



مركز الاعتماد  
وإضمان الجودة  
ACCREDITATION & QUALITY ASSURANCE CENTER



**The University of Jordan**

**Accreditation & Quality Assurance Center**

## **Course Syllabus**

**Course Name:**  
**Marine Communities Ecology**

1	Course title	Marine Communities Ecology
2	Course number	0304901
3	Credit hours (theory, practical)	(3,0)
	Contact hours (theory, practical)	(3,0)
4	Prerequisites/requisites	General Zoology 0304261
5	Program title	Ph.D. of Biological Sciences
6	Program code	0304
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	Ph.D.
13	Other department (s) involved in teaching the course	None
14	Language of Instruction	English
15	Date of production/revision	April 3 2017

**16. Course Coordinator:**

Dr. Mamoon M.D. Al-Rshaidat  
Office: Biological Sciences Building, Second Floor  
Office Hours: Sunday & Tuesday 10:00-11:00, Monday & Wednesday 11:00-12:00  
Phone Number: Ext. 22210  
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**17. Other instructors:**

N/A

**18. Course Description:**

*As stated in the approved Ph.D. study plan.*

*Unit marine communities and diversity, the distribution of phytoplankton, zooplankton and chemical composition, the productivity of phytoplankton, zooplankton, organic materials dissolved, granular and operations composition, feed plankton and production, scrap recovery and its source of food, distribution, diversity and abundance of benthic communities, production of secondary benthic, the chemical composition of sediments and benthic, migration patterns and production in a society Alsoaih, population growth and production, the exploitation of marine production, survival strategies.*

**19. Course aims and outcomes:**

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

**20. Topic Outline and Schedule:**

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Course Introduction, The Science of Marine Biology	1.	M. Al-Rshaidat			Chp 1
The Sea Floor, Chemical & Physical Factors	2.	M. Al-Rshaidat			Chp 2,3
The Microbial Life	3.	M. Al-Rshaidat			Chp 5
Primary Producers: Seaweeds and Plants	4.	M. Al-Rshaidat			Chp 6
Marine Invertebrates	5.	M. Al-Rshaidat			Chp 7
Marine Fishes	6.	M. Al-Rshaidat			Chp 8
Marine Reptiles, Birds, and Mammals	7.	M. Al-Rshaidat			Chp 9
Introduction to Marine Ecology	8.	M. Al-Rshaidat			Chp 10
Between the Tides	9.	M. Al-Rshaidat			Chp 11
Estuaries: Where Rivers Meet the Sea	10.	M. Al-Rshaidat			Chp 12
Life on the Continental Shelf	11.	M. Al-Rshaidat			Chp 13
Coral Reefs, Life Near the Surface	12.	M. Al-Rshaidat			Chp 14,15
The Ocean Depths	13.	M. Al-Rshaidat			Chp 16
Resources from the Sea	14.	M. Al-Rshaidat			Chp 17
The Impact of Humans on the Marine Environment	15.	M. Al-Rshaidat			Chp 18

## 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 three 1-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 1 hour 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 and 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	30%
Participation and Oral Presentaion	10%
Research Proposal 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 book (s), assigned reading and audio-visuals:

*Marine Biology*, 9th ed., (2012) P. Castro and M. E. Huber. McGraw Hill.

**26. Additional information:****Schedule of Student Seminars & Guidelines**

Your seminar should have the following sections: Introduction (with pictures), Materials/Methods (outline), Data (graphs), and Discussion/Conclusion. Use bullet points on your PPT slides. Avoid reading, either from slides or note cards. Try your best to make it as interesting as possible. Your presentation will be held during the laboratory period and should last for ~20 min, followed by 5 min for questions/answers/class discussions.

No.	Student Name	Marine Ecology Topic	Date
1.			
2.			

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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