

The Water Planet

Spring Semester 2016

Course 01:460:204:01; 11:628:204:01
Loree Building, Room-022: T, Th 2:15 – 3:35

Course Description

Water makes Earth a unique planet in our solar system. This introductory course for science and non-science majors deals with Earth as an integrated system and explores the interactions between its major components: the geosphere, hydrosphere, atmosphere and the biosphere. We'll discuss the evolution of the earth system and the natural processes governing global environmental change in the past and at Present. In addition to the regular lectures, every three lectures will be followed up with topical discussions offered in small groups to each of the sections instead of the regular class. Section 1 is only open to students enrolled in Rutgers Honors Programs, whereas sections 2-4 are open to everyone else. During the course of the semester we'll have classwork, quizzes and homework handouts to provide the students with hands on experience with the material. These will be an important part of the final grade.

Professors:

Yair Rosenthal (rosentha@marine.rutgers.edu; 848-932-3402)

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Teaching Assistants:

TBA

Text: The Blue Planet 2nd edition by Skinner, Porter & Botkin ISBN 0-471-16114-4
Available as used books online

Grading and rules:

Attendance & participation	15%
Classwork & synopses	15%
Term paper	20%
Mid-term Exam	20%
Final Exam	30%

N.B. Honors' recitations (sec. 1) will be taught by the course professors. Their content and assignments will be specifically design for the Honors' level.

- *Temporal grades will be posted after each assignment/ exams. A notice will be send to the student to alert them of the posting.*
- *It is each student duty to check his/ her grade immediately after it is posted. Students can check / appeal their grades NO LATER than 2 weeks after the grades have been posted.*

- We will strictly follow the department's "Policy on Classroom Etiquette" and the University code on academic ethics

Course Syllabus

Date	Day	Instructor	Topic	Reading
From particles to planets				
19-Jan	T	RS	Formation of matter and planets	
21-Jan	TH	YR	Sun energy	
26-Jan	T	YR	Studying Earth: system approach	
28-Jan	TH	RS	Recitation 1	
The solid Earth				
2-Feb	T	YR	Plate tectonics	
4-Feb	TH	YR	Earthquakes and volcanoes	
9-Feb	T	RS	Into the abyss, the ocean floor	
11-Feb	TH	RS	Recitation 2	
The solid Earth				
16-Feb	T	RS	Water properties	
18-Feb	TH	RS	River, groundwater & ice	
23-Feb	T	YR	Draughts in the USA	
25-Feb	TH	YR	Recitation 3	
The ocean				
1-Mar	T	RS	Ocean properties	
3-Mar	TH	RS	Ocean movements	
8-Mar	T	RS	Ocean surprises	
8-Mar	T	RS	Recitation 4	
15-Mar	T		<i>Spring break</i>	
17-Mar	TH		<i>Spring break</i>	
22-Mar	T		<i>Mid-term</i>	
The atmosphere				
24-Mar	TH	YR	The atmosphere	
29-Mar	T	YR	Winds and weather	
31-Mar	TH	YR	Recitation 5	
The climate system				
5-Apr	T	YR	Climate Change: Past & present	
7-Apr	TH	YR	Climate Change: Past & present	
12-Apr	T	RS	Climate Change: Past & present	
14-Apr	TH	RS	Recitation 6	
The biosphere				
19-Apr	T	YR	Planetary perspective on life	
21-Apr	TH	YR	History of the Biosphere	
26-Apr	T	YR	History of the Biosphere	
28-Apr	TH	YR	Recitation 7	

Final Exam