaion	10%
Term Paper and Literature Review	10%
Final Exam	40%

F- Available university services that support achievement in the course:

Online resources from the e-library to access scientific literature.

24. Required equipment:

Class-room, data show, projector screen, whiteboard

25. References:

Required textbook (s), assigned reading and audio-visuals:

"Oceanography: An Invitation to Marine Science" by Tom S. Garrison. 9th Edition. Brooks Cole Publishing, ©2016

26. Additional information:

Name of Course Coordinator: **Dr. Mamoon M.D. Al-Rshaidat** Signature: ----- Date: -----

Head of curriculum committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of curriculum committee/Faculty: ----- Signature: -----

Dean: ----- -Signature: -----

Copy to:
Head of Department
Assistant Dean for Quality Assurance
Course File