

USP 518 W23: Energy and Society Syllabus

Term: Winter 2022 starting Jan 11th, 2023,

Date/Time: Wednesdays 10:00AM-12:40PM

Room: In-person, Science & Education Center #159

Office hours: In-person Wednesday 1pm and Remote by arrangement

Instructor: Rick Williams

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Course description:

Nearly every aspect of society in our modern world is influenced by energy. Energy resources and technology choices are interdependent with cultures, economies, and international relations. While there are direct connections between energy use and quality of life, the effects (both positive benefits and negative impacts) and consequences (vulnerabilities and risks) of harnessing and using energy are unevenly distributed.

Since the dawn of the fossil fuel era, energy systems have underpinned unequal social relations and resulted in an imbalance between energy-nature-society. Problems posed by our current energy-nature-society relations, such as climate change and energy inequalities, highlight the need to change our ways of living.

What is “the Energy System” and how do we go about changing it? First, we must understand the extent to which our lives are integrated with this “complex, interdependent, closely-coupled, system-of-systems” including resources-fuels-production-consumption-waste. Only then can we realize that our energy situation is not merely one of engineering or technologies, but rather a social situation of policy, governance, and stakeholder engagement -- rooted in path dependence.

This course offers a critical perspective on energy-nature-society relations. The syllabus is designed to provide students with the methods, tools, and perspectives to understand, critique, and ultimately influence the technical, economic, policy, and governance choices regarding energy production and consumption. Addressing contemporary concerns about energy requires a social science perspective. Therefore, we will focus on the behavioral, socioeconomic, political, and environmental aspects of energy. The use of words like resources, fuels, power, and work are important to understanding energy.

This syllabus draws on prior syllabi of Dr Loren Lutzenhiser (Spring 2016) and Ms. Kelsea Schumacher (Winter 2019) as a foundation. The energy domain and society are dynamic, so we will also incorporate learnings from the Energy Policy and Management Graduate Certificate, the Public Affairs and Policy Ph.D. Program, the new Emergency Management and Community Resilience (EMCR) master’s degree program, and the ongoing Initiative for Community Disaster Resilience (ICDR). <https://www.pdx.edu/urban-public-affairs/speaker-series>

Topical information will be incorporated such as the “Triple Bottom Line” of financial, social, and environmental (people, profit, and planet), as well as information on Environmental, Social and Governance (ESG), and Diversity, Equity, and Inclusion (DEI).

The Oregon Department of Energy (ODOE) has valuable resources that will be incorporated as well, including the 2022 Biennial Energy Report (BER) and prior BERs from 2020 and 2018, plus the Oregon Guidebook for Local Energy Resilience:

<https://www.oregon.gov/energy/Data-and-Reports/Documents/2022-Biennial-Energy-Report.pdf>

<https://www.oregon.gov/energy/Data-and-Reports/Pages/Biennial-Energy-Report.aspx>

<https://energyinfo.oregon.gov/2018-ber>

<https://www.oregon.gov/energy/...resiliency/.../Oregon-Resilience-Guidebook-COUs.pdf>

Course Learning Objectives:

The primary goal of USP 518 is to introduce the history and implications of the energy-nature-society relationship as well as strategies and means to rethink and 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 including equity.
3. Analyze existing and proposed policies and programs aimed at redesigning the current energy system to achieve more sustainable and resilient communities.
4. Evaluate the tools that professionals in the energy field use to assess the benefits and mitigate the impacts of energy production and consumption, as well as encourage energy efficiency and energy conservation through stakeholder engagement and market transformation.
5. Apply knowledge and skills to create more equitable and just communities and planning outcomes, including accurate use of words like resources, fuels, energy, power, work.

Course Policies:

Course Materials:

There is no textbook for the course. The Canvas site contains all assignments and required and optional readings. Materials are organized by week.

Attendance:

This is an in-person course. Attendance and active participation in the weekly class meeting is essential to the understanding of the subject matter of this course and are expected. The small class size will make it imperative that everyone completes the readings and the assignments, as we will include a lot of detailed discussion and debate during class meetings.

Classroom Environment

The classroom, including the virtual classroom when used for guest speakers, is a professional and civilized environment. At a minimum, this means that you come to class on time, silence phones, and respect other participants. (In the event of illness requiring remote attendance, occasional background noise from children and pets is understood.)

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.

Reading assignments

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.

Access and Inclusion for Students with Disabilities:

PSU values diversity and inclusion. My goal is to create a learning environment that is accessible, equitable, inclusive, and welcoming. I am committed to fostering mutual respect and full participation for all students. If any aspects of instruction or course design result in barriers to your inclusion or learning, please notify me. Additionally, the Disability Resource Center (DRC) provides reasonable accommodations for students who encounter barriers in the learning environment. The DRC works with students who have physical, learning, cognitive, mental health, sensory, and other disabilities.

If you have, or think you may have, a disability that may affect your work in this class and feel you need accommodations, contact the Disability Resource Center to schedule an appointment and initiate a conversation about reasonable accommodations.

If you already have accommodations, please contact me to make sure that I have received your faculty notification letter from the DRC so we can discuss your accommodations.

The DRC is located in 116 Smith Memorial Student Union, Suite 116. You can also contact the DRC at 503-725-4150 or, drc@pdx.edu. Visit the DRC online at <https://www.pdx.edu/disability-resource-center>.

Title IX Support and Resources:

Portland State is committed to providing an environment free of all forms of prohibited discrimination and sexual harassment (sexual assault, domestic and dating violence, and gender or sex-based harassment and stalking). If you have experienced any form of gender or sex-based discrimination or sexual harassment, know that help and support are available. Information about PSU's support services on campus, including confidential services and reporting options, can be found on PSU's Sexual Misconduct Prevention and Response website at:

<http://www.pdx.edu/sexual-assault/get-help> or you may call a confidential IPV Advocate at 503-725-5672 or schedule Online at <https://psuwrc.youcanbook.me>. You may report any incident of discrimination or discriminatory harassment, including sexual harassment, to:

- PSU's Title IX Coordinator: Julie Caron by calling 503-725-4410, via email at titleixcoordinator@pdx.edu or in person at Richard and Maureen Neuberger Center (RMNC), 1600 SW 4th Ave, Suite 830
- Deputy Title IX Coordinator: Yesenia Gutierrez by calling 503-725-4413, via email at yesenia.gutierrez.gdi@pdx.edu or in person at RMNC, 1600 SW 4th Ave, Suite 830

Please be aware that all PSU faculty members and instructors are required to report information of an incident that may constitute prohibited discrimination, including sexual harassment and sexual violence. This means that if you tell me about a situation of sexual harassment or sexual violence that may have violated university policy or student code of conduct, I must share the information with my supervisor, the University's Title IX Coordinator or the Office of the Dean of Student Life. However, the Title IX Coordinators will keep the information confidential and refer you to a confidential advocate. For more information about Title IX please complete the required student module *Creating a Safe Campus* in your Canvas course site. More PSU resources:

https://www.pdx.edu/sexual-assault/sites/g/files/znldhr4031/files/2020-08/2-sheet_SexualRelationshipViolenceResourcesforstudents.pdf

Academic honesty:

Students are expected to be ethical not only in the classroom, but also outside of the classroom. It is in all students' interest to avoid committing acts of academic dishonesty and to discourage others from committing such acts. Academic dishonesty includes, but is not limited to, the following examples: engages in any form of academic deceit; refers to materials or sources or uses devices not authorized by the instructor for use during any quiz or assignment; provides inappropriate aid to another person in connection with any quiz or assignment; engages in Plagiarism. Plagiarism is the act of claiming someone's work as your own through copying it without giving the creator of the work credit. Plagiarism can also include using another person's theories, ideas, or phrases without proper attribution. The simplest way to avoid plagiarizing is to always cite the sources from which you gather information or develop arguments – just cite anything you use from someone else (it actually makes your work stronger!). Plagiarism is a serious issue and is a violation of the [PSU Student Conduct Code](#) . University policy requires instructors to report all instances of plagiarism and penalize the perpetrator(s) according to guidelines set. Please see me if you ever have any questions about how to cite your work.

Inclusivity:

Building an inclusive learning environment requires us to work together to listen (reading carefully and reflecting in the classroom and online environment) and make space for all to have a say (asking questions and interacting in an encouraging way); to support each other to find our voice; and to recognize and anticipate a wide range of perspectives, backgrounds, experiences, identities, and ways of being in the world.

I hope that we can begin from a place of mutual respect – taking each other where we are at each day, offering the benefit of the doubt, and being aware that the workings of power and privilege impact different communities and individuals in different ways. These are difficult times, and we are all experiencing the Coronavirus pandemic and its impacts in different ways - please be gentle with one another and do not make assumptions about what anyone is going through. We can all promote safe and inclusive learning by listening deeply (including reading carefully and reflecting) and being ready to learn from those around us.

In a learning environment, it is important to speak clearly, thoughtfully, and respectfully (take your time and consider the selection and impact of your words). Please learn and use the correct pronouns for your classmates, please do not make assumptions. I will work to support you in learning how to engage online in respectful and encouraging ways; begin from the knowledge that behind each comment and profile is a person who deserves to be treated with respect and care. The quality, thoughtfulness, and clarity of your writing and chat posts will be considered in assessment.

Assignments and Grading:

Assignments will be judged for their coherence, connection to the class materials, clarity in writing and documentation. Make sure you cite all references and sources of data; include a list of references at the end of your assignments. All assignments should be uploaded as MS Office formats (e.g., Word, Excel, PowerPoint) or PDF files into the dropbox on the Canvas site. Please also have the assignments accessible during Zoom meetings as they will be discussed.

- 16% Reading, Attendance and Participation (65 points)
- 10% Policy Brief (Part 1: 15 points) and Weekly News Briefs (Parts 2 & 3: 24 points)
- 16% Evaluation of guest speakers (63 points)
- 20% Three essays on section readings (20 + 25 + 35 = 80 points)
- 38% Book review outline and slides and presentation (153 points)

Reading Summary, Attendance & Participation

Reading, attendance, and participation are essential. Participation in all classes is important to get the maximum benefit from the course. Students are expected to come to class prepared, having completed all assigned readings, so that we can have engaged, informed discussions. A summary of three key points for each reading is required to be posted in Canvas by 8pm the evening before class each week. The inputs of other class members will be available after students submit your inputs.

Grading of this portion will be based on the instructor's discretion. Opportunities to practice presentation skills include a short verbal introductions, a "Pick a Policy to Brief," Weekly New Briefs, and the Book Review.

Introductions and Program Reviews (Part 1)

Week 1: Submit your introduction used in class (half page) and review (half page) of USP 518 course learning outcomes that fit your program of study by 8pm the day after class in Week 1.

Pick a Policy to Brief (Part 1)

Week 2: Pick three policy topics from the Oregon Department of Energy (ODOE) Biennial Energy Report (BER), 2022 or 2018 versions, ranked in order of preference, and submit by 8pm the day after class in Week 2. A topic will be assigned by the following Monday to optimize class preferences and avoid duplication.

Week 3: Submit key points of your initial outline (half page) by 8pm the day before class.

Week 4: Submit slides (maximum of five) for your Policy Brief by 8pm the day before class.

Briefing slots will be assigned. **The briefing should be 8 to 12 minutes** with a maximum of five slides (minimum font 24 pt.).

Weekly News Briefs (Parts 2 and 3)

Students are encouraged to find a news article relevant to the energy-nature-society relationship and the topic discussed each week so that you can give a summary to the rest of the class. Also provide any news from your educational and career endeavors!

Submit a MSWord document with title of the topic, a link to the article, and a two-or-three sentence summary by 8pm the day before class. Be prepared to brief the class. We will use the standard for public comment to the Oregon Public Utility Commission and Northwest Power and Conservation Council: **The briefing should be 3 minutes maximum.**

Evaluation of guest speakers

Guest speakers are scheduled to visit our class to discuss issues and developments in the energy industry. Anticipated local organizations include PSU, the Oregon Department of Energy, Western Energy Institute, Pacific Northwest National Laboratories, Northwest Energy Efficiency Alliance, Energy Trust of Oregon, GridFWD, and Pacific Ocean Energy Trust.

Following a guest presentation, students are expected to submit a **½ to 1-page** review of the speaker's presentation by 8pm the day after class. Address the following points in your review:

1. Speaker name and organization
2. What were the key points of the presentation?
3. What was the most interesting thing you learned?
4. How does the speaker's work/organization address the energy-society relationship?
5. Should the presenter be invited back next year?

Essays on section readings

Students will write three short essays following the three course sections.

The purpose is to solidify students' understanding of the section readings and emergent themes. They are intentionally brief and are expected to be dense. Use a style that would be useful in a professional job context.

Each essay should:

1. Introduce the conceptual theme(s) of the section using descriptive writing (25%) and,
2. Use argumentative writing (75%) to present your finding "I argue that", supported by facts, "as evidenced by", with citations from the course readings to demonstrate comprehension of the theme. In addition to section readings from the course, students may use external material to support your argument.
3. Format guidelines are:
 - 3-4 pages of text, with option of a half page graphic or photograph, plus reference page.
 - On page one, provide a single line thoughtful subject, and student name. This should use a few inches at the top, so no Title page or Table of Contents.
 - 1.5 line spacing.
 - Page numbers.

Schedule:

Date	Topic	Deliverable
Part 1: The history and effects of our current energy system		
Jan 11 Week 1	Introduction and energy primer Guest Speaker: PSU Senior Fellow Jeff Hammarlund (Confirmed)	Short verbal introduction Half page written introduction Half page review of outcomes
Jan 18 Week 2	Energy and society through history Guest Speaker: ODOE Senior Clean Energy Policy Analyst Amy Schlusser (Confirmed)	Pick a Policy from the ODOE 2022 Biennial Energy Report
Jan 25 Week 3	Chronic and acute problems of modern energy systems; environmental and social injustice Guest Speaker: ODOE Government Affairs Coordinator Christy Splitt and Public Affairs Specialist Erica Zeigler (Confirmed)	Brief a Policy progress discussion
Feb 1 Week 4	Implications of the modern energy system Guest Speaker: Western Energy Institute Director of Program Curriculum + Analytics Eric Christianson (Confirmed)	Brief a Policy presentations
Part 2: What have we tried to change our current energy system		
Feb 8 Week 5	How energy systems change: Energy transitions Guest Speaker: NEEA (TBD) and Energy Trust (TBD)	Weekly News Brief Essay #1 Propose 3 choices of book for review.
Feb 15 Week 6	Markets, policy innovations, accidents, and surprises Guest Speakers: POET (TBD)	Weekly News Brief Assignment of Book Review
Feb 22 Week 7	Thinking outside of the box (and questioning that a box exists): Emerging problems and new policy and program approaches Guest Speakers: PNNL Renewables Team (TBD)	Weekly News Brief
Part 3: What could the future of energy look like?		
Mar 1 Week 8	Redesigning the box from the outside-in and inside-out. Stakeholder Engagement, Policies, Governance, and Technologies, implemented through projects, programs, portfolios to shape the systems of the future. Guest Speaker: TBD	Weekly News Brief Essay #2
Mar 8 Week 9	Sustainable energy systems: fantasy, possibility, or necessity? Where do we go next? Guest Speaker: GridFWD (TBD)	Weekly News Brief
Mar 15 Week 10	ODOE Community Resilience Program Guest Speaker: ODOE (Invited)	Weekly News Brief Essay #3
Mar 22 Week 11	Finals Week: Student Book Review presentations	Book Review slides

Submitting work online:

For assignments that require uploading files to Canvas, it is the student's responsibility to verify that (1) all files are submitted in Canvas prior to the deadline and (2) all submitted files are those that the student intends to be graded for the assignment. Submitting the "wrong" file by accident is not acceptable grounds for a deadline extension. Assignment grades will be based on the file submitted prior to the posted deadline. Files submitted in a format that cannot be accessed by the instructor cannot be graded and will therefore receive a zero. Acceptable file formats are MS Office formats (e.g., Word, Excel, PowerPoint) or PDF files. Individual assignment instructions may contain a required file format.

Technology access:

Proficiency in the use of Canvas, PSU email, and other computer tools such as Zoom, or part of Google suite is required for this course. This course requires consistent access to functioning computer equipment and Internet access throughout the length of the course. Reliance on a cellular connection may not provide reliable and fast access to online learning resources. Here are some broadband programs that are free or low-cost:

<https://www.highspeedinternet.com/resources/are-there-government-programs-to-help-me-get-internet-service>