

## **OCB 3043: Marine Biology and Oceanography Fall 2018**

### **Instructor**

- Dr Alastair Harborne; MS 352 at BBC campus
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### **When and where**

- Lectures: Glenn Hubert Library 160, Tuesday and Thursday 12:30-13:45
- Office hours: Tuesday and Thursday 9:30-12:00, following each lecture or by appointment (request by email)

### **Learning materials**

- Required: Registered iclicker
- Recommended Text: Levinton, J.S. Marine Biology: Function, Biodiversity, Ecology
- Each lecture posted to Blackboard prior to class so it can be annotated during the lecture
- Other learning materials (e.g. required papers to read) will be posted to Blackboard

### **Course description and learning outcome**

Oceans cover 71% (and rising) of the world, and no more than 5% of the oceans have been explored. They include wondrous creatures and provide humans with lots of benefits. However, they are threatened by a range of factors, and need urgent conservation.

This course is designed as an introduction to marine biology and biological oceanography for majors in Biology and Marine Biology. It will also introduce the basics of physical and biological oceanography and the biology/ecology of the major marine ecosystems. Since this is an upper division level course, core knowledge of natural sciences is expected and we will draw upon the primary literature published in scientific journals.

Successful completion of General Biology I and II is a prerequisite.

Specifically, this course should allow you to:

1. Understand the basic physical and oceanographic processes that shape life in oceans
2. Understand the major characteristics of the key animals and plants in the oceans
3. Recognize key processes in the oceans and how they differ from terrestrial ecosystems
4. Appreciate the biology, ecology, and functioning of the major marine ecosystems
5. Consider the threats to the marine environment, and the basics of marine conservation
6. Understand how we conduct marine research, and how to read and interpret research papers

**Teaching schedule (please be advised that the course syllabus schedule of events is subject to change)**

- Changes to this schedule and other announcements regarding the course will be to FIU email addresses only
- Deadline to drop a course with a DR grade: Monday October 29

Week	Date	Lecture number	Subject
1	21 Aug	1	Introduction to the course and marine biology
	23 Aug	2	Living in a marine environment
2	28 Aug	3	Oceanography part 1
	30 Aug	4	Oceanography part 2
3	4 Sep	5	Plankton
	6 Sep	6	Marine invertebrates
4	11 Sep	7	Marine vertebrates part 1
	13 Sep	8	Marine vertebrates part 2 / Review of Section 1
5	18 Sep	<b>Mid-term 1</b>	
	20 Sep	8	Primary production and grazing
6	25 Sep	9	Predation, mutualism, and parasitism
	27 Sep	10	Competition
7	2 Oct	11	Food webs
	4 Oct	12	Reproduction, migration, and connectivity
8	9 Oct	13	Marine biogeography / Review of Section 2
	11 Oct	<b>Mid-term 2</b>	
9	16 Oct	14	Rocky shores and temperate reefs
	18 Oct	15	Estuaries and sandy shore
10	23 Oct	16	Polar regions
	25 Oct	17	Coral reefs
11	30 Oct	18	Seagrass beds and oyster reefs
	1 Nov	19	Mangroves and saltmarshes
12	6 Nov	20	The deep sea / Review of Section 3
	8 Nov	21	Threats to marine environments part 1
13	13 Nov	22	Threats to marine environments part 2
	15 Nov	<b>Mid-term 3</b>	<i>* Lectures 14-20 only</i>
14	20 Nov	23	Conservation of marine habitats
	22 Nov	No class – Thanksgiving	
15	27 Nov	24	Practicing data interpretation
	29 Nov	Revision	Review of all course material
16	TBA	<b>Final exam</b>	<b>TBA</b>

### Weekly tasks and objectives

Regular, on-time class attendance is expected. Please try to participate in class by asking and answering questions - we will also use iClickers in the class. Following each lecture, you should ensure that you understand all the taught material and seek help with material you don't understand (meet with the instructor, ask questions in class, read the text book). There is some required reading of journal articles (posted to Blackboard) associated with each topic that will be

highlighted in class and discussed the following week. No cell phones are tolerated during class – please turn them off or turn them to “silent” before class begins.

### **Grading**

The course will have three midterm exams (multiple choice). Your highest two grades from the midterms will count towards your final grade (25% each of final grade). Your lowest midterm will be dropped. These exams are non-cumulative and cover only material since the last exam. The final exam is cumulative and covers all information from the semester (multiple choice and short answers). It counts for 40% of your final grade. Missed exams will count as zero points. Participation in the lecture will account for 10% of your grade and will comprise of a series of quizzes offered throughout the course covering material relevant to the topic we are discussing in the lecture.

There will be absolutely no make-up exams for absences or tardiness unless for university-approved excuses. Examples of university-approved excuses include: documented medical emergencies, death of members of immediate family, and jury duty. Exam scores may be curved.

#### *Grade scale:*

A 93-100; A- 90-92; B+ 87-89; B 83-86; B- 80-82; C+ 75-79; C 70-74; D 60-69; F < 60

#### *Summary (students will be graded on their performance in these areas ONLY)*

Highest Midterm 1 – 25%; Highest Midterm 2 – 25%; Lowest Midterm – 0%; Final – 40%;  
Participation- 10%

### **Lab Sections: OCB 3043L TA: Melanie Esch**

The associated laboratory will be a separate one-credit course led and taught by a teaching assistant. The lecture and lab sections have been designed carefully to complement one another throughout the semester; however, the lecture and lab grades will be completely independent. It is highly recommended that you take this lab section if you are interested in marine biology.

### **Professional and academic integrity**

Florida International University is a community dedicated to generating and imparting knowledge through excellent teaching and research, the rigorous and respectful exchange of ideas, and community service. All students should respect the right of others to have an equitable opportunity to learn and honestly demonstrate the quality of their learning. Therefore, all faculty members as well as students are expected to adhere to a standard of academic conduct, which demonstrates respect for themselves, their students or fellow students, and the educational mission of the University. All students are deemed by the University to understand that if they are found responsible for academic misconduct (e.g. cheating, plagiarism, academic dishonesty), they will be subject to the Academic Misconduct procedures and sanctions, as outlined in the FIU Student Handbook under the “Academic Misconduct” section.”

FIU is committed to eliminating sexual harassment. In accordance with the FIU Faculty Senate guidelines, this syllabus includes a warning that any misconduct will be reported. FIU's sexual harassment policy is available at: <http://www.fiu.edu/~eop/EOPSexH.pdf>