

PLANET IN PERIL: ENVIRONMENTAL SCIENCE IN THE 21st CENTURY

COURSE SYLLABUS

This syllabus reflects the special circumstances and requirements brought about by the Covid-19 crisis. Changes to the syllabus and to the content of the course may be necessary as that situation continues to evolve.

ENST 94101: SPRING 2021
TUESDAY/THURSDAY, 3:30-4:45
WEBEX LOG IN:

<https://rowan.webex.com/meet/federmanr>

INSTRUCTOR/CONTACT INFORMATION

Richard Federman

Lecturer, Department of Geography, Planning & Sustainability

Instructor's Email: federmanr@rowan.edu

Instructor's Cell: 215.876.5891

OFFICE HOURS

Please feel free to email me at any time with questions, or to arrange a private conversation via WebEx.

COURSE OVERVIEW

This course examines the underpinnings and key elements of the environmental field in the early 21st century from a scientific and/or quantitative perspective. Specifically, the course relies on basic principles of biology, chemistry and physics to explore the components of the Earth System as well as the critical environmental issues of our time.

The human-environment interface will also be discussed in an attempt to understand the scientific realities driving such issues as the pollution of our air and water, climate change, and the loss of biodiversity both on land and in the sea.

An emphasis on the local and regional application of the issues and principles discussed will also be part of the course.

COURSE LEARNING OBJECTIVES

Through active participation in this course, including participating fully in class assignments, discussions and activities, students should acquire, develop, and/or build upon the ability ...

1. To understand how basic principles of chemistry and energy apply within an environmental context
2. To become fluent with the underlying principles of ecology
3. To familiarize yourself with the planet's key biogeochemical cycles
4. To learn about the fundamentals of ecotoxicology
5. To appreciate the factors that enhance and limit biodiversity
6. To grasp the major threats to the quality of our air and fresh water
7. To appreciate the scarcity of fresh water, and the reasons to conserve it
8. To become familiar with the various threats to the planet's oceans
9. To realize the role that fossil fuels play in the environmental problems we face today
10. To understand the science behind climate change and global warming

COURSE MATERIALS

There are no materials that need to be purchased by the student for this class. All course materials – including slides, additional readings, study guides and assignments will be provided to you by the instructor.

ONLINE COMPONENT

This course will be supplemented by a class Canvas web page. Lecture materials including the slide shows, study guides and assignments will be posted to the class Canvas site. You are responsible for accessing and utilizing the class materials posted on the Canvas site.

EMAIL

Your official Rowan email is an essential form of communication in this course. You are expected to check your email every day, in case of any announcements or other urgent course information. Email is my preferred form of communication for any course or topic questions, or any issues that arise during the semester. I prioritize student emails and generally aim to respond in less than one business day (<24 hours during the work week, perhaps longer on the weekend or other announced period).

Please feel free to contact me with any queries: federmanr@rowan.edu

COURSE STANDARDS

Students are expected to be attentive and respectful of others in the class.

I do not require but will strongly encourage you to turn your camera on during the WebEx meetings!

Academic integrity is paramount. Academic dishonesty, in any form, will not be tolerated. According to Rowan University policy, students committing any act of academic dishonesty may fail the course, be suspended from the university, or both.

WORKING WITH CLASSMATES

There will be times during the semester when working with one or more classmates is encouraged, such as in preparing for a class debate or during in-class games and activities. There are also situations in which collaborating with a classmate is permissible, within certain guidelines. This includes most importantly the preparation of homework assignments. Below is a list of what you can and cannot do with respect to collaboration on a homework assignment.

Permissible

- a. helping each other research answers to questions
- b. bouncing ideas off one another for thought questions

Not Permissible

- a. handing in one assignment with multiple names on it
- b. submitting answers identical or nearly identical to a classmate, particularly for thought or opinion questions
- c. **copying an electronic file from a classmate**

UNIVERSITY-WIDE POLICIES

Important information regarding Rowan's academic and classroom policies is available on the Provost's web site:

http://www.rowan.edu/provost/policies/conduct_OfficeofTheProvostRowanUniversity.htm

GRADING SCALE

Grades on various course assessments and final grades for the course will adhere to Rowan's standard grading scale which is summarized below:

A (94-100%), A- (90-93%)
B+ (87- 89%), B (83- 86%), B- (80- 82%)
C+ (77- 79%), C (73- 76%), C- (70- 72%)
D+ (67- 69%), D (63- 66%), D- (60- 62%),
F (<60%)

GRADING PROCEDURE – WEIGHTS OF VARIOUS COURSE EXERCISES

| | |
|---------------------|-----|
| Exams (5*) | 45% |
| Discussion Board | 12% |
| Scientific Report | 13% |
| Expert/Presentation | 10% |
| Final Poster | 15% |
| Attendance | 5% |

DESCRIPTION OF VARIOUS COURSE EXERCISES

EXAMS

There will be an exam offered at the end of each of the five units we cover this semester. You will take the exams online, and they will consist of multiple choice questions based on the material outlined in your packet and in the lectures.

Exams may NOT be made up. If you have not taken the exam by that time it closes, I will assume it is your “drop”.

Tentative Exam Dates:

| Exam #1 | Exam #2 | Exam #3 | Exam #4 | Exam #5 |
|---------------------------|-----------------------|------------------------|------------------------|---------|
| February 14 th | March 7 th | March 28 th | April 18 th | TBA |

*** I will drop the lowest of your first four exam grades.**

DISCUSSION BOARD

I will provide you with four (4) videos to watch this semester, and also invite two (2) guest speakers to join our class. Each video and speaker will have a Discussion Board Question associated with it/them on Canvas. You will be expected to submit an answer to each of these six Discussion Board Questions.

SCIENTIFIC REPORT

Each student will work individually or as part of a group to design and carry out quantitative research in order to test an hypothesis relevant to a local environment. The individual or group will prepare a written summary that demonstrates their adherence to the scientific method. Detailed instructions for this project will be posted on Canvas.

The scientific report will be due by Sunday, April 4th.

EXPERT/PRESENTATION

Each of you will be required to reach out to an expert in a particular field of study that touches upon a topic covered in our course this semester. You can define “expert” as you'd like, but this person should be able to add significantly to your knowledge on the subject.

Two class periods will be set aside for each of you to tell the group about what you learned from your expert. I will also ask you to submit on Canvas a brief summary of the contact that you had with your expert.

FINAL POSTER

Each student will choose an issue or topic that pertains to the environmental challenges we face as citizens of planet Earth during the early 21st century, then research the topic with a eye toward addressing this issue and seizing opportunities to bring about positive change.

The primary deliverable for this project will be a poster board worthy of presentation at a regional meeting of a planning board, economic committee, or non-profit. Each student will also prepare a short abstract summarizing their work and conclusions. (The abstract may, but doesn't have to be, part of the poster.)

Please see the file called *Poster Guidelines* that I have placed on our Canvas site for more details on this assignment.

The final poster will be due by Sunday, April 25th.

ATTENDANCE

This portion of your grade will be determined by the percentage of class WebEx meetings that you attend during the semester. Under the current configuration each student will be asked to attend a total of 28 class meetings.

ACADEMIC SUCCESS OUTREACH

Your academic success is very important. If you have a documented disability that may have an impact upon your work in this class, please contact me. Students must provide documentation of their disability to the Academic Success Center in order to receive official University services and accommodations. The Academic Success Center can be reached at 856-256-4234. The Center is located on the 3rd floor of Savitz Hall. The staff is available to answer questions regarding accommodations or assist you in your pursuit of accommodations.

ROWAN UNIVERSITY'S STATEMENT ON DIVERSITY

Rowan University promotes a diverse community that begins with students, faculty, staff and administration who respect each other and value each other's dignity. By identifying and removing barriers and fostering individual potential, Rowan will cultivate a community where all members can learn and grow. The Rowan University community is committed to a safe environment that encourages intellectual, academic, and social interaction and engagement across multiple intersections of identities. At Rowan University, creating and maintaining a caring community that embraces diversity in its broadest sense is among the highest priorities.

Rowan University Sexual Misconduct and Harassment Reporting, and Title IX

Rowan University and its faculty and staff are committed to assuring a safe and productive educational environment for all students. Title IX makes it clear that sexual misconduct and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against protected categories such as race, national origin, etc.

University faculty and staff members are required to report any instances of sexual misconduct or harassment to the University's Title IX Coordinator so that the appropriate resources and support options are provided. What this means is that as your professor, I am required to report any incidents of sexual misconduct and harassment that are directly reported to me, or of which I am made aware.

If you are the victim of sexual misconduct or harassment, Rowan encourages you to reach out to these resources:

Confidential Resources: The Wellness Center, Winans Hall, 856-256-4333, www.rowan.edu/wellness **Non-Confidential Resources:** Office of Student Equity and Compliance (OSEC), Savitz Hall 203, 856-256-5830 Public Safety, Bole Annex, 856-256-4911 Other reporting information is available here: go.rowan.edu/titleix