

Environmental Solutions 11:374:220
Spring 2025
Mondays and Thursdays, 12:10-1:30 PM
Ruth M Adams Building 104 - 131 George Street

Dr. Rachael Shwom

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Office Hours : 11 – 12:00 coffee/lunch at IFNH and walk to class on Thursdays or by Appointment



COURSE DESCRIPTION

The causes of modern environmental problems are complex and multi-faceted. As our understanding of this complexity has grown, societies have begun to explore solutions beyond the traditional government regulatory command and control approaches. This class focuses on understanding the multiple causes of environmental problems and the full range of non-traditional regulatory and non-regulatory approaches to improving the environment. These include market based and economic policies, private governance approaches like voluntary certifications and labeling, alternative organizational forms like Benefits Corporations and non-profit models, alternatives to capitalist organization, and household and community based behavioral change programs. By focusing on understanding our model of what is causing the environmental problem, we will be able to target our solutions to change the factors in the model that are driving the negative environmental outcome. This helps students understand under what conditions various environmental solutions are appropriate and should be applied. In addition, students are trained to treat new interventions as “experiments” and to implement evaluations to understand if the solution is working.

LEARNING OBJECTIVES

- Analyze the competing models of social organizations' (households, firms, government) environmentally harmful behavior that emerge from economics, psychology, and sociology
- Describe interventions to alter these decisions and behaviors and improve environmental problems outside traditional command and control regulation via the state.
- Analyze and synthesize information from lectures, case studies, and outside sources, to generate insights on where new solutions can be applied to environmental problems
- Identify plans to evaluate success through writing short memos and presentations

LEARNING GOALS

1.2 Identify different approaches to the governance and management of human activities that affect the environment, both in the US and abroad, including institutions, property relations, management regimes, politics, and policies.

2.6. Identify appropriate governance tools to manage human-environment impacts and engage with regulatory, legislative and other democratic processes.

2.11. Work effectively in team settings

How Will We Learn About Innovative Environmental Solutions?

In this class, we will learn about models of environmental behavior, non-traditional regulatory and non-regulatory approaches to changing those environmental behaviors. We will focus on how to develop, implement, and evaluate non-regulatory approaches to improve the environment. We will do this by reading case studies, written reflections, short lectures and discussions, films, active discussions and exercises in class, and periodic class assignments. You will engage with an end of semester class project to improve your understanding of non-traditional environmental solutions, when they should be used, and how they can be evaluated. This class is a 200-level class and is meant to build on your knowledge of traditional environmental policy approaches and environmental behavior. It will require a reasonable commitment of your time to complete the readings and assignments.

For each class you will read about an environmental solution. Most Mondays by 12 PM you will have an online quiz that you can take as many times as needed to check your understanding and help you focus on the basic information you should be learning. You are expected to read before class and come prepared to discuss the solution. In class, we will explore the models or theories of behavior underlying the intervention and how to evaluate its success. Each **one hour and twenty-minute** class will have a mix of lectures, class discussions, multi-media presentations, and small group, paired and/or independent activities. In class we will gain theoretical and evaluative frameworks for these case studies. Class attendance and participation is very necessary for successful performance.

ASSIGNMENTS/RESPONSIBILITIES, GRADING & ASSESSMENT:

How Will Your Learning Be Evaluated?

Your grade will be based upon several different kinds of assessments of your knowledge of and ability to apply class lessons.

Assignments

ASSIGNMENT	PERCENTAGE
In Class Mid-term and Final (taken online in person in class; one page of notes allowed) – 15 points each	30%
14 2 point in class assignments; 3 lowest dropped	22%
12 Online Learning Monday Night Quizzes; can retake quizzes	12%
Rutgers Sustainability Solution Proposal – In and Out of Class Group and Independent Work	16%
Solutions Journalism Paper	20%

See canvas modules and assignments for more details.

ABSENCE POLICY

Students are expected to attend all classes; if you expect to miss one or two 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.

Excusable Absences:

Religious holidays

Students can be excused for religious holidays if they provide advance notice.

Documented illness

Students can be excused for illness if they provide a doctor's note. The note should include the student's name, diagnosis, and the dates of treatment, recuperation, or recovery.

University-sponsored events

Students can be excused for participating in university-sponsored events, such as intercollegiate athletics.

Documented chronic illness

Students can be excused for documented chronic illness.

If only a short-term excused absence you may send directly to me. If longer term, across multiple classes, or of a sensitive nature you may reach out to the deans office <https://studentsupport.rutgers.edu/requesting-assistance>

LATE AND MISSING WORK POLICY

As we have recovered from the COVID epidemic, we are returning to the expectation that you will attend and participate in regular classes. Excusable absences (documented above) provide automatic rescheduling of assignments. If your absence does not fall under excusable then the assignment is NOT automatically rescheduled

- In class assignments are meant to be done in class and cannot be submitted if you miss class without an excused absence (the lowest 3 will be dropped automatically to allow for missing classes that are not officially excused).
- Other assignments will remain open for submission until the end of semester and can be submitted late for reduced points. If you need an extension on an assignment and ask ahead of time by email, you may pass it late with no reduced points. This only happens if you actively manage and ask for extra time – if you just pass in an assignment late without ever asking for an extension you will lose points.

ACCOMODATIONS FOR STUDENTS WITH DISABILITIES

Please follow the procedures outlined at <https://ods.rutgers.edu/students/getting-registered>. Full policies and procedures are at <https://ods.rutgers.edu/>

FINAL EXAM/PAPER DATE AND TIME

The final exam is April 3rd in class and will cover all previous readings.

The final class project is due May 5th.

Your Solutions Journalism Paper is due May 12th.

ACADEMIC INTEGRITY

The university's policy on Academic Integrity is available at

<https://academicintegrity.rutgers.edu/sites/default/files/pdfs/current.pdf>. 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.

AI POLICY

Writing is integral to thinking and therefore learning. It is also hard. Natural language processing (NLP) applications like chatgpt or sudowrite are useful tools for helping us improve our writing and stimulate our thinking. However, they should never serve as a substitute for either. And, in this course, they cannot.

Think of the help you get from NLP apps as a much less sophisticated version of the assistance you can receive (for free!) From a Rutgers writing center tutor or meeting with your professor. That person might legitimately ask you a question to jump-start your imagination, steer you away from the passive voice, or identify a poorly organized paragraph, but should never do the writing for you. A major difference here, of course, is that an NLP app is not a person. It's a machine which is adept at recognizing patterns and reflecting those patterns back at us. It cannot think for itself. And it cannot think for you.

With that analogy in mind, you will need to adhere to the following guidelines in our class.

Appropriate use of AI when writing essays or group projects:

You are free to use spell check, grammar check, and synonym identification tools (e.G., Grammarly, and MS word).

You are free to use it to help you or your groups brainstorm ideas.

You are free to use app recommendations when it comes to rephrasing sentences or reorganizing paragraphs you have drafted yourself.

You are free to use app recommendations when it comes to tweaking outlines you have drafted yourself.

Inappropriate use of AI when writing for this class:

You may not use entire sentences or paragraphs suggested by an app without providing quotation marks and a citation, just as you would to any other source. Citations should take this form: openai, chatgpt. Response to prompt: “explain what is meant by the term ‘triple bottom line’” (february 15, 2023, <https://chat.Openai.Com/>).

You may not have an app write a draft (either rough or final) of an assignment for you.

Evidence of inappropriate AI use will be grounds for submission of an academic integrity report. Sanctions will range from a zero for the assignment to an F for the course.

(Adapted from Chris Beneke AI Policy ; https://docs.google.com/document/d/1RMVwzjc1o0Mi8Blw_-JUTcXv02b2WRH86vw7mi16W3U/preview?tab=t.0#heading=h.1cykjn2vg2wx)

SEBS DEI STATEMENT

It is our intention that students of all backgrounds will be well served by this course. We will work to create an environment of inclusion which respects and affirms the inherent dignity, value, and uniqueness of all individuals, communities and perspectives. We are lucky to have a diverse university. Diverse voices and life experiences enhance the learning process and we welcome students to share their personal experiences. We will not tolerate disrespectful language or behavior against any individual or group. If you feel as though you have been disrespected or treated unfairly by the instructors or any other individual please let us know. You may speak with the instructors in person, over email or report anonymously via the Office of Academic Programs. In addition, you may also report bias to the Rutgers Diversity and Inclusion initiative using this link: <http://inclusion.rutgers.edu/report-bias-incident/>.

STUDENT WELLNESS SERVICES

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 professionals 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 / <https://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 Accommodation. 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://webapps.rutgers.edu/student-ods/forms/registration>.

DoSomething button through Rutgers Dean of Students office:

<http://health.rutgers.edu/do-something-to-help/>

Wellness Coaching through Rutgers HOPE:

<https://health.rutgers.edu/health-education-and-promotion/health-promotion-peer-education/wellness-coaching>

Self-Help Apps found on the Rutgers Student Health website:

<https://health.rutgers.edu/health-education-and-promotion/self-help/self-help-apps>

NJ Hopeline - (1-855-654-6735) | **National Suicide Hotline** - (1-800-273-8255)

BASIC NEEDS RESOURCES

Any student who has difficulty affording groceries or accessing sufficient food, or who lacks a safe and stable place to live, is urged to contact the Rutgers Student Food Pantry and/or the Dean of Students (details below). Furthermore, please notify the professor if you are comfortable doing so, as they may be able to provide additional support.

Rutgers Student Food Pantry

848-932-5500 / College Ave Student Center, Room 115 (126 College Ave) /
<http://ruoffcampus.rutgers.edu/food/>

Check their website for hours and additional locations. The Rutgers Student Food Pantry is dedicated to helping all Rutgers students in need of food, no questions asked. Students will be provided with groceries that typically last about one week.

Dean of Students Office

848-932-2300 / 88 College Avenue, New Brunswick, NJ 08901 / <https://deanofstudents.rutgers.edu/>
Mon-Fri, 8:30am-5:00pm

The Dean of Students Office at Rutgers University-New Brunswick provides solutions, services, and support to help students navigate Rutgers University. The Office serves as a student support network by providing advocacy, problem resolution, and critical incident intervention for those times when additional assistance is needed. Please call to schedule an appointment to meet with a representative from the Dean's office.

DATE	GOAL OF CLASS	PREPARATION FOR CLASS: DUE THIS DAY
SECTION 1	EVOLUTION, ASSESSMENT, AND EVALUATION OF INNOVATIVE ENVIRONMENTAL SOLUTIONS	
Thursday, January 23, 2025	Meet each other Review goals of class Review structure and assignments	Read Syllabus
Monday, January 27, 2025	A History of Environmental Regulation and why we need innovative environmental solutions	Read: Environmental regulations: Lessons from the command-and-control approach Online Quiz 1 Due by 12 PM 1/27/2025
Thursday, January 30, 2025	Selecting Solutions In class: practicing screening solutions exercise	Read: Improving Climate Change Mitigation Analysis: A Framework for Examining Feasibility
Monday, February 3, 2025	Evaluating Solutions In class: evaluating solutions exercise	Read: Does Your Project Make a Difference? Online Quiz 2 Due by 12 PM 2/3/2025
Thursday, February 6, 2025	Solutions Journalism In class: Discussion of what makes a compelling solutions story	Read: Solutions Journalism Assignment: Read assigned example to read and summarize before that you will then discuss and present in class with group
SECTION 2	ECONOMIC POLICY REFORMS UNDER CAPITALISM TO ADDRESS ENVIRONMENTAL PROBLEMS	
Monday, February 10, 2025	Market-based Solutions: Taxes/Cap and Trade CASE: Clean Air Act; Nitrogen Trading in the Chesapeake	Read: Meat Tax is Probable - Here is how it would Work Online Quiz 3 Due by 12 PM 2/10/2025
Thursday, February 13, 2025	Market-based Solutions: Certification and Labeling CASE: Fair Trade Coffee (Brewing Justice) In class assignment: Pros and cons of labeling	Read: The Murky world of Green Marketing Homework : find a certification and answer questions about transparency
Monday, February 17, 2025	Market-based Solutions:	Read: Market Transformation of Washing Machines

	Market Transformation for Technologies CASE: Vending Machines and Washing Machines	Online Quiz 4 due 12 PM 2/17/2025
Thursday, February 20, 2025	Economic Policy Solutions: Steady State Economic Policy	Read:
Monday, February 24, 2025	MIDTERM	
SECTION 3	ORGANIZATIONAL AND INSTITUTIONAL REFORMS UNDER CAPITALISM TO SOLVE ENVIRONMENTAL PROBLEMS	
Thursday, February 27, 2025	Organizational-based Solutions: Stakeholder Accounting CASE: The Body Shop	Read: The Body Shop Values Report – Towards Integrated Stakeholder Auditing Online Quiz 5 due 12 PM 2/24/2025
Monday, March 3, 2025	Field-based Solutions: Changing Practices Guest Lecture by Peggy Policastro Director-Rutgers Dining, Nutrition Services and Alexandra Ceribelli Manager Retail Operations for Harvest IFNH CASE: Menus of Change	Read: Food Choice and Waste in University Dining Commons Online Quiz 6 due 12 PM 3/3/2025
Thursday, March 6, 2025	Organizational-based Solutions: Informal Rule Change In class assignment: How would you design a workplace game? CASE: Wisconsin Cool Choices Program	CASE: Wisconsin Cool Choices Program
Monday, March 10, 2025	Alternative Organizational Forms: Non-Profits Vanessa Thomas – Guest speaker - Ironbound Community Corporation	Watch: Bending the Arc https://www.pih.org/bending-the-arc Online Quiz 7 due 3/10/2025
Thursday, March 13, 2025	Community Based Solutions: Community Based Social Marketing	Read: Quick Reference on Community Based Social Marketing Assignment: Find CBSM case and describe and upload to be prepared to discuss in class on Monday Online Quiz 8 due 3/13/2025
Monday, March 17, 2025	SPRING BREAK	
Thursday, March 20, 2025	SPRING BREAK	
Monday, March 24, 2025	New Organizational Forms: Social Benefits Corporations	Watch: youtube video about the legal Benefits Corporation and the B-Corps Certification

SECTION 4	ALTERNATIVES TO CAPITALISM	
Thursday, March 27, 2025	Alternatives to Capitalism: Cooperatives and Employee Owned Businesses Visit to George Street Coop (tentative) CASES: George Street Co-op	Read : Co-ops 101 Online Quiz 9 due 12 PM 3/31/2025
	Alternatives to Capitalism: Sharing economy / collaborative consumption CASE: Tool Libraries	Read: The page USDN Sustainable Consumption Library Online Draft of Solutions Article Due
Monday, March 31, 2025	Alternatives to Capitalism: New economic structures CASES: Time banks	Read: Introduction to time banks and time credit networks Online Quiz 10 due 12 PM 10 4/7/2025
Thursday, April 3, 2025	FINAL EXAM	
Monday, April 7, 2025	Funding your project: Foundation and Government Grants, Small Business Loans and Investors	Read: What foundations fund ?
Thursday, April 10, 2025	Class Project Day 1: Generating and discussion Ideas for Improving Rutgers Sustainability	Homework Assignment due: Submit your suggestions for sustainability proposal to Rutgers
Monday, April 14, 2025	Class Project Day 2: Selecting Solution for Improving Rutgers Sustainability; Creating Group Workplans for Rutgers Sustainability Project with Individual Responsibilities and Deliverables	Fill in assessment Criteria
Thursday, April 17, 2025	Democratizing Institutions: Participatory Mapping and Planning	Read: Participatory Mapping Guest Lecture: Participatory mapping Invite Dave Tulloch?
Monday, April 21, 2025	Class Project Day 3: Assessing Equity in your proposal	Submit your assignment due according to your group work plan
Thursday, April 24, 2025	Democratizing Institutions: Increasing Public Engagement in Environmental Decision-Making	Read: Public Participation Guide Invited Shereen Kandil - US EPA NY Regional Public Affairs Specialist
Monday, April 28, 2025	Class Project Day 4: Executing Workplans	Submit your assignment due according to your group work plan
Thursday, May 1, 2025	Class Presentations Proposals Day Voting on funding project	Rutgers Sustainability Project Funding Proposal

Monday, May 5, 2025	SOLUTIONS PAPER DRAFT PEER REVIEW	
Monday May 12, 2025	FINAL VERSION OF SOLUTIONS PAPER	