

INTRODUCTION TO ENVIRONMENTAL SCIENCE

11:375:101:xx (index #xxxxx) Fall/Spring
Online

CONTACT INFORMATION:

Instructor: Dr. Craig Phelps

Email: phelps@envsci.rutgers.edu

Office Hours: By Arrangement

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

COURSE WEBSITE, RESOURCES AND MATERIALS:

Website: This class is conducted entirely online. All of the materials that you will need for this course (including the textbook) will be found at MindTap® through the class Canvas website (<http://canvas.rutgers.edu>). Tech support for the MindTap® site is available at: <http://support.cengage.com> or by calling: 1-800-354-9706.

Textbook: Living in the Environment, 20th ed. Miller and Spoolman with access to MindTap®

This course is part of the First Day™ program of the college bookstore. The cost of your textbook and website access is included in your term bill and you will have access to them through Canvas starting on the first day of class. Although you will have an option to opt out of this program, the textbook material is required and the First Day™ program guarantees the lowest cost available for your required materials.

To access your required materials for this course, please click on the “MindTap Access and Textbook” link in Canvas and go directly to the “Open Course” or similar link after setting up your Cengage account. The upgrade or free trial to Cengage Unlimited is not required for this course.

If you have any problems with access or questions about First Day™ contact Bookstore Customer Care at bookstorecustomercare@bncollege.com for assistance.

COURSE DESCRIPTION:

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.

LEARNING GOALS:

SAS Core Curriculum Learning Goals

Contemporary Challenges – Our Common Future [CCO]

Analyze the relationship that science and technology have to a contemporary social issue.

Natural Sciences [NS]

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

ASSIGNMENTS/RESPONSIBILITIES, GRADING & ASSESSMENT: Requirements and Grading:

There are 25 units to complete for this course. All assignments for each unit will be due at 11:59 p.m. on the day that is scheduled for that unit. Each unit consists of:

1. a reading assignment from the text
2. a series of power-point slides
3. a problem set (5 or 10 points)
4. a unit quiz (5 points)

Exams:

There will also be two online exams worth 60 or 65 points each. The exam is not a group assignment; you must do your own work. You may consult your notes, slides and text while taking the test, but you may not consult with anyone else. I am depending on each of you to take the test on your own without help. By submitting the test for grading you are stating that it is your work alone. Academic integrity infractions are taken very seriously at the University. If I believe that you have cheated it will be treated according to policy as stated at

<http://academicintegrity.rutgers.edu/academic-integrity-disciplinary-process>

Class Participation:

There will be a total of 6 threaded discussion questions for you to respond to throughout the semester. Each discussion thread is worth 5 points. You are expected to answer the question(s) fully and thoughtfully to earn 4 points and the 5th point will be given for further contributions (i.e. responding to a classmate's answer). Sources must be cited for any information that does not come from the text.

Grading:

Chapter Quizzes – 5 points each	125 pts.
Problem Sets (25) – 5 or 10 points each	200 pts.
Participation – 5 points / discussion	30 pts
<u>Exams – 60 or 65 points each</u>	<u>125 pts.</u>
Total	480 pts.

Final Grades will be assigned on a straight scale: $\geq 90\%$ = A; $\geq 85\%$ = B+; $\geq 80\%$ = B; $\geq 75\%$ = C+; $\geq 70\%$ = C; $\geq 60\%$ = D.

Late Assignments and Make-Ups:

Because meeting the deadlines and completing assignments on time are important parts of this class, late assignments will not be accepted without an acceptable excuse. You may be allowed to make-up up to 2 units at the instructor's discretion. Any other make-ups (if allowed) will be penalized by 50%. Exam make-ups will only be given for a University-approved absence.

ACCOMODATIONS FOR STUDENTS WITH DISABILITIES

Please follow the procedures outlined at <https://ods.rutgers.edu/students/registration-form>. Full policies and procedures are at <https://ods.rutgers.edu/>
Contact me as soon as possible so that we may make any necessary arrangements to support a successful learning experience.

COURSE SCHEDULE:

Unit #	Open Date	Deadline	Topic	Reading
1			Introduction	--
2			Sustainability	Chap. 1
3			Nature of Science, Matter and Energy	Chap. 2
4			Matter, Energy and Systems	Chap. 2
5			Ecosystems	Chap. 3
6			Cycles / Biodiversity	Sect. 3.4, 4.2-3, 5.1
7			Economics	Chap.23
8			Policy / Worldview	Chap. 24, Sect. 25.1+2
9			Population Ecology and Human Population	Sect. 5.3, Chap. 6
10			Terrestrial Ecosystems	Chap. 7
11			Land Management (Sustaining Ecosystems)	Chap. 10
12			Marine Ecosystems	Sect. 8.1-3, Sect. 11.1-2
Exam 1			Covering units 1-12	
13			Food Production and the Environment	Chap. 12
14			Food Production II	Chap. 12
15			Water Resources	Chap. 13
16			Water Systems	Sect. 20.5
17			Water Pollution	Chap. 20
18			Non-Renewable Energy	Chap. 15
19			Renewable Energy	Chap. 16
20			Health and Toxicology	Chap. 17
21			Health and Toxicology II	Chap. 17
22			Air Pollution	Chap. 18
23			Climate	Chap. 19
24			Solid and Hazardous Waste	Chap. 21
25			Urbanization	Chap. 22
Exam 2			Covering units 13-25	

Discussion Question Due Dates:

#1 – xx	#4 – xx
#2 – xx	#5 – xx
#3 – xx	#6 – xx

ACADEMIC INTEGRITY

The university's policy on Academic Integrity is available at <http://academicintegrity.rutgers.edu/academic-integrity-policy>. The principles of academic integrity require that a student:

- properly acknowledge and cite all use of the ideas, results, or words of others.
- properly acknowledge all contributors to a given piece of work.
- make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of impermissible materials or impermissible collaboration.
- obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions.
- treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress.
- uphold the canons of the ethical or professional code of the profession for which he or she is preparing.

Adherence to these principles is necessary in order to ensure that

- everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments.
- all student work is fairly evaluated and no student has an inappropriate advantage over others.
- the academic and ethical development of all students is fostered.
- the reputation of the University for integrity in its teaching, research, and scholarship is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.

STUDENT WELLNESS SERVICES

Just In Case Web App <http://codu.co/cee05e>

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

Counseling, ADAP & Psychiatric Services (CAPS)

(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901 / www.rhscaps.rutgers.edu/

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

Violence Prevention & Victim Assistance (VPVA)

(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 / www.vpva.rutgers.edu/

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

Disability Services

(848) 445-6800 / Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / <https://ods.rutgers.edu/>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

Scarlet Listeners

(732) 247-5555 / <https://rutgers.campuslabs.com/engage/organization/scarletlisteners>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.