هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

2023
TP-153

Course Specification
(Bachelor)

Course Title:	*Marine Biology*
Course Code:	*BIO1403*
Program:	*Bachelor of Science in Biology*
Department:	*Department of Biology*
College:	*Faculty of Science*
Institution:	*University of Tabuk*
Version:	***Course Specification Version Number***
Last Revision Date:	*September 2023*

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours:					
3 Credit (2 theoretical + 1 practical) hours.					
2. Course type					
A.	☐University	☐ College	☒ Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (7th Level / 4th year)					
4. Course general Description:					
This course introduces students to marine biology covering aspects such as marine ecosystems, organisms and oceanography. The topics include exploring the seas oceans with a special focus on the red sea, tides, marine environment, interdependence in the ocean, marine unicellular organisms, marine plants and algae, and marine invertebrate and vertebrate animals. The course started to develop a range of core skills and confidence in effective written communication, information technology (including use of peer-reviewed literature), and data handling skills. It will also start to develop field and id skills and taxonomy skills and safe fieldwork practices.					
5. Pre-requirements for this course (if any)**:**					
Vertebrates (BIO1207). Natural Recourses (PHYS1206).					
6. Co-requirements for this course (if any)**:**					
None					
7. Course Main Objective(s):					
By the end of this course, the students should be able to: - Providing a broad overview of the world's seas and oceans focusing primarily on living organisms. - Recognizing and understanding basic terms and concepts of marine biology. - Understanding the structure, function and behavior of representative marine life forms. - Identifying the biodiversity of marine ecosystems. - Understanding both the general and the habitat specific biological processes that occur in marine environments. - Describing interactions between physical and biological factors occurring in various marine environments. - Identifying and discussing major energy transformations in the marine environment. - Identifying and analyzing current issues in marine science and technology					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	2	50%
2	E-learning		
3	Hybrid • Traditional classroom • E-learning		
4	Distance learning		
5	**Others (Lab works)**	2	50%

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	30
2.	**Laboratory/Studio**	30
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		**60**

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Describe the physical, chemical and biological environment of the deep- sea, and how this accounts for patterns of species abundance and diversity	K1	-Lectures. -Class discussion. -Group discussion. -Case studies.	-Quizzes -Midterm examination. -Final examination. -Class discussion and participation.

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
				-Homework (Problem-solving).
1.2	List the roles of disturbance and biological interactions (Competition, grazing, predation and disease) in shaping community organization in the red sea	K2	-Lectures. -Class discussion. -Group discussion. -Homework assignments. -Case studies.	-Quizzes -Midterm examination. -Final examination. -Class discussion and participation. -Homework assignments.
2.0	**Skills**			
2.1	Apply the classification of different marine living organisms, phytoplankton, zooplankton, algal phyla, seaweeds phyla and different animal phyla	S1	-Lab work. -Class discussion. -Group discussion. -Brainstorming.	-Quizzes -reports -Final examination. -Class discussion and participation. -Homework (Problem-solving).
2.2	Compare invertebrates and vertebrates of the marine environment	S2	-Lab work. -Class discussion. -Group discussion. -Brainstorming.	-Quizzes -reports -Final examination. -Class discussion and participation. -Homework (Problem-solving).
2.3	Use quantitative scientific techniques to describe the marine environment including interactions	S2,S5	-Lab work. -Class discussion. -Group discussion. -Brainstorming. -Field trip.	-Quizzes -reports -Final examination.

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	between organisms and/or the physical environment			-Class discussion and participation. -Homework (Problem-solving).
3.0	**Values, autonomy, and responsibility**			
3.1	Work independently as part of a team	V1	-Lectures. -Lab work -Class discussion. -Group discussion. -Individual or group presentation,	-Class discussion and participation. -Homework (Problem-solving).

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction	2
2.	Exploring the seas Oceans with a special focus on the red sea I	2
3.	Exploring the seas Oceans with a special focus on the red sea II	2
4.	Current, waves, Tides I	2
5	Current, waves, Tides II	2
6.	Marine Environments	2
7.	Interdependence in the Ocean I	2
8.	Interdependence in the Ocean II	2
9.	Marine Unicellular Organisms	2
10.	Marine algae and plants I	2
11.	Marine algae and plants II	2
12.	Marine invertebrate animals I	2
13.	Marine invertebrate animals II	2
14.	Marine vertebrate animals I	2
15.	Marine vertebrate animals II	2
Total		**30**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Class Participation	During whole teaching period	5
2.	Homework (Problem-solving)	3 to 13	5
3.	Short Exams (Quizzes)	During whole teaching period	5
4.	Midterm Theoretical Examination	8-9	20
4.	Reports (For Practical)	During whole teaching period	10
5.	Final Practical Examination	15	15
6.	Final Theoretical Examination	17	40

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	- Karleskint, G., Turner, R., & Small, J. (2012). Introduction to marine biology. Cengage Learning. - Marine biology: An Ecological Approach (6th Edition). James W. Nybakken, Mark D. Bertness (2004)
Supportive References	- Kathiresan, K. (2015). Ocean and Coastal Ecology:(21st Century Biology and Agriculture: Textbook Series). Scientific Publishers.
Electronic Materials	- Websites on the internet that are relevant to the topics of the course.
Other Learning Materials	- Multi-media associated with the textbook and the relevant websites.

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Well-equipped classrooms and laboratories that accommodate a sufficient number of students
Technology equipment (projector, smart board, software)	Multimedia projectors and smart boards.
Other equipment (depending on the nature of the specialty)	Equipment for environmental monitoring and impact assessment required.

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	- Students. - Faculty members.	Indirect & direct: - Questionnaires. - Meetings.
Effectiveness of Students assessment	- Quality and development committee. - Department chair.	- Course report. - Program annual report.
Quality of learning resources	- Plan and program committee. - Students. - Staff members.	Indirect & direct: - Questionnaires. - Meetings. - Reports.
The extent to which CLOs have been achieved	- Quality and development committee. - Peer Reviewer. - Program leaders.	Indirect & direct: - Questionnaires. - Meetings. - Reports.
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**PROGRAMS AND STUDY PLANS COMMITTEE**
REFERENCE NO.	
DATE	**SEPTEMBER 2023**