USP 518: Energy and Society
Course Syllabus

Term: Winter 2019
Date/Time: Wednesdays 2:00-4:40PM
Room: University Technology Services 310

Instructor: Kelsea Schumacher
E-mail: Kelsea3@pdx.edu
Office hours: By appointment

Course description
Energy resources and technologies shape cultures, economies, and international relations, and vice versa. In the modern world, nearly every aspect of society is, in some fashion, influenced by energy. While there are direct connections between energy use and quality of life, the positive and negative consequences of harnessing and using energy are unevenly distributed. Since the dawn of the fossil fuel era, energy systems have underpinned and constructed unequal social relations as well as imbalanced nature-society relations. Problems posed by our current society-energy relations, such as climate change, highlight the need to change our ways of living. But how do we go about changing our current energy system? Before we can answer this question, we must first understand the extent to which our lives are integrated with the production and consumption of energy. Only then can we realize that our energy problem is not merely one of engineering or technological advancement, but rather a social problem that requires social changes.

This course offers a critical perspective on energy-society relations and is designed to provide students with the methods, tools, and perspectives to understand, critique, and ultimately influence the technical, economic, and policy choices regarding energy production and consumption. Addressing contemporary concerns about energy requires a social science perspective and therefore we will focus on the behavioral, socioeconomic, political, and environmental aspects of energy.

Course Learning Objectives

The primary goal of USP 518 is to provide an introduction to the history and implications of the energy-society relationship as well as strategies and means to redesign the current energy system. This goal is accomplished through the following course learning objectives:

1. Explain how societies’ historical relationships with energy have shaped the development and advancement of nations, economies, and environments.
2. Discuss the current U.S. and global energy production and consumption systems and the environmental, economic, political, and social impacts.
3. Analyze existing and proposed policies and programs aimed at redesigning the current energy system.
4. Evaluate the tools that professionals in the energy field use to assess and mitigate the impacts of energy production and consumption, as well as encourage conservation.
5. Formulate a review and lead a discussion about a text related to society’s interaction with energy systems.
## Course Policies

<table>
<thead>
<tr>
<th>Attendance</th>
<th>Attendance and active participation is essential to the understanding of the subject matter of this course and are expected.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Environment</td>
<td>The classroom is a professional and civilized environment. At a minimum, this means that you come to class on time, silence phones, and respect other participants. Class meetings will have an interactive low-threat environment where student participation is necessary. You will be called upon to answer questions. It is not primarily important whether you answer a question correctly or incorrectly; this is done to stimulate thinking and for the purpose of increasing your learning and retention of the subject matter. You are encouraged to ask questions.</td>
</tr>
<tr>
<td>Reading assignments</td>
<td>This course is reading intensive. Selected readings will be the basis for discussion in the class meetings. You are expected to come to class with a general understanding of the major concepts to be discussed that day, which means that you need to do the required reading.</td>
</tr>
</tbody>
</table>

## Grading

- **10%** Participation and attendance
- **15%** Weekly news brief
- **15%** Evaluation of guest speakers
- **20%** Essays on section readings
- **40%** Book review

### Participation and Attendance

Attendance and participation in all classes are important to get the maximum benefit from this course. Students are expected to come to class prepared (i.e., having completed all reading assignments) so that we can have engaged, informed discussions. Grading of this portion will be based on the instructor’s discretion.

### Weekly News Brief

Every week students are required to find one news article relevant to the energy-society relationship and the topic discussed that week. Read the article so that you can give a summary to the rest of the class and answer questions. Submit a link to the article to the instructor every Wednesday before class.

### Evaluation of guest speakers

Several guest speakers are scheduled to visit our class to discuss issues and developments in the energy industry. Anticipated speaker organizations include: Northwest Energy Efficiency Alliance, Energy Trust of Oregon, 3Degrees, Bonneville Power Administration, Leidos Maritime
Solutions, Earth Advantage Institute, and Research Into Action. The week following a guest presentation, students are expected to submit a ½ to 1 page review of the speaker’s presentation. Please address the following points in your review:

- What were the key points of the presentation?
- What was the most interesting thing you learned?
- How does the speaker’s work/organization address the energy-society relationship?
- Should the presenter be invited back next year?

**Essays on section readings**

Over the course of the term students will write three short (3-4 pages, 1.5 line spacing) essays following the completion of the three course sections (see schedule). The purpose of these essays is to solidify students’ understanding of the section readings and emergent themes. They are intentionally brief but are expected to be dense. Each essay should introduce the conceptual theme(s) of the section and use evidence from the readings to prove students’ comprehension of the theme. Students may use external material to support their case, in addition to section readings. Use citations as needed.

**Book Review**

During the course of the class, each student will read a book provided by the instructor. Students will present a review and analysis of their book on the last day of class (see schedule). Presentations are expected to be 20-30 minutes in length (including time for questions) and should address the following points:

- **Author**
  - Who wrote the book?
  - What is their background and/or basis for writing the book?
  - What was the author’s objective and audience for the book?
- **Content**
  - What is the book about?
  - What are the main arguments?
  - How does the book relate to/address the energy-society relationship?
- **Evaluation**
  - What are key points or concepts that struck you?
  - Did you find the book engaging? Persuasive?
  - Did you agree with the book? Did you enjoy it?
  - How does the book compare with other literature on the subject (i.e., class readings)?
  - Did the authors consider everything or was anything missed?
  - What are your conclusions about the book?

The final deliverable for the book review will be the presentation slides. The grade for the book review will be based on the instructor’s evaluation as well as peer-review grades.
Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Deliverable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 9</td>
<td>Introduction and energy primer</td>
<td></td>
</tr>
<tr>
<td>Jan 16</td>
<td>Energy and society through history</td>
<td></td>
</tr>
<tr>
<td>Jan 23</td>
<td>Chronic and acute problems of modern energy systems; environmental and social injustice</td>
<td></td>
</tr>
<tr>
<td>Jan 30</td>
<td>Implications of the modern energy system</td>
<td></td>
</tr>
<tr>
<td>Feb 6</td>
<td>How energy systems change; Energy transitions</td>
<td>Essay #1</td>
</tr>
<tr>
<td>Feb 13</td>
<td>Markets, policy innovations, accidents, and surprises</td>
<td></td>
</tr>
<tr>
<td>Feb 20</td>
<td>Getting outside of the box: Emerging problems and new policy and program approaches</td>
<td></td>
</tr>
<tr>
<td>Feb 27</td>
<td>Redesigning the box from the outside in: Policies, programs, and systems of the future</td>
<td>Essay #2</td>
</tr>
<tr>
<td>March 6</td>
<td>Sustainable energy systems: fantasy, possibility, or necessity? Where do we go next?</td>
<td></td>
</tr>
<tr>
<td>March 13</td>
<td>Student book review presentations</td>
<td>Essay #3 and Book review presentation</td>
</tr>
</tbody>
</table>