



The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	Course title	Marine Sciences
2	Course number	5502221
3	Credit hours (theory, practical)	3 theory
	Contact hours (theory, practical)	
4	Prerequisites/corequisites	5502102 + 5501102
5	Program title	Bachelor in Marine Biology
6	Program code	5501
7	Awarding institution	The University of Jordan-Aqaba
8	Faculty	Marine Sciences
9	Department	Coastal Environment
10	Level of course	Second year
11	Year of study and semester (s)	First semester 2015/2016
12	Final Qualification	BSc.
13	Other department (s) involved in teaching the course	Non
14	Language of Instruction	English
15	Date of production/revision	2011

16. Course Coordinator:

Office numbers, office hours, phone numbers, and email addresses should be listed.

Prof. Maroof A. Khalaf,
Tel. 03-2090450-35073
Office hours;
e-mail; m.khalaf@ju.edu.jo

17. Other instructors:

Office numbers, office hours, phone numbers, and email addresses should be listed.

Prof. Maroof A. Khalaf,
Tel. 03-2090450-35073
Office hours;
e-mail; m.khalaf@ju.edu.jo

18. Course Description:

As stated in the approved study plan.

This course provides detailed information on processes of biological, chemical, physical and geological that affect the marine environment for animal and marine plants.

19. Course aims and outcomes:

Chapter I. Continental Margins and Ocean Basins: Heat is not the same as temperature, water resists rising in temperature as heat is added, the ocean is density stratified.

- **Chapter II. Water and Ocean Structure:** Water Is a Powerful Solvent, Seawater Consists of Water and Dissolved Solids, Gases Dissolve in Seawater, The Ocean's Acid-Base Balance Varies with Dissolved Components and Depth.

- **Chapter III. Circulation of the Atmosphere:** The Atmosphere and Ocean Interact with Each Other, The Atmosphere Is Composed Mainly of Nitrogen, Oxygen, and Water Vapor, The Atmosphere Moves in Response to Uneven Solar Heating and Earth's Rotation, Atmospheric Circulation Generates Large-Scale Surface Wind Patterns, Storms Are Variations in Large-Scale Atmospheric Circulation.

- **Chapter IV. Waves:** Ocean Waves Move Energy across the Sea Surface, Waves Are Classified by Their Physical Characteristics, The Behavior of Waves, Wind Blowing over the Ocean Generates Waves, Irregular Wave Motions, Internal Waves, "Tidal Waves", Storm Surges, Tsunami and Seismic Sea Waves

- **Chapter V. Tides:** Tides Are the Longest of All Ocean Waves, Tides Are Forced Waves Formed by Gravity and Inertia, The Dynamic Theory of Tides, Tidal Patterns, Tidal Motion.

- **Chapter VI. Coasts:** Coasts Are Shaped by Marine and Terrestrial Processes, Erosional Processes Dominate Some Coasts, Beaches Dominate Depositional Coasts, Biological Activity Forms and Modifies Coasts, Fresh Water Meets the Ocean in Estuaries, Humans Interfere in Coastal Processes.

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to ...

Learning outcomes:

- **Knowledge and understanding**

At the end of this module, students will be able to:

- Know the ocean basin and how the tectonic forces shaped the seabed, how the ocean floor topography varies with locations and what are the types of continental margins.
- Know the water and ocean structure, what are the physical and chemical characteristics of water.
- Know the circulation of the atmosphere and how the atmosphere and ocean interact with each others. How ocean waves move energy across the sea surface. Tides and what are the forces that affects the tides.
- Know how the coasts are shaped, know the terms beaches, shores, estuaries, sea islands, deltas....etc classifications of coral reefs.

- **Cognitive skills (thinking and analysis).**

- The thinking skills will be developed by encouraging students to conclude answers to different questions that the instructor intends to use during the presentation of the scientific material.

- The instructor intends to stimulate the student's analytical thinking side via connections with general aspects in daily life or through questions, net searching, and home works.

20. Topic Outline and Schedule:

Topic	Week	Instruct or	Achieved ILOs	Evaluation Methods	Reference
Continental Margins and Ocean Basins	1-2			Quiz	
Water and Ocean Structure	3-5			Quiz	
Circulation of the Atmosphere.	6-8			Quiz	
Waves	9-12			Quiz	
Tides	13-14				
Coasts	15-16				

21. Teaching Methods and Assignments:

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

Power point lectures, questions and discussions, videos, home works, lab work
Assignments such as preparing of reports on topics related to the subject.
Students are requested to present a power point presentation on a subject of his/her choice within the framework of the study material.

22. Evaluation Methods and Course Requirements:

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

1. Quizzes
2. Power point presentations
3. Home work
4. Lab work
5. Participation in the class
6. Mid Exam
7. Final Exam

23. Course Policies:

A- Attendance policies: I strongly recommend you attend every lecture. Missing any class will put you at a distinct disadvantage when test taken. 2- Any student with six or more unexcused absences from lecture sessions can be legally dropped from the course.

B- Absences from exams and handing in assignments on time: The only valid excuses for missing an exam are: death in the family, illness, or accident. In this case you must provide evidence of some kind and you must report me within 3 days.

C- Health and safety procedures: Students who miss the exam due to illness or other excuse must notify me within the first week after the exam, so make up arrangements can be Made.

D- Honesty policy regarding cheating, plagiarism, misbehavior:

1. Students are not expected to talk in class while the instructor is lecturing
2. After two warning of talking or any other classroom disruption, the Student will be automatically removed from the class.
3. Any act of cheating, or academic misconduct is subject to penalties.
4. The minimum penalty for any students caught cheating will receive a zero on that test.

E- Grading policy: I will base your grade on your performance in the exams and classroom

Type	Grading
Quizzes, Scientific reports and participation	20%
Midterm exam:	30%
Final Exam:	50%

Exams: The examinations will consist of any combination of Multiple choice, short answer, fill in the blank, matching, identification of figures or essay questions

F- Available university services that support achievement in the course: Books in the library, data show, printers, scanners

Mid Term 30%, Reports, research projects, Home works, presentations 15%, Quizzes. 10%, Final Exam 50%

Available university services that support achievement in the course:

Library sources are available, internet, laboratory facilities

24. Required equipment:

1. Lab top
2. Data how
3. white board
4. Printer
5. scanner
6. markers

25. References:

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

Textbook: All required readings are in the **Oceanography, An Invitation to Marine Science, 7th Tom Garrison**

B- Recommended books, materials, and media: Internet access, videos

26. Additional information:

Name of Course Coordinator: -----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