



## Course Syllabus: Contemporary Topics in Marine Science - MarS 394

<b>Division</b>	Biological and Environmental Sciences & Engineering Division
<b>Course Number</b>	MarS 394
<b>Course Title</b>	Contemporary Topics in Marine Science
<b>Academic Semester</b>	Fall
<b>Academic Year</b>	2018/2019
<b>Semester Start Date</b>	08/26/2018
<b>Semester End Date</b>	12/11/2018
<b>Class Schedule</b> (Days & Time)	01:00 PM - 02:30 PM   Sun Wed

Instructor(s)				
Name	Email	Phone	Office Location	Office Hours
Michael Lee Berumen	michael.berumen@kaust.edu.sa	+966128082376	3221, 2, Ibn Al-Haytham (bldg. 2)	By appointment

Teaching Assistant(s)	
Name	Email
N/A	N/A

Course Information	
<b>Comprehensive Course Description</b>	This course will focus on several aspects of movement ecology in the marine environment. The topics will span a range of spatial and temporal scales, ranging from feeding mechanics and daily home ranges to ocean-scale migrations and evolutionary connectivity. An emphasis will be placed on concepts with case studies to investigate in further detail.
<b>Course Description from Program Guide</b>	
<b>Goals and Objectives</b>	Students should gain a working knowledge of the current state of research in the specific topic areas. An emphasis placed on critical thinking and assessments of published literature. The overall objective is to provide students with some basic literacy in various aspects of movement ecology.
<b>Required Knowledge</b>	MarS 221 is a prerequisite or corequisite for this course for MSc students. A strong background in basic marine science and ecology principles is necessary to follow the course contents.
<b>Reference Texts</b>	As a contemporary topics course, there are not any required textbooks. Several reading assignments will be assigned by the instructor.
<b>Method of evaluation</b>	<b>50.00%</b> - Final exam <b>20.00%</b> - Homework /Assignments <b>30.00%</b> - Active participation
<b>Nature of the assignments</b>	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; and/or a written assignment.
<b>Course Policies</b>	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	Sun 08/26/2018 Wed 08/29/2018	Introduction to movement ecology, challenges of studying movement ecology in the marine environment
2	Sun 09/02/2018 Wed 09/05/2018	movements within coral reef systems
3	Sun 09/09/2018 Wed 09/12/2018	long-distance marine migrations
4	Sun 09/16/2018 Wed 09/19/2018	marine microbial dispersal
5	Sun 09/23/2018 Wed 09/26/2018	special case studies - e.g., adult coral movements
6	Sun 09/30/2018 Wed 10/03/2018	sensory cues for movement
7	Sun 10/07/2018 Wed 10/10/2018	marine larval dispersal
8	Sun 10/14/2018 Wed 10/17/2018	terrestrial vs marine movement ecology
9	Sun 10/21/2018 Wed 10/24/2018	fish feeding strikes / mechanics
10	Sun 10/28/2018 Wed 10/31/2018	marine evolutionary connectivity
11	Sun 11/04/2018 Wed 11/07/2018	swimming modes
12	Sun 11/11/2018 Wed 11/14/2018	marine vertical migrations
13	Sun 11/18/2018 Wed 11/21/2018	cnidarian polyp contraction
14	Sun 11/25/2018 Wed 11/28/2018	tracking technologies for marine environments
15	Sun 12/02/2018 Wed 12/05/2018	marine population genetics
16	Sun 12/09/2018	Student Presentations

**Note**

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