

Sci 321U Energy and Society CRN 12967/Thurs 4-5:50 CH224 Instructor: Candace Gossen
 email: gossen@pdx.edu Office hours: by appointment

Conceptual content: An environmentally sustainable society is one that meets the current needs of its people for food, clean water, clean air, shelter and other basic resources without compromising the ability for future generations to meet their needs. Problems arising from the human need for energy and the environmental degradation that follows has created problems generating from a local to global scale. The nature and success in resolving these problems starts with a proper understanding of the scientific causes and effects of the problems, as well as their socio-economic and political context. The premise of this course energy and society is that energy is a social issue with a technical component. We will evaluate the idea of natural capital including free capital like solar and wind while examining the fossil fuel era we are living in. The life cycle of energy including extraction, methods of production, use and disposal are all things that affect our society, and the choices of conservation, economics and policy direct the outcome. More importantly is that we are all connected to all living species on this planet, the trees that clean the air, water, plants that provide food and medicine, energy... nothing can be created without nature. The idea of “resources” is a man-made construct.

This course will include team projects and fieldwork, as well as a fieldtrip.

Prerequisite: Recommended: Natural Science Inquiry.

Reading Requirements: Edward Abbey, The Monkey Wrench Gang. Additional articles will be assigned.

Reading/Worksheet Packet: Clean Copy, 150 pages approx \$20

Daily Access to a computer is necessary

Weekly Assignments: Groups will be formed the first week of classes and each thursday you will work as a team to answer questions relevant to the Abbey readings in class along with a film review on the topic of the week. You may work with your teammates to answer questions. Each assignment will be worth 20pts. Some assignments may be given over the weekend due on the following Tuesday. **Worth 130pts.**

Abbey book: For the first 5 weeks of class, the last 10 minutes of class each Thursday will be devoted to group discussions and question answering for the reading requirements of Abbey. You are expected to outline relevant passages from the book, be ready to share and discuss, as well as give some insight into current issues with energy and what Abbey may do! You must have read the book by the end of the 5th week as the **mid-term** is a 5 page (doubled sided = 10 pages max) character story on a scenario of a NW energy issue that Abbey may have written. **Worth 100 pts turned in on October 29 at the beginning of class on double-sided recycled paper, on a thumb drive in word or pdf format.**

Fieldtrips (expected attendance) 50pts. TBA. Tillamook BioDigester, Astoria Living Machine, ... Mr. Sun solar...?

Final Project: This is a group film project, given at mid-term you will conduct research and produce a 5-10 minute video. Presentations will be during the class final.

Evaluation: 500 points possible Be on time and turn assignments in promptly

Exercises	Points Possible
Koyannisqatsi, Cadillac Desert, Ecological Design films	60
Hopi Land, Hot Politics, other TBD films	60
24 hour exercise	40
Earth Science Experiment	20
Life Cycle Analysis	20
Field trip	50
Essay Mid-Term	100
Final Group Film Project	150
Total	500
Extra Credit options will be given in class and via email	