

Syllabus, Spring/Fall
Introduction to Environmental Science
11:375:101, 3 credits

Time: TBA
Place: TBA

Instructors: Dr. Craig Phelps, 848-932-5713
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Office Hours: most afternoons; appointment recommended

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Note: For all e-mails, please include “ES101” in the subject line, and give your full name.

Textbook: **Living in the Environment**, 18th ed. Miller and Spoolman with access to MindTap[®]

MindTap[®] access includes an electronic version of the textbook and is available to purchase directly by using the “Cengage.com” link in the Sakai course page. It is also available to purchase at the University Bookstore, at N.J. Books. (Do not purchase an access code through an external Cengage website. It will not work properly.)

A physical copy of the book is not required but MindTap[®] access is.

ISBN #9781285850078 MindTap[®] printed access card
ISBN #9781305435988 Loose-leaf bundle with MindTap[®] access

Website: All lecture notes and homework assignments will be available on MindTap[®] through the class SAKAI site (www.sakai.rutgers.edu). Tech support for the MindTap[®] site is available at:
<http://support.cengage.com/magellan/ClassLandingPage.aspx?OptyId=1-1VUPTUF>

Requirements and Grading:

1. Three exams: 300 points total (Exams 1+2 = 96 pts. each, Exam 3 = 108 pts.)
2. Homework Assignments (10) in MindTap: 100 points total.
Due Dates (assignments must be submitted for grading by 11:59 p.m.):

#1: XX	#6: XX
#2: XX	#7: XX
#3: XX	#8: XX
#4: XX	#9: XX
#5: XX	#10: XX

3. Total class points = 400
4. Extra Credit: up to 20 points for approved environmental volunteer experience (2 points for each hour of service.) Volunteer service must be related to the environment and pre-approved by the instructor.

Your final grade will be calculated by dividing the total number of points earned (including any extra credit) by 400 to obtain a percentage. The letter grade will be based on that percentage, which may be curved depending on the course average.

Late Assignments and Make-Ups:

Because meeting the deadlines and completing assignments on time are important parts of this class, late assignments without an acceptable excuse will be penalized by 50%. Exam make-ups will only be given for a University-approved absence.

Objectives of the Course

It is our goal to introduce the field of environmental science and show how an understanding of the natural world around us and the application of the scientific method can help us to address the problems facing our planet. Our specific objectives are to:

1. Introduce a variety of environmental problems, and solutions, in a scientific context.
2. Enable students to understand environmental issues using a scientific approach.
3. Improve basic scientific literacy.

SAS Core Curriculum Learning Goals

I: 21st Century Challenges

- c. Analyze the relationship that science and technology have to contemporary social issues.

II: Areas of Inquiry

A: Natural Sciences

- e. Understand and apply basic principles and concepts in the physical and biological sciences.
- f. Explain and be able to assess the relationship among assumptions, method, evidence, arguments, and theory in scientific analysis.

Attendance: Students are expected to attend all classes (although attendance is not recorded); if you expect to miss a significant number of classes, please use the University absence reporting website <https://sims.rutgers.edu/ssra/> to indicate the dates and reason for your absence. An email will be automatically sent to me.

Please note: If you miss a class, you are responsible for all materials, including announcements. Arrange (now!) with a classmate to pick up any handouts and take notes for you. There will be no make-up exams without an acceptable excuse.

Special Needs: Students with a disability: please see us immediately so that we may make any necessary arrangements to support a successful learning experience.

Tentative Class Schedule

(subject to change; check website)

Date	Day	Topic	Lecture No.	Instructor	Reading
		Introduction	1	CP	--
		Sustainability	2*	CP	Chap. 1
		Nature of Science, Matter and Energy	3	CP	Chap. 2
		Matter, Energy and Systems	4*	CP	Chap. 2
		Ecosystems	5	CP	Chap. 3
		Cycles / Biodiversity	6	CP	Chaps. 3.4, 4.1, 4.6 + 5.1
		Population Ecology and Human Population	7*	CP	Chaps. 5.3 + 6
		Economics	8	PS	Chap. 23
		Opt. Review (TBA)	-		
		Exam 1 – covering classes 1-8	-		
		Policy, Ethics and Worldview	9	PS	Chaps. 24 + 25
		Aquatic Ecosystems	10*	CP	Chap. 8
		Terrestrial Ecosystems	11	CP	Chap. 7
		Land Management (Sustaining Ecosystems)	12*	CP	Chap. 10
		Aquatic Resource Management	13	CP	Chap. 11
		Water Resources	14	PS	Chap. 13
		Water Pollution	15*	PS	Chap. 20
		Spring Break			
		Water Systems	16	PS	Sect. 20.5
		Food Production and the Environment	17*	CP	Chap. 12
		Opt. Review (TBA)	-		
		Exam 2 – covering classes 9-16	-		
		Non-Renewable Energy	18*	CP	Chap. 15
		Renewable Energy	19	CP	Chap. 16
		Health and Toxicology	20	CP	Chap. 17
		Health and Toxicology II	21*	CP	Chap. 17
		Air Pollution	22	PS	Chap. 18
		Solid and Hazardous Waste I	23	PS	Chap. 21
		Solid and Hazardous Waste II	24	PS	Chap. 21
		Climate	25*	Guest	Chap. 19
		Wrap-Up	26		
		Exam 3 – May 11, 8:00 a.m.; classes 17-26	-		

* This lecture corresponds to one of the 10 homework assignments.