

## GENERAL COURSE INFORMATION

Professors: Dr. Brian Hopkinson  
Marine Sciences, Rm. 102B  
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Dr. Amanda Spivak  
Marine Sciences, Rm. 164  
706-542-5709  
[aspivak@uga.edu](mailto:aspivak@uga.edu)

Office Hours: Hopkinson: Tuesday 3:00 – 4:00 PM or by appointment  
Spivak: Monday 1:30-2:30 PM or by appointment

Class Times: Monday & Wednesday 9:30-11:00 AM, Marine Sciences Rm 239

Readings: There is no official textbook for the course. Assigned readings will be available on the course ELC website.

Optional Textbook: “Biological Oceanography”, C. Miller and P.A. Wheeler, Blackwell Publishing 2012

Grades:	Midterm Exam <sup>1</sup>	20%
	Final Exam <sup>1</sup> (comprehensive)	25%
	Homework/Projects <sup>2</sup>	30%
	Proposal/Panel <sup>2</sup>	15%
	General Participation <sup>3</sup>	10%

<sup>1</sup>Please see make-up exam policy on following page

<sup>2</sup>Details, including grading criteria, will be provided at a later date

<sup>3</sup>Includes attendance and participation in general class discussions

Letter-Grades: The following is a general guide for grade assignment in this course. The exact correspondence between calculated numeric grades and assigned letter-grades is at the discretion of the professor.

		89.99 – 87.00	B+	79.99 – 77.00	C+	69.99 – 60.00	D
100 – 93.00	A	86.99 – 83.00	B	76.99 – 73.00	C	< 60.00	F
92.99 – 90.00	A-	82.99 – 80.00	B-	72.99 – 70.00	C-		

## 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.

## HOMEWORK/PROJECTS

Problem sets (2-3) 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 modeling will be introduced and the basics of programming in the Python language will be discussed. We will gradually develop a simple model of the pelagic ecosystem (a Nutrient-Phytoplankton-Zooplankton, or NPZ model) to better understand its dynamics. There will be three classes dedicated to student research proposals. Proposals will take the format of an external graduate fellowship competition and are due by 11/19/2019 at 5 PM. Proposal presentations will be randomly split over 2 class periods and based on AGU style. Proposal reviews for the mock panel will be due by 11/25/2019 at 5 PM. Each student will lead the discussion for one proposal during class on 12/02/2019 and submit a panel summary synthesizing reviews and panel discussion by 12/04/2019 at 5 PM. In all cases, the work you hand in *must be your own*.

## CLASS SCHEDULE

Date		Instructor	Topic	
Aug	14	Wed	BH	Physical Environment
	19	Mon	BH	Chemical Environment and Light
	21	Wed	BH	Phytoplankton – Taxa, Measuring Biomass
	26	Mon	BH	Photosynthesis, Primary Production, and Growth
	28	Wed	BH	Regulation of Primary Productivity – Nutrients, Light
Sept	2	Mon		Labor Day
	4	Wed	BH	Numerical Modeling 1: NP model
	9	Mon	BH	The Microbial Loop and Bacterial Production
	11	Wed	BH	Molecular Methods
	16	Mon	BH	Marine Microbial Diversity
	18	Wed	BH	Viruses
	23	Mon	BH	The Zooplankton
	25	Wed	BH	Grazing and Life Cycles
	30	Mon	BH	Numerical Modeling 2: NPZ model
Oct	2	Wed	BH	<b>MIDTERM</b>
	7	Mon	BH	Fish/Fisheries
	9	Wed	AS	Marine Food Webs
	14	Mon	AS	Nutrient Cycles I
	16	Wed	AS	Nutrient Cycles II
	21	Mon	AS	Carbon Cycle
	23	Wed	AS	Benthos
	28	Mon	AS	Estuaries
	30	Wed	AS	Tidal saline wetlands and seagrasses
Nov	4	Mon	BH	Coral Reefs
	6	Wed	BH	Numerical Modeling 3: Add a box
	11	Mon	AS	Polar

	13	Wed	AS	Global Climate Change
	18	Mon	AS	Disturbances
	20	Wed	AS	<i>Proposal Talks</i>
	25	Mon	AS	<i>Proposal Talks</i>
	27	Wed		THANKSGIVING BREAK
	2	Mon	AS	<i>Proposal Panel</i>
Dec	9?	Mon	BH/AS	<b>FINAL EXAM 8:00 – 11:00 AM Rm 239</b>

#### 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. Spivak or 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:

As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in "A Culture of Honesty" found at: <https://ovpi.uga.edu/academic-honesty/academic-honesty-policy>. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed the Professor.

#### 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 or Spivak.

#### COURSE WITHDRAWALS:

Per UGA policy, students withdrawing from the course before the semester's withdrawal deadline will be assigned a grade of W. Withdrawals after the deadline are not permitted except in cases of significant personal hardship as determined by the Office of Student Services. See the UGA Withdrawal Policy for further information (<http://www.reg.uga.edu/policies/withdrawals>).

#### SYLLABUS DISCLAIMER

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