جامعة الملك عبدالله
للعلوم والتقنية
King Abdullah University of
Science and Technology

Course Syllabus: Marine Life - MarS 221

Division	Biological and Environmental Sciences & Engineering Division
Course Number	MarS 221
Course Title	Marine Life
Academic Semester	Fall
Academic Year	2019/2020
Semester Start Date	08/25/2019
Semester End Date	12/10/2019
Class Schedule (Days & Time)	09:00 AM - 12:00 PM | Tue

Instructor(s)

Name	Email	Phone	Office Location	Office Hours
Xose Anxelu G. Moran	Xelu.Moran@kaust.edu.sa	+966128082455	2218, 2, Ibn Al-Haytham (bldg. 2)	Appointments to be made on request by email
Michael Lee Berumen	michael.berumen@kaust.edu.sa	+966128082376	3221, 2, Ibn Al-Haytham (bldg. 2)	Appointments to be made on request by email

Teaching Assistant(s)

Name	Email

Course Information

Comprehensive Course Description	An overview of marine biology that surveys the diversity of marine habitats, major groups of taxa inhabiting those habitats, and the general biology of the various taxa. Topics include the impacts of climate change and other anthropogenic impacts in the ocean. Species diversity, structure of marine food webs, and the flow of energy within different marine habitats will be detailed and contrasted. The course will cover the major marine ecosystem types and the ecology of the adaptations of marine life occupying these habitats. There will be a particular emphasis on Red Sea systems.
Course Description from Program Guide	An overview of marine biology that surveys the diversity of marine habitats, major groups of taxa inhabiting those habitats and the general biology of the various taxa. Topics include the impacts of climate change and other anthropogenic impacts in the ocean. Species diversity, structure of marine food webs, and the flow of energy within different marine habitats will be detailed and contrasted. The course will cover the major marine ecosystem types and the ecology of the adaptations of marine life occupying these habitats. there will be a particular emphasis on Red Sea systems.
Goals and Objectives	Students should gain a working knowledge of the biology of the aforementioned organisms. Provided that logistic arrangements can be made, there may be an optional fieldtrip. Students will be exposed to seminal as well as current literature relevant to the subjects covered in class. The overall objective is to provide students with some basic literacy in modern marine biology and specific preparation for MSc studies and research.
Required Knowledge	Undergraduate course in ecology, zoology, or marine science. **Students from programs other than Marine Science must have instructor permission to register for this course**.
Reference Texts	Marine Biology (Castro and Huber) Coral Reef Guide: Red Sea (Lieske and Meyers) (optional but recommended) other texts as assigned by the instructor

Method of evaluation	**50.00**% - Final exam **30.00**% - Homework /Assignments **20.00**% - Attendance and Participation
Nature of the assignments	The course may include assigned reading from textbooks and from primary literature; literature searches on assigned topics; presentations to the class based on readings or other research; taxonomic illustrations; and/or a written assignment.
Course Policies	Attendance is mandatory to all lectures. Participation is a significant component of the grade. Any anticipated absence should be cleared with the instructor by written (email) notification as early as possible. Students with approved absences are responsible for catching up on the materials from their classmates.
Additional Information	It is strongly preferred that communications are via email. For urgent issues, the instructor may be reached by phone (number will be provided to the class).

Tentative Course Schedule

(Time, topic/emphasis & resources)

Week	Lectures	Topic
1	Tue 08/27/2019	Introduction to Marine Sciences – chemistry, physics, geology, biology, oceanography
2	Tue 09/03/2019	Marine Biodiversity – overview of systematics and speciation
3	Tue 09/10/2019	Invertebrate Zoology – marine animals without a backbone
4	Tue 09/17/2019	Marine Vertebrate Zoology – fishes, reptiles, birds, and mammals
5	Tue 09/24/2019	Coral Reef Ecosystems
6	Tue 10/01/2019	Climate Change – coral bleaching
7	Tue 10/08/2019	The Microbial World – microbial ecology of the ocean
8	Tue 10/15/2019	Marine Macrophytes – seaweeds, seagrasses and mangroves
9	Tue 10/22/2019	**RV Thuwal field trip**
10	Tue 10/29/2019	**RSRC Open Science Conference**
11	Tue 11/05/2019	Coastal Ecosystems – the intertidal zone, estuarine systems and the continental shelf
12	Tue 11/12/2019	Open Sea Ecosystems – pelagic habitats and the deep sea
13	Tue 11/19/2019	Marine Ecology – biogeochemical cycles
14	Tue 11/26/2019	Climate Change – the impacts of global change on marine ecosystems
15	Tue 12/03/2019	Student presentations
16	Tue 12/10/2019	Final Exam Week (date TBD)

Note

The instructor reserves the right to make changes to this syllabus as necessary.