Energy and Society
11:374:175
SEMESTER YEAR
Time; Location

Dr. Rachael Shwom  shwomrac@sebs.rutgers.edu
OFFICE HOURS

Our lives, homes, workplaces, and whole societies are highly dependent upon a constant flow of energy — we can barely imagine an hour without the use of electricity, natural gas, or gasoline. The amount of energy we use and how it is produced have major impacts on the health of our environment, our economy, and local, national, and international politics. The problems, such as climate change, posed by our current human-energy system highlight the need for us to find new ways of living. But how do we change our energy system and what should we change it to? To begin to answer this question, we must realize the extent to which our lives are integrated with energy production and consumption. Only then can we realize that changing our energy system is not just an engineering or physics problem, but also a social problem that requires societal changes.

LEARNING GOALS

- Identify and describe how societies’ historical relationships with energy have shaped the development of nations, economies, and environments across space and time.
- Analyze the current U.S. and global energy production and consumption systems and their environmental, economic, political and social impacts at various scales. (Areas of inquiry: Social and Historical Analysis – Understand the bases and development of human and societal endeavors across time and place).
- Apply the different models of decision-making that explain why individual, household, business organizations, and governments make the decisions they do about energy consumption and production.
- Evaluating the appropriate analytical tools and approaches for analyzing energy technologies and changing individual, household, business, and governmental decisions about energy production and consumption (21st Century Challenges – b - Analyze a contemporary global issue from a multidisciplinary perspective).
**How Will We Learn About Energy & Society?**

In this class, we will learn about the relationships between energy and society by engaging with readings, lecture materials, films, active online discussions, periodic class assignments and a mini-research project to improve your understanding of our current human-energy system and how we can change it. This class is a 100 level class and is meant to be an accessible introduction to human-energy systems. However, it will require a reasonable commitment of your time to complete the readings and assignments thoroughly. You should expect doing 3 hours of work for 1 credit hour and so 9-10 hours of work per week. Some weeks’ readings will be easier than others. Live lecture accompanied by recorded lectures and video clips will follow up and reinforce these key concepts and skills by introducing different examples and case studies. All required readings and materials will be posted at https://canvas.rutgers.edu/portal. There is no book to purchase.

In the first half of the class, we will learn about the current human-energy system and the individual, household, organizational, and institutional decisions that constitute the human-energy system. We’ll learn about the competing theories to explain why we make the energy decisions we do and the extensive impacts of those decisions. In the second half of the class, we will learn and apply the tools needed for analyzing and changing our human-energy system at multiple levels. The ultimate objective of these sections is for you to be able to demonstrate a competent well-developed understanding of our current human-energy system, its impacts through quizzes, discussion boards, and conducting a decision analysis.

**How Will You Be Evaluated?**

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<tr>
<th>Assignments</th>
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<tr>
<td>Weekly activities/ quizzes</td>
<td>40%</td>
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<tr>
<td>Mid-term Exam</td>
<td>15%</td>
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<tr>
<td>Energy and Society Topic Video</td>
<td>30%</td>
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<tr>
<td>Final Exam</td>
<td>15%</td>
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Your grade will be based upon several different kinds of assessments of your knowledge of and ability to apply class lessons.

In-class exercises and quizzes (40%): There will be weekly exercises such as data analysis activities and comprehension quizzes on readings and lecture. They will be posted in canvas under assignments and will be due by the end of each week that they are assigned for.

Mid-term and Final Exams (30%; 15% each): There will be a mid-term and final exam for this class – each worth 15% of your grade. The exams will be open materials and timed. They will be non-cumulative.

Energy and Society Video Final Project (30%): For your final project you will be asked to identify an energy and society topic of interest to you. You will then be asked to make a 7-8 minute explainer video that includes your own designed data infographic on that energy and society topic.

**Rules**

To contact professor with questions or issues, please use email with “Energy and Society” in subject. Please use your Rutgers email address or it may not make it through the Spam filter. Expect that there may be a 24 hour turn-around on emails during working days but not holidays or weekends. If you do not receive a response to
your email after 24-48 hours, please resend – despite our best efforts, email does not always work perfectly and your professor might lose track.

**Late work:** In this class we encourage you to be proactive and act like an adult if you can’t meet a deadline. If you notify the professor ahead of a due date, I will work with you to help you set an appropriate deadline and extension. However, if you miss an assignment without talking with me you will lose a half point for each calendar day it is late unless qualified under Rutgers qualified absence (religious observance; death in the family; illness).

**Contesting a Grade:** If you contest a grade you must email Dr. Shwom. Provide the argument and cite any readings/lecture materials that support your argument. Dr. Shwom will consider your argument and notify you if you get credit or not.

**Accommodations for disabilities:** 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](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](https://ods.rutgers.edu/students/registration-form)

**ACADEMIC INTEGRITY**

The university’s policy on Academic Integrity is available at [http://academicintegrity.rutgers.edu/academic-integrity-policy](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.

This class values diversity equity and inclusion and will insist upon:

• Respect for classmates and their identities
  - Diversity of students’ experiences and ideas
  - The historical context and possible biases of the subject area

If you encounter issues where DEI has not been attained please contact the Office of Academic Programs and/or 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 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.

**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:


**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.
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<thead>
<tr>
<th>DATE</th>
<th>READINGS AHEAD OF TIME</th>
<th>CLASS OBJECTIVES</th>
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<tbody>
<tr>
<td><strong>INTRODUCTION TO CLASS AND BASIC CONCEPTS</strong></td>
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<tr>
<td>Day 1</td>
<td>1) The syllabus with Dr. Shwom’s class and life advice</td>
<td>Who are we? What will we learn? And how will we learn it?!!</td>
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<td><strong>PAST, PRESENT, AND FUTURE OF COAL</strong></td>
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<td>Day 6</td>
<td>2) “African countries plan to build dozens of coal-fired power stations“ The Economist. July 25, 2019 China article</td>
<td>What is the future of coal around the world?</td>
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<td><strong>PAST, PRESENT AND FUTURE OF OIL</strong></td>
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Past and Present: How does oil influence the political development of nations? |
Frontline’s *Nuclear Aftershocks*: What are the impacts of Fukushima? |
2a) How Conservative Texas Took The Lead in U.S. Wind Power by Roger Drouin. | What are the technical and political potentials for renewables?  
What are the political factors of solar policies? |
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<td><strong>GETTING TO DESIRABLE ENERGY FUTURES</strong></td>
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<td>Day 18</td>
<td>Practicing decision analysis and ICA</td>
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