

## **Environmental Solutions 11:374:220**

Dr. Rachael Shwom

[shwomrac@sebs.rutgers.edu](mailto:shwomrac@sebs.rutgers.edu) / 848-932-9235

Office hours available by appointment. In office most Mondays and Thursdays after class.

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 approaches. This class focuses on understanding the complex causes of environmental problems and the full range of non-traditional regulatory and non-regulatory approaches to improving the environment. By focusing on understanding the causes and contexts of environmental problems along with innovative environmental solutions, the class aims to provide students an understanding of under what conditions various environmental solutions are appropriate and should be applied.

By the end of this class you will be able to:

- 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 policy-making and regulation via the state.
- Analyze and synthesize information from lectures, case studies, outside sources, to generate insights on which solution/approach is appropriate for which kind of problem/context and identify ways to evaluate success through writing short memos and presentations

The goals of the Environmental Policy Institutions and Behavior major served by this class are:

- 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 be capable of engaging 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, participatory lectures, films, active discussions and exercises in class, periodic class assignments. You will engage with a semester long 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 innovative environmental solutions and in class we will fill out a worksheet together that helps us analyze the approach. These worksheets will be part of your in-class participation grade in addition to other activities. You are expected to read before class and come prepared to discuss the solution. You will have 3 point online reading quizzes about once a week before class. In class we will explore the models or theories of behavior underlying the intervention and how to evaluate the successfulness of the intervention. In each one hour and twenty minute class we will have lectures, class discussions and debates, multi-media presentations, small group and 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.

### ***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**

5 15 minute 8 question In class multiple choice quizzes (open note)	40
In class learning activities (1-3 points across semester, drop lowest 3)	20
Group project on Rutgers climate action plan (2 points group member responsibilities and meeting timeline plan, 3 points outline proposal, 10 points full analysis, 5 points presentation)	20
Solutions Journalism article (2 points paper proposal and outline, 8 points draft, 10 points final)	20

See canvas modules and assignments for more details.

### **Flexible Late Policy**

All assignments will be left open until May 5<sup>th</sup>. May 5th is a hard stop for submitting assignments unless you are going to take a temporary grade and finish after the class is done.

- If you **contact me before the deadline to request an extension** via the assignment on canvas, then you can submit the assignment without penalty. This request should be submitted via canvas and I will note it on the canvas electronic assignment itself. If you do NOT request an extension you may pass in work late with penalty of 1 point per day. It should be noted that for group work – if your group needs more time it should be discussed and requested together with all group members on an email. For both paper assignments, each step builds on each other and you are given feedback and so it is useful to work generally on time to allow for feedback and corrections.

### **The Rules**

<http://academicintegrity.rutgers.edu/integrity.shtml>

No plagiarism. This means using ideas directly (cut and paste) or indirectly (summarizing) without citing where they came from is not allowed.

No cheating.

### **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.

### **COURSE SCHEDULE:**

See attached

### **FINAL EXAM/PAPER DATE AND TIME**

There is no final exam.

A 5<sup>th</sup> non-cumulative quiz will be given on the last day of class May 1st.

Final group paper due April 24<sup>th</sup>.

Final individual paper (solutions article) due May 8<sup>th</sup>.

### **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.

### **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. 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>.

**DoSomething** button through Rutgers Dean of Students office:  
<http://health.rutgers.edu/do-something-to-help/>

**Wellness Coaching** through Rutgers HOPE:  
<http://health.rutgers.edu/education/hope/wellness-coaching/>

**Self-Help Apps** found on the Rutgers Student Health website:  
<http://health.rutgers.edu/education/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 / <http://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.

See daily modules for Topics and readings in canvas.

	Readings and Assignments Due Before Class this day	Goals for Class
Class 1	Syllabus	Class Overview of what we'll learn and how
Class 2	Singhal, Puja. Environmental regulations: Lessons from the command-and-control approach. No. 124. DIW Roundup: Politik im Fokus, 2018.	What are Innovative Environmental Solutions and Why Are they of Interest?
Cross-Cutting Themes		
Class 3	<p>Your Undivided Attention. "The Power of Solutions Journalism" <a href="https://your-undivided-attention.simplecast.com/episodes/the-power-of-solutions-journalism-wfe_jVC">https://your-undivided-attention.simplecast.com/episodes/the-power-of-solutions-journalism-wfe_jVC</a></p> <p>Curry, Alexander L., and Keith H. Hammonds. "The power of solutions journalism." Solutions Journalism Network 7 (2014): 1-14.</p>	<p>Introduction to Solutions Journalism/Individual Assignment and Group Assignment</p> <p>Guest Speaker Dr. Angie Oberg</p>
Class 4	<p>Stern, P. C., Dietz, T., Nielsen, K. S., Peng, W., &amp; Vandenberg, M. P. (2022). Feasible climate mitigation. Nature Climate Change, 1-3.</p> <p>Stern, Paul C., Thomas Dietz, and Michael P. Vandenberg. "The science of mitigation: Closing the gap between potential and actual reduction of environmental threats." Energy Research &amp; Social Science 91 (2022): 102735.</p>	<p>Introduction to Solutions Selection and Group Assignment: How do we select Solutions?</p> <p>First Group Meeting Planning</p>
Class 5	McNamara, C. (2008). <i>Basic guide to program evaluation</i> . Free Management Library.	<p>Introduction to Solutions Evaluation and Group Assignment: How do we know if a Solution is Working?</p> <p>Second Group Meeting Planning</p>
Market-Based Policy Solutions		
Class 6	<p>Green, Jessica F. "Does carbon pricing reduce emissions? A review of ex-post analyses." Environmental Research Letters 16.4 (2021): 043004.</p> <p>"A Political History of Cap and Trade" <i>Smithsonian Magazine</i>.</p>	<p>Quiz #1</p> <p>Taxes and Cap and Trade</p>

Class 7	<p>“An emerging push for time-of-use rates sparks new debates about customer and grid impacts”</p> <p>“Utility regulators eye new tools to ensure equity efforts don’t impinge on other policy goals”</p>	<p>Time of use pricing</p> <p>Work Plan from Group due</p>
<b>Voluntary Policy Initiatives</b>		
Class 8	<p>Vandenbergh, Michael P. "Private environmental governance." <i>Cornell L. Rev.</i> 99 (2013): 129.</p> <p>Borck, Jonathan C., and Cary Coglianese. "Voluntary environmental programs: assessing their effectiveness." <i>Annual Review of Environment and Resources</i> 34 (2009): 305-324.</p>	Certification/Standards/Labeling
Class 9	What is a B-Corporation and Why would a company want to be one? By Anne Field	B-Corporations
<b>Behavioral Solutions</b>		
Class 10	<p>Guide to Community Based Social Marketing</p> <p>McKenzie-Mohr, Doug. "Fostering sustainable behavior through community-based social marketing." <i>American psychologist</i> 55.5 (2000): 531.</p>	<p>Quiz #2</p> <p>Community Based Social Marketing</p>
Class 11	<p>Cialdini, Robert B. "Crafting normative messages to protect the environment." <i>Current directions in psychological science</i> 12.4 (2003): 105-109.</p>	Information
Class 12	<p>“How a game can move people from climate apathy to action” Rooney Varga, Juliette. <i>The Conversation</i>.</p>	<p>Serious Games</p> <p>Group work Rutgers Climate Action Solution Proposal due</p>
<b>Technology Policy</b>		
Class 13	<p>York, D., S. Nadel, and S. Subramanian. 2022. <i>U.S. and International Experience with Market Transformation</i>. Washington, DC: American Council for an Energy-Efficient Economy.</p>	Market Transformation
Class 14	<p>CAN GLOBAL INNOVATION COMPETITIONS HELP UNEARTH THE NEXT SUSTAINABILITY SOLUTION?</p> <p><a href="https://ensia.com/features/sustainability-solutions-innovation-competitions/">https://ensia.com/features/sustainability-solutions-innovation-competitions/</a></p>	Innovation Contests

Class 15	No reading	Quiz #3 Group Work Day
Class 16	SPRING BREAK	SPRING BREAK
Class 17	SPRING BREAK	SPRING BREAK
<b>Alternative Economic Systems &amp; Pathways to Change</b>		
Class 18	Czech, Brian, and Herman E. Daly. "In my opinion: The steady state economy—what it is, entails, and connotes." <i>Wildlife Society Bulletin</i> 32, no. 2 (2004): 598-605.	Solutions Journalism Article Proposal for feedback (or Thursday) Steady State Economy
Class 19	Kawano, Emily, and Julie Matthaei. "System Change: A Basic Primer to the Solidarity Economy." <i>Nonprofit Quarterly</i> 1 (2020).	Solidarity Economy Solutions Journalism Article Proposal for feedback
Class 20	Plewnia, Frederik, and Edeltraud Guenther. "Mapping the sharing economy for sustainability research." <i>Management Decision</i> 56, no. 3 (2018): 570-583. Schor, Juliet. <i>After the gig: How the sharing economy got hijacked and how to win it back</i> . Univ of California Press, 2021.	Sharing Economy
Class 21	Schweickart, David. "Economic Democracy: Ethical, Economically Viable Socialism." <i>The New Systems Reader</i> . Routledge, 2020. 195-201.	Democratizing the Economy
Class 22	Meadows, Donella. "Leverage points." <i>Places to Intervene in a System</i> 19 (1999).	Quiz #4 ONLINE from home Recorded lecture
Class 23	Chapters 20, 24, and 25 in Speth, James Gustave, and Kathleen Courrier, eds. <i>The new systems reader: alternatives to a failed economy</i> . Routledge, 2020.	System Change
Class 24	Mechanisms of Social Tipping Points by Rachael Shwom	Social/Institutional Change
Class 25	Shrivastava, Paul, and Stuart Hart. "Greening organizations." <i>Academy of Management Proceedings</i> . Vol. 1992. No. 1. Briarcliff Manor, NY 10510: Academy of Management, 1992.	Organizational Change
Class 26	Group Work Day	Group Work Day
Class 27	Draft Peer Editing Day	Solutions Article Draft Peer Editing Day
Class 28	Presentations	Final Group paper due.  Group Presentations 1,2,3 with evaluations
Class 29	Presentations	Group Presentations 4,5,6 with evaluations



Class 30	Crowdsourcing and ranking climate solutions from group work	Last Day of Class Climate Action Selection Quiz # 5
Monday May 8, 2023	Final Individual Solutions Article Due	