MARS 8010 Biological Oceanographic Processes Fall 2013

GENERAL COURSE INFORMATION

Professor: Dr. Brian Hopkinson

Marine Sciences, Rm. 102B

706-542-7880 bmhopkin@uga.edu

Office Hours: Wednesday 1:30-2:30 PM or by appointment

Class Times: Tuesday & Thursday 11:00-12:15, Marine Sciences Rm 208

Readings: "Biological Oceanography", C. Miller, Blackwell Publishing 2012

Other Readings, as assigned (updates on the class ELC website)

Grades: Midterm Exam¹ 20%

Final Exam¹ (comprehensive) 35% Homework 20% Student Presentation² 15% General Participation³ 10%

READINGS

Background readings will be assigned from both the textbook and influential articles from within the discipline. Articles from the primary literature will be assigned periodically for *discussion* in class. Both sets of readings will be provided to the class before the relevant lecture, usually through the class ELC-website, which will be updated regularly.

For the *Discussion papers*, a student or group of students will be assigned to provide a brief presentation on the paper and lead the discussion. All students must read these papers carefully and come to class that day with your questions and thoughts. Your questions may concern things you do not understand about the paper, broader implications and consequences of the work, or ideas for further work inspired by the paper.

PROBLEM SETS

Problem sets (3) will be assigned during the course and form an integral part of the material being covered. They are designed to help with your understanding of the material covered in class, and to improve your quantitative skills. Some of the problem sets will include numerical modeling problems. There will be several classes (3) in which numerical

¹Please see make-up exam policy on following page

²Details, including grading criteria, will be provided at a later date ³Includes attendance and participation in general class discussions

modeling will be introduced and the basics of programming in the R language will be discussed. The work you hand in *must be your own*

CLASS SCHEDULE

	Date		Topic
Aug	13	Tues	Introduction – Physical Environment
	15	Thurs	Chemical Environment
	20	Tues	Phytoplankton I – Taxa, Measuring Biomass
	22	Thurs	Photosynthesis and Growth
	27	Tues	Primary Productivity
	29	Thurs	Regulation of Primary Productivity – Nutrients, Light
Sept	3	Tues	Numerical Modeling 1: R, NP model
	5	Thurs	The Microbial Loop and Bacterial Production
	10	Tues	Molecular Methods
	12	Thurs	Marine Microbial Diversity
	17	Tues	Viruses
	19	Thurs	The Zooplankton
	24	Tues	Grazing
	26	Thurs	MIDTERM
Oct	1	Tues	Zooplankton Production and Life Cycles
			Numerical Modeling 2: NPZ model
	3	Thurs	Fish
	8	Tues	Fisheries
	10	Thurs	Marine Food Webs
	15	Tues	Nutrient Cycles
	17	Thurs	Iron Limitation
	22	Tues	Numerical Modeling 3: NPZ with nutrient fluxes
	24	Thurs	Deep Sea Benthos
	29	Tues	Benthic Processes
	31	Thurs	Estuaries and Salt Marshes
Nov	5	Tues	Coral Reefs
	7	Thurs	Carbon Cycle
	12	Tues	Global Climate Change
	14	Thurs	Student Presentations
	19	Tues	Student Presentations
	21	Thurs	Student Presentations
	26	Tues	THANKSGIVING BREAK
	28	Thurs	THANKSGIVING BREAK

Final Exam: Thurs, Dec 5: 12:00 - 3:00 PM.

MAKE-UP EXAM AND EXTRA CREDIT POLICIES

Make up exams will not be offered except in cases of extreme circumstance. Any student who desires a make-up exam should contact Dr. Hopkinson **before** the regularly scheduled

exam if possible, and in any case not more than 24 hr after the exam. The decision to offer a make-up exam in any particular case is at the sole discretion of the Professor.

No extra credit is available in this course.

ACADEMIC HONESTY:

All academic work must meet the standards contained in "A Culture of Honesty". Students are responsible for informing themselves about those standards before performing any academic work.

The UGA Academic Honesty Policy (A Culture of Honesty) is available on-line at: http://www.uga.ed/honesty/ahpd/culture_honesty.htm.

STUDENTS WITH DISABILITIES:

Students with disabilities who require reasonable accommodations in order to participate in course activities or meet course requirements should contact Dr. Hopkinson.

COURSE WITHDRAWLS:

Students withdrawing from the course before the midpoint of the semester will be assigned a grade of 'WP' or 'WF', depending on their performance in the class up until the time that the drop is initiated.

For withdrawls after the semester midpoint, University policy requires that a grade of 'WF' be assigned, except in those cases in which the student is doing satisfactory work and the withdrawal is necessitated by ill health or other hardship, as certified by the Office of the Vice President for Student Affairs. Students wishing to withdraw from the course after the midpoint of the semester under these circumstances should contact the office of the Vice President for Student Affairs.

SYLLABUS DISCLAIMER

This course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.