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 has 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 highlights the need for us to find new ways of living. But how do we change our energy system? To begin to answer this question, we must realize the extent that 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.

In this class you will learn:

- How societies’ historical relationships with energy have shaped the development of nations, economies, and environments.
- The current U.S. and global energy production and consumption systems and the environmental, economic, political, and social impacts.
- Why individuals, households, business organizations, and governments make the decisions they do about energy consumption and production.
- Policy tools and approaches for analyzing energy choices and changing individual, household, business, and governmental decisions about energy production and consumption.

Unit One: Understanding why businesses, governments, and people make the energy choices they make

Unit Two: Understanding the far-reaching consequences of these energy choices

Unit Three: Tools for Analyzing Energy Choices

Unit Four: Tools for Changing Energy Choices
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 discussions, periodic class assignments and a semester long experimental 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. Some weeks readings will be easier than others – use the reading guides supplied to make sure you are understanding the key concepts. Lectures and recitations will follow-up and reinforce these key concepts by introducing different examples and case studies. All required readings will be posted at https://sakai.rutgers.edu/portal.

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, and energy decision-making on 2 quizzes, a mid-term, and final exam. An additional objective is for you to be able to apply this understanding to be able to write a quantitative and qualitative assessment of your own role in the energy system through the completion of an energy diary.

How Will You Be Evaluated?

<table>
<thead>
<tr>
<th>Assignments</th>
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<tbody>
<tr>
<td>2 Quizzes</td>
<td>15%</td>
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<tr>
<td>Mid-term Exam</td>
<td>20%</td>
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<tr>
<td>Recitation</td>
<td>20%</td>
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<tr>
<td>Energy Diary</td>
<td>20%</td>
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<tr>
<td>Final Exam</td>
<td>25%</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.

Two Quizzes (10%): You will have a quiz on in your recitation. These quizzes will each be 2 multiple choice and 3 short answer (1 point each question). They are mainly meant to help you study as we go along, help you assess how well you are learning the material, and prepare you for the kinds of questions that will be on the mid-term and final.

Mid-Term Exam (20%): You will have a mid-term exam on October 15th in class that will cover classes through October 12th. Questions will be 10 multiple choice (1 point each) and 5 short answers (2 points each). Your mid-term exam will cover all topics/questions identified in your reading and lecture guides posted on sakai for each class. The answers to these guides are found in readings, lectures, and films from class.

Final Exam (25%): You will have a final exam on December 22nd 8:00-10:00 am that will cover class material from 10/19 – 12/10. Questions will be 15 multiple choice (1 point each) and 5 short answers (2 points each). Your final exam will cover all topics/questions identified in your reading and lecture guides posted on sakai for each class. The answers to these guides are found in readings, lectures, and films from class.
Recitation (20%): Recitation is a great chance to discuss what you have read and learned in lecture in a small class and this is where lots of students do their learning. To receive credit for recitation students **MAY NOT MISS MORE THAN THREE RECITATIONS** (no excuses please – that is why we give you three). More than three absences during the semester will result in losing 10 points from your recitation grade (effectively lowering your class one whole grade). Class assignments identified on the syllabus that contribute to your grade include:

- Due Friday October 8th in class: Early in the semester, the class will submit questions they have on energy and society and we will select one to discuss. You will be responsible for finding and posting on sakai a newspaper, journal, or magazine article that answers the selected question in some way. A paragraph explaining how the article you submitted answered the class’s question is due in recitation.
- Other recitation activities and assignments made at your TAs discretion.

Energy Diary (25%): Each student will be responsible for making 5 two-page entries in an “energy diary.” The first entry will chronicle your energy use for two hours. You should identify your activities for two hours in a day and analyze the amount and source of energy used. For the next four entries you will choose an energy-saving activity from the list provided and undertake it in your life. You will conduct a short analysis of the energy saved from you undertaking that activity. You will also reflect on the activity answering the following questions: 1) Why did you choose that activity? 2) What made it an easy activity? 3) What made it a hard activity? 4) What do you think could be done to encourage people to undertake that activity more often? The purpose of the energy diary is for you to learn by doing in your own life and be able to apply your analytic skills to figuring out how much energy can be saved and how these activities fit into the social world. See additional paper for list of activities and further instructions for the energy diary.

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<th>The Rules</th>
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<td><a href="http://academicintegrity.rutgers.edu/integrity.shtml">http://academicintegrity.rutgers.edu/integrity.shtml</a></td>
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<tr>
<td>1. No plagiarism.</td>
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<td>2. No cheating.</td>
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<tr>
<td>3. LATE ASSIGNMENTS WILL LOSE HALF A GRADE FOR EACH CALENDAR DAY LATE. If your paper is a 3.0 then it will be marked as a 2.5 for a day late, a 2.0 for 2 days late. <strong>If you must miss a deadline due to illness or emergency, notify all of us via email on or before the due date.</strong></td>
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<td>4. THERE IS NO EXTRA CREDIT. There will be not additional assignments or revised work for re Grading. Instead, be prepared for tests and quizzes and we are happy to review drafts of your work and answer questions before it is due.</td>
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<td>5. IF YOU CONTEST A GRADE, you must do it in writing to the grader. Write your argument presenting evidence supporting a grade change and attach your original work with our grading on it.</td>
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<td>09/21 Tues.</td>
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**10/08 Fri.**  

**ASSIGNMENT DUE**  
Bring an article (from a newspaper, academic journal, or magazine) that provides some perspective on the question chosen by the class. Write a paragraph on how your article answers the question posed by the class and pass it in in lecture.

**Understanding Our Energy Choices:** Why do investments in energy efficiency often lead to increases in energy use?

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**10/12 Tues.**  
Two articles chosen from your suggestions will be posted on sakai on 10/07.

**Understanding Our Energy Choices:** A Question Chosen From Class Suggestions

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**10/15 Fri.**  
**MID-TERM EXAM IN CLASS – 09/03/2010 THROUGH 10/12/2010**

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**10/19 Tues.**  

**Our Energy Choices & their Impacts:** What’s oil got to do with freedom?

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**10/22 Fri.**  

**Our Energy Choices & their Impacts:** Why are indigenous Amazonian populations losing their land?

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**10/26 Tues.**  

**Assignment: Find the % of Mercury you are getting**  
http://www.gotmercury.org/article.php?list=type&type=75

**Our Energy Choices & their Impacts:** Why is there mercury in my tuna?

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**10/29 Fri.**  

**Our Energy Choices & their Impacts:** Why are crops in Gaolong China dying?

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**11/02 Tues.**  

**Thinking About Our Energy Choices:** What are the technological options available to us?

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**11/05 Fri.**  
Schumacher, E.F. 1977. “Technology with a Human Face” from *Small is Beautiful: Economics as if People Mattered*

**Thinking About Our Energy Choices:** What should the goals for our future energy system be?

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**11/09 Tues.**  

**Thinking About Our Energy Choices:** How can we analyze the tough choices we have to make about our energy system?

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**11/12 Fri.**  

**Thinking About Our Energy Choices:** How can we assess which energy sources meet these goals?

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**11/16 Tues.**  

**QUIZ IN RECITATION on 10/19/2010 THROUGH 11/12/2010**

**Thinking About Our Energy Choices:** How can we assess how our everyday consumption impacts the energy system?

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**11/19 Fri.**  

**Strategies for Transforming Our Energy System:** How much did you pay for your carbon?

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**11/23 Tues.**  
Werthamer, C. 2007. “Five Years Later, Greenburgh’s Code is

**Strategies for Transforming Our Energy System:** Changing Household Energy Decisions
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Reading</th>
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<tbody>
<tr>
<td>11/26 Fri.</td>
<td>NO CLASS: THANKSGIVING</td>
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<tr>
<td>12/10 Fri.</td>
<td>“Dear Energy Diary” : Turn in class energy project and discuss findings.</td>
<td>Strategies for Transforming Our Energy System:</td>
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<tr>
<td>12/22 Wed. 8:00-10:00 am</td>
<td>FINAL EXAM COVERING 10/19 to 12/10</td>
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