OCE 4930 OCEANOGRAPHIC STUDIES / OCB 5050 INTRO INTO BIOLOGICAL OCEANOGRAPHY

Fall 2016

Syllabus (08/04/16)

Credit hours: 3
Classroom: 327 OSB
Time: Monday and Wednesday 12:30pm – 1:45pm
Instructor: Mike Stukel
Office hours: Wednesday 1-3 pm, anytime by email (mstukel@fsu.edu with OCB5050/OCE4930 in the subject heading).

Prerequisites: none

Course description:

The course will introduce you into the field of biological oceanography covering a fairly wide perspective of topics on marine biota. We will talk about pelagic organisms and processes, benthos, hydrothermal vents, climate-change effects, and fisheries. Different size classes of marine life (from virus (by definition not an organism) to marine mammals) will be covered. Biological-physical and chemical (Biophysicochemical) interactions will be reviewed and responses of different organisms to environmental changes will be assessed. Students will present research papers in a journal-club style and will write a final paper about a chosen topic.

Learning objectives:

At the end of this course, you will be able to

- Gain an understanding of the major factors controlling the distribution of biomass and production of plankton.
- Understand the complex relationships in the marine foodweb
- Explain the importance of the marine biosphere
- Understand methods used to assess and quantify marine productivity
- Conceptualize how climate change affects the marine biota
- Read and discuss scientific literature

Preliminary course calendar (subject to change):

week #		Date	class #	subject of class	reading assignment
1	Tu	Aug 30	1	Introduction	Chapter 1
	Th	Sep 8	2	Phytoplankton Physiology	Chapter 3
2	Tu	Sep 14	3	Phytoplankton Diversity	Chapter 2
	Th	Sep 16	4	Limitation in the Pelagic	
3	Tu	Sep 20	5	Paper Discussion	Capone et al. (1997), Falkowski et al. (2004)

	Th	Sep 22	5	Marine microbes	Chapter 5
4	Tu	Sep 27	6	Protistan Zoology	p. 117-118
	Th	Sep 29	7	The microbial Loop	
5	Tu	Oct 4	8	Paper Discussion	Azam & Malfatti (2007), Landry & Calbet (2004)
	Th	Oct 6	9	NO CLASS	
6	Tu	Oct 11	10	Mesozooplankton Zoology	Chapter 6
	Th	Oct 13	11	Zooplankton Ecology	Chapter 7 & 8
7	Tu	Oct 18	12	Food webs	Chapter 9
	Th	Oct 20	13	Paper Discussion	Richardson & Schoeman (2004), Ohman et al. (2013)
8	Tu	Oct 25	14	Pelagic Biogeography and Biomes	Chapter 10 & 11
	Th	Oct 27	15	Pelagic Biogeochemistry	
9	Tu	Nov 1	16	Paper Discussion	Barton et al. (2013) & Mitra et al. (2014)
	Th	Nov 3	17	Seabirds & Marine Macrofauna	Chapter 17
10	Tu	Nov 8	18	Mesopelagic	Chapter 12
	Th	Nov 10	19	Paper Discussion	Worm et al. (2005) & Steinberg et al. (2008)
11	Tu	Nov 15	20	Benthic Ecology	Chapter 14
	Th	Nov 17	21	Deep-Sea Fauna	Chapter 13
12	Tu	Nov 22	22	Estuaries	
	Th	Nov 24		NO CLASS - THANKSGIVING	
13	Tu	Nov 29	23	Intertidal Ecology	
	Th	Dec 1	24	Paper Discussion	Smith et al. (2009), Riegl & Purkis (2015)
14	Tu	Dec 6	25	Coral Reefs	
	Th	Dec 8		Kelp Forests	
15	Tu		26		
	Th		27	Last Day of Class / Discussion	

Course Mechanics:
The course material will consist of lectures involving both Powerpoint™ and white (black) board presentations. Discussion of the subject matter in class is strongly

encouraged. Some lectures consist of a journal-club style discussion forum in which students present and discuss assigned scientific articles.

The final exam (see below) will consist of a final paper on a subject chosen by the student and the instructor. Please consult the instructor about the topic of the presentation early. For additional information on attendance, please refer to the University attendance policy (below).

Course Texts:
Textbook: Biological Oceanography – Wiley-Blackwell – Miller and Wheeler second edition
The scientific articles discussed during this class will be available online and are posted on Blackboard one week before each class.

Assignments/student participation:
Attendance is mandatory and active participation by students is expected

Papers: There will be one term paper to test comprehension of subject material and scientific writing worth 50% of the final grade (this will be broken down into 20% for an outline/literature search, and 30% for the final paper). Term papers will be written as homework. Topics will be chosen in consultation with the instructor. The paper may be based on a coherent set of papers that illuminate a particular topic or on sections of the textbook – using the original literature cited in these sections. The deadline for finalizing the topic and submitting the outline is Nov. 22. Students are responsible for scheduling a time to meet with Dr. Stukel between Nov. 22 and Dec. 2 to discuss their outlines. Final papers are due Dec. 9th.

Final paper: 6-8 pages for graduate students/ 4-6 pages for undergraduate students excluding references). Formatting: 1.5 line space, Arial (11) or New Times (12), in a Microsoft Word format with electronic submission. The paper has to be organized like a scientific manuscript. The paper will be run through an anti plagiarism software! Detailed information will be given in class. Graduate students will be graded more comprehensively.

Paper Discussions:
The goal of the paper discussion is to prepare you to read and critically discuss scientific manuscripts. At the same time, I would like to prepare you for *impromptu* scientific speaking. For this reason, during class, I will randomly choose individual students to present different parts of each paper (e.g. the introduction or a specific figure). For this reason it is important for EVERYONE to read EVERY paper. Be ready to think and explain!

Grading:
The total score of 100 is comprised of:

Attendance/Participation:	50
Outline	20

Final Paper:	30
Total:	100 points

Grade Cumulative Score:

A	A-	B+	B	B-	C+
>94	90-93	85-89	75-84	70-75	66-69

C	C-	D+	D	D-	F
60-65	55-59	50-54	45-49	40-44	<39

Blackboard:
We will use Blackboard to post Powerpoint™ presentations, supplemental material, and grades, make announcements, etc. Please make sure to REGISTER for this course, otherwise you will not have access to Blackboard. To learn about the features of Blackboard see instructions at http://online.fsu.edu/bb6tools/.

Recording of lectures: NO unauthorized recording of lectures in audio or video is permitted.

Copyright notice:
This course website may contain copyrighted materials that are used in compliance with U.S. Copyright Law. Under that law, materials may not be saved to your computer, revised, copied, or distributed without permission. They are to be used in support of instructional activity as part of this course only and shall be limited to the duration of the course, unless otherwise specified by the instructor or owner of the material. You may only download or print materials at the direction of your instructor, who knows which materials are copyrighted and which are not.

For more information, see the FSU Copyright Guidelines.

Attendance Policy:
University Attendance Policy- Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness. For further information, consult the FSU General Bulletin at: http://registrar.fsu.edu/bulletin/undergrad/apdefault.htm.

Academic Honor Policy
The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to ". . . be honest and truthful and . . . [to] strive for personal and institutional integrity at Florida State University." (Florida State University Academic Honor Policy, found at http://dof.fsu.edu/honorpolicy.htm.)

Americans With Disabilities Act
Students with disabilities needing academic accommodation should:

(1) register with and provide documentation to the Student Disability Resource Center; and
(2) bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class.

This syllabus and other class materials are available in alternative format upon request.
For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center
874 Traditions Way
108 Student Services Building
Florida State University
Tallahassee, FL 32306-4167
(850) 644-9566 (voice)
(850) 644-8504 (TDD)
sdrc@admin.fsu.edu
http://www.disabilitycenter.fsu.edu/

Syllabus Change Policy
Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.