

# **BIOLOGY, SOCIETY, AND ECOLOGICAL ISSUES**

01:119:160 Spring 2023

Tuesdays and Fridays 10:20 – 11:40am

Allison Road Classroom Building, Room 328, Busch Campus

## **INSTRUCTORS' CONTACT INFORMATION:**

Carrie Ferraro

ferraro@marine.rutgers.edu

Office Hours: Mondays and Wednesdays 1-2pm and by appointment

## **COURSE WEBSITE, RESOURCES AND MATERIALS:**

- Course will be run using Canvas: <http://canvas.rutgers.edu>  
(For tech help with Canvas, please visit <https://it.rutgers.edu/help-support>)
- Handouts and readings will be posted to Canvas

## **COURSE DESCRIPTION:**

This course will focus on examining, systematically and creatively, the relationships between human activities and the environment. Through local field trips on campus, case studies, projects, and discussions, we will explore how biological constructs and current technology can be used to understand and address environmental challenges both in NJ and globally. We will work to uncover the complexities surrounding issues such as climate change, land use modifications, and pollution.



## **SAS CORE LEARNING GOALS:**

Our Common Future [CCO]

Natural Sciences [NS]

## **LEARNING GOALS:**

Participants in this course will also:

- Identify the key biological and/or ecological principles at the root of major environmental problems
- Recognize the role of research and technology in understanding and addressing complex environmental issues
- Develop the skills needed to interpret scientific information and engage in systems-oriented thinking for informed decision-making regarding environmental issues.

## **ASSIGNMENTS/RESPONSIBILITIES & ASSESSMENT:**

Course Requirements:

1. **Assignments (20%).** Complete and turn in assignments on time All assignments will be posted to CANVAS. Please check the course CANVAS site for readings and assignments

2. **Class and Group Participation (20%).** Attend class and participate in class discussions (see discussion rubric on next page)
3. **Final Project (30%).** You will create a photo narrative of a contemporary environmental issue of your choice. Grade for final project will be determined using the rubric provided with the project guidelines
4. **Concept Checks (20%).** Concept checks will be given throughout the semester and will include one or more questions for you to work on during class
5. **Mid-term and Final Exams (30%).** All exams will be administered in person (as long as University policy allows). Make-up/Conflict Exams will be given only under very unusual circumstance. Please contact the professor as soon as possible if such a circumstance arises.

Discussions: As a discussion based course, it is built upon the sharing of ideas. As such, it is very dependent on everyone's active participation and being open to both sharing and respectfully considering others ideas. The rubric on the next page outlines some of the criteria that will be considered when assessing your class participation grade.

Criteria	Outstanding (3)	Proficient (2)	Basic (1)	Below Expectations (0)
<i>Critical Thinking</i>	<ul style="list-style-type: none"> <li>▪ Substantive content</li> <li>▪ Full of thought, insight, and analysis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Substantial information</li> <li>▪ Thought, insight, and analysis has taken place</li> </ul>	<ul style="list-style-type: none"> <li>▪ Generally competent</li> <li>▪ Information is thin and commonplace</li> </ul>	<ul style="list-style-type: none"> <li>▪ Rudimentary and superficial</li> <li>▪ No analysis or insight is displayed</li> </ul>
<i>Connections</i>	Clear connections: <ul style="list-style-type: none"> <li>▪ To previous or current threads</li> <li>▪ To real-life situations</li> </ul>	<ul style="list-style-type: none"> <li>▪ New ideas or connections</li> <li>▪ Lack depth and/or detail</li> </ul>	<ul style="list-style-type: none"> <li>▪ Limited, if any connections</li> <li>▪ Vague generalities</li> </ul>	<ul style="list-style-type: none"> <li>▪ No connections are made</li> <li>▪ Off topic</li> </ul>
<i>Uniqueness</i>	<ul style="list-style-type: none"> <li>▪ New ideas</li> <li>▪ New connections</li> <li>▪ Made with depth and detail</li> </ul>	<ul style="list-style-type: none"> <li>▪ New ideas or connections</li> <li>▪ Lack depth and/or detail</li> </ul>	<ul style="list-style-type: none"> <li>▪ Few, if any new ideas or connections</li> <li>▪ Rehash or summarize other postings</li> </ul>	<ul style="list-style-type: none"> <li>▪ No new ideas</li> <li>▪ "I agree with..." statement</li> </ul>

[Middle Tennessee State University Model](#)

**\*\* Late assignment policy:** Should you need extra time to complete an assignment, please speak with Dr. Ferraro before the assignment is due.

## 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/>

## ABSENCE POLICY

Students are expected to attend all classes; if you expect to miss two or more classes, please use the University absence reporting website <https://sims.rutgers.edu/ssra/> to indicate the date and reason for your absence. An email is automatically sent to me.

## ACADEMIC INTEGRITY

The University's policy on Academic Integrity is available at <http://academicintegrity.rutger.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 other
  - 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/](http://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/](http://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.

## OTHER INFORMATION

It is important that students have the tools to succeed in this course. **Please see the instructor \*as soon as possible\* with any difficulties or questions regarding the course materials.** In addition, student affairs (<http://studentaffairs.rutgers.edu/>) is available for any needs or concerns.

## Tentative Schedule

Class	Date	Topic
<b>I. Context Setting</b>		
1	<b>Tues., Jan. 17th</b>	Introductions and Course Overview
2	<b>Fri., Jan. 20th</b>	The 3 Spheres of Sustainability
3	<b>Tues., Jan. 24th</b>	Measuring our Environmental Footprint & Introduction to Final Project
<b>II. Climate Change and It's Impacts on NJ</b>		
4	<b>Fri., Jan. 27th</b>	What's the Deal with Climate Change?
5	<b>Tues., Jan. 31st</b>	Is NJ Really Warming? – The Search for Evidence in the Trees
6	<b>Fri., Feb. 3rd</b>	<b>Field trip</b> – Rutgers Geology Museum
7	<b>Tues., Feb. 7th</b>	What's the Catch? – Impacts on the Ocean Species
8	<b>Fri., Feb. 10th</b>	<b>Field trip</b> – Rutgers Center for Ocean Observing Leadership
9	<b>Tues., Feb. 14th</b>	Drowning our Marshlands – Impacts at the Boundary of Water and Land
10	<b>Fri., Feb. 17th</b>	Flowers for Valentine's Day – Impacts on Agriculture
11	<b>Tues., Feb. 21st</b>	Is it Hot in Here? – Climate Change and Human Health
12	<b>Fri., Feb. 24th</b>	Achoo – Allergies and Climate Change
13	<b>Tues., Feb. 28th</b>	Science & Technology to the Rescue – Combatting Climate Change
14	<b>Fri., March 3rd</b>	Science & Technology to the Rescue – Combatting Climate Change
15	<b>Tues., March 7th</b>	Science & Technology to the Rescue – Combatting Climate Change
16	<b>Fri., March 10th</b>	Midterm

<b>Class</b>	<b>Date</b>	<b>Topic</b>
March 11 <sup>th</sup> - 19 <sup>th</sup> <b>SPRING BREAK</b>		
<b>III. The Changing Landscape of NJ</b>		
17	<b>Tues., March 21st</b>	<b>Field trip</b> – Library of Science & Medicine
18	<b>Fri., March 24th</b>	Is NJ Really the Garden State? - Trends over time
19	<b>Tues., March 28th</b>	What’s Coming Out of Our Sewers? - Urbanization
20	<b>Fri., March 31st</b>	Algal Blooms – Pretty or Poisonous?
21	<b>Tues., April 4th</b>	On the Banks of the Old Raritan – Biology Changes Over Time
22	<b>Fri., April 7th</b>	<b>Field trip</b> – Water Quality and the Raritan River
23	<b>Tues., April 11th</b>	Environmental Justice – You Want to Put a Factory Where?
24	<b>Fri., April 14th</b>	Developing Rutgers Town, NJ – Developing a Plan
25	<b>Tues., April 18th</b>	Developing Rutgers Town, NJ – Class Town Hall
26	<b>Fri., April 21st</b>	Final Project Presentations
27	<b>Tues., April 25th</b>	Final Project Presentations
28	<b>Fri., April 28th</b>	Final Project Presentations
29	Final Exam as scheduled	