

PGEOG 25100 – Spring 2020
EARTH SYSTEMS SCIENCE II
COURSE SCHEDULE
Lecture Instructor: Professor Haydee Salmun
Lab Instructor: Mr. Thomas Carboni

CLASS SCHEDULE:

LECTURES: Tuesday/Friday, 11:10 AM – 12:25 PM, Room 1022 Hunter North

LABS: Section 1: Tuesday, 12:45 PM – 1:35 PM, Room 1090B Hunter North
Section 2: Tuesday, 1:45 PM – 2:35 PM, Room 1090B Hunter North

Prof. SALMUN CONTACT INFORMATION:

Office Department of Geography and Environmental Science, Room 1035 HN
E-mail hsalmun@hunter.cuny.edu (*)
Tel. 212-772-5224
Office Hours: Tuesday/Friday, 1:00 PM – 2:00 PM, *please make an appointment*

Prof. CARBONI CONTACT INFORMATION:

Office Geography Department and Environmental Science, Room 1032 HN
E-mail Thomas.Carboni72@myhunter.cuny.edu (*)
Office Hours: *by appointment*

* **Note:** the best way to contact me is via email – (1) You must include the course name or number in your subject line (2) You must include your entire name in your email (3) I try to answer all emails within 24 hours. Allow for a 48-hour delay on the weekends.

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. Updates will be posted regularly on BlackBoard.

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**** Schedule (FINAL!!! well may be ...) ** UPDATED 3/26 ****

Tentative Syllabus Readings specified by chapter, with no author (e.g. “Ch. 9: The Biosphere and Biodiversity”) refer to the main text of the class (Kump, Kasting, and Crane), which the students are expected to have. Other readings, specified by author, are supplied as pdf files.

Class No & Date	Lecture Subjects	Reading	Labs	Assign Due	Other Reading*
1. Tue – 1/28	Introduction and course overview		Intro		
Unit 1					
2. Fri – 1/31	The biosphere – metabolism, structure	Chapter 9		HW#1	McCaulyetal_2015
3. Tue – 2/4	Ecosystems dynamics - biodiversity	Chapter 9	Lab 1		
4. Fri – 2/7	Biodiversity through Earth’s history	Chapter 13			
5. Tue – 2/11	Biodiversity through Earth’s history	Chapter 13	Lab 1	HW#1	
6. Fri – 2/14	Human threat to biodiversity	Chapter 18			
7. Tue – 2/18	Human threat to biodiversity	Chapter 18	Lab 2		
8. Fri – 2/21	Human threat to biodiversity	Chapter 18		HW#2	CTP Ch18 Readings PT
Unit 2					
9. Tue - 2/25	Early atmosphere -Life on Earth	Chapter 10	Lab2		
10. Fri – 2/28	Midterm 1. Chapters 9, 13 & 18				
11. Tue – 3/3	Early atmosphere	Chapter 10	Lab 3		
12. Fri – 3/6	Effects of life on the atmosphere	Chapter 11			
13. Tue – 3/10	Effects of life on the atmosphere	Chapter 11	Lab 3	HW#2	
Classes 3/13 & 3/17 CANCELLED					
14. Fri – 3/13	Long-term climate regulation	Chapter 12			
15. Tue – 3/17	Snowball Earth	Chapter 12	Lab 4		
Classes RESUME online					
16. Fri – 3/20	Effects of life on the atmosphere. Rise of O ₂	Chapter 11		HW#3	Lyonsetal_2014 - Nature
Unit 3					
17. Tue – 3/24	Long-term climate regulation	Chapter 12	Lab 4		

18. Fri – 3/27	Snowball Earth	Chapter 12	NO CLASS - CUNY 'PAUSE'		
19. Tue – 3/31	Review	Prepare Questions!	NO CLASS - CUNY 'PAUSE'		
20. Fri - 4/3	Long-term climate regulation	Chapter 12			
Tuesday – 4/7	No Class – Classes Follow Wed. Sch.				
Fri – 4/10: **NEW**Spring Recess – No Classes Scheduled					
21. Tue – 4/14	Midterm II: Chapters 10, 11, part of 12	Lab 4	HW#3		
22. Fri – 4/17	Snowball Earth	Chapter 12			
23. Tue – 4/21	Snowball Earth	Chapter 12	Lab 5		
24. Fri– 4/24	Pleistocene glaciations	Chapter 14			
25. Tue – 4/28	Pleistocene glaciations - feedbacks	Chapter 14	Lab 5	HW#4	
Unit 4					
26. Fri – 5/1	Special Topic: Climate of high latitudes	TBA			
27. Tue – 5/5	Special Topic: Climate of high latitudes	TBA	Lab 5		
28. Fri – 5/8	Special Topic: Climate of high latitudes	TBA	Pres	HW#4	
29. Tue – 5/12	Review for Final Exam	Come to class with your questions!	Pres		
Friday 5/15 – Reading Day					
FINAL EXAM: week 5/16 – 5/22					
EXACT DATE TBD					
NOTE: focus of final exam is material discussed since Midterm Exam II					

*** Other Readings**

1. **MaCauleyetal_2015** – McCauley, D. J., M. L. Pinsky, S. R. Palumbi, J. A. Estes, F. H. Joyce and R. R. Warner, 2015: Marine defaunation: Animal loss in the global ocean. *Science*, Vol. 347, Issue 6219, p. 247.
2. **Lyonsetal_2014 - Nature** –Lyons, T. W., Ch. T. Reinhard and N. J. Planavsky, 2014: The rise of oxygen in Earth’s early ocean and atmosphere. *Nature*, Vol. 506, 307-315.
3. **Jaccard&Galbraith_2012** – Jaccard, S. L. and E. D. Galbraith, 2012: Large climate-driven changes of oceanic oxygen concentrations during the last deglaciation. *Nature Geosci.*, **5**(2), 151– 156. DOI: 10.1038/NGEO1352