

Energy, Environment, and Society APHY S120, ENAS S120, PHYS S120, EVST S121, G&G S120

Session B

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Lecture/seminar that examines the technology and use of energy. Impacts on the environment, climate, security, and economy. Application of scientific reasoning and quantitative analysis. Intended for non-science majors with good backgrounds in math and science. Enrollment limited to 24.

This course can be applied towards the following Yale College distributional requirements:

Quantitative Reasoning and **Sciences**

Content:

This course emphasizes the technology, use and impacts of energy on the environment, climate, security and economy. In addition, we will be discussing policy and how to transition to fully renewable sources. This course is ideal for any student interested in economics, political science, international relations, or business fields with an interest in the environment, energy generation/use, or climate issues. Throughout this course we will cover the many forms of renewable energy and think critically about their viability, practicality, and the ways in which they impact society and the environment. We will also cover some of the advanced energy facilities at Yale via virtual field trips.

Text:

Energy, Environment and Climate by Richard Wolfson [Middlebury College] WW Norton Company, Second or Third Edition. This book is current and very well written. It is available used from various used book sellers, including Amazon. Electronic versions are available from Amazon, and from the publisher.

We will also make use of web resources, and will post lecture notes for each lecture.

Yale exhibits some of these advanced energy technologies, which we will visit on virtual 'class trips'.

Background required:

Knowledge of high school math, chemistry, and physics is assumed/required

Homework:

There will be problem sets assigned during the course. Optional homework help sessions will be held.

Midterm exam:

This will be open book, during class time.

Final paper:

Each student will also submit an individual paper or work in a group presentation at the end of the term. The topic will be developed with the instructor.

Grading:

- a. Homework_____30%
- b. Midterm exam_____30%
- c. Final paper/presentation_____30%
- d. Class participation_____10%

Examples of Yale topics we will discuss in the course; pictures from the Yale campus:

a, (upper left) Yale's new residential colleges and energy efficiency b. Kroon Hall, with solar and geothermal renewable energy c. Yale power plant, co-generation d. Yale solar plant

