

ECO 180 Citizens, Energy, and Sustainability
Fall 2017 Syllabus
Tues/Thurs 12:30-1:45pm
Estabrooke 130 (Active Learning Classroom)

COURSE INFORMATION

ECO 180: Citizens, Energy and Sustainability

3 credits

Course website: <https://classroom.google.com> (*instructions for access will be given on first day of class*)

Instructor

Dr. Sharon Klein

Assistant Professor

School of Economics

Winslow Hall, Room 305C

207-581-3174

sharon.klein@maine.edu (*when sending email to this address, please start the subject line with the course designator (e.g., ECO 180)*)

Office Hours: Thursdays 10-11am, starting the second week of classes

Teaching Assistant (TA)

Afton Hupper

School of Economics

Winslow Hall

Email: afton.hupper@maine.edu

Office Hours: Mondays 10am-12pm; Tuesdays 2-3pm in the Econ Lab in 205 Winslow Hall.

Prerequisites

None

Course Description

This course introduces students to why they should care about energy issues and what they can do about them. Students will get a broad overview of a variety of technical, economic, environmental, and social implications of energy production and use. The course will focus on current U.S. and global energy use and policies as well as alternative energy options. Students will learn how citizens can play a vital role in determining the direction that the future energy system and policies will take. In the course of our lifetime each of us will be asked to make individual energy decisions, including voting on energy-related issues. This course will give you a place to start in understanding the complex tradeoffs associated with sustainable energy decision-making. Students will be required to do readings and watch videos prior to class so they can spend most of the class time engaged in active learning (e.g., discussions, debates, problem-solving, games, presentations, etc). Students may be required to participate in field trips.

This course satisfies the General Education requirements for Population and Environment and Social Context and Institutionsⁱ.

Course Goal

The main goal of this course is to expand student understanding of the current energy system, sustainable energy alternatives, and the citizen's role in achieving a sustainable energy future.

Student Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Describe energy production and consumption systems using appropriate units and vocabulary.
2. Identify existing patterns, policies and targets associated with energy consumption and production.

3. Identify options and constraints associated with various methods of alternative energy production, transportation, and use.
4. Discuss the role of the citizen in local, state and national energy policy.
5. Discuss tradeoffs inherent in the selection of energy options and policy support for these options.
6. Evaluate the overall sustainability of energy options.
7. Engage in citizen-oriented solutions to energy issues.
8. Evaluate the role of civic engagement and service learning in creating and implementing sustainable energy solutions.
9. Create a new vision for transitioning to a sustainable energy future.

We will measure these learning outcomes throughout the semester through **homework, in-class activities, service, exams, and a final presentation.**

INSTRUCTIONAL MATERIALS & METHODS

Required Texts

There is no required text for this course. All required readings and videos will be available through the course website in Google Classroom (<https://classroom.google.com> (*instructions for access will be given on first day of class*)). There will be a fee for the course management software, Top Hat, however (see below for more information).

Google Classroom

Google Classroom will be our main stop for most course content. This is where I will post weekly readings, videos, and homework assignments, as well as announcements and most grades. You will submit your homework (and occasionally some in-class assignments) through Classroom. You will receive grades for these assignments through Classroom. Classroom also links to Google Drive (GD) so if you have GD installed on your computer and set up to automatically sync, you can access the Classroom folder for this course directly from your computer's desktop. Alternatively, you can visit your GD through your web browser and find the Classroom folder for this course in there. Downloading and accessing GD through your computer directly (through Finder on Mac or one of your computer file folders on Windows) can sometimes reduce issues associated with accessing GD through a web browser. You can access our course on Classroom here: <https://classroom.google.com>. I will provide the course code on the first day of classes and go through a little tutorial.

Top Hat

Top Hat is great for in-class assignments like mini-quizzes and attendance. It's kind of like iClicker but allows for some more flexibility. I will use Top Hat each class period to ask questions about course content and/or take attendance. Although readings and videos are free, you are required to purchase access to Top Hat (for more information see: <http://www.umaine.edu/it/software/tutorials/TopHat/>). During the first week of classes, **I will send you an invitation through Google Classroom to register for Top Hat.** When you receive my email, click on the link to complete your registration. You can choose to pay \$26 for the semester, \$38 for 12 months, or \$75 for four years (see <https://tophat.com/educational-technology/pricing/>). Please make sure you are registered and have access by the start of the second day of class. It is important that once you pay for your Top Hat account that you register with your full first and last name, student ID and ideally your maine.edu email address. Registering in this way will prevent grading delays later in the semester. Top Hat will allow us to engage more readily in in-class active learning activities, and it is required in order to participate in class activities that earn course credit.

Non-Traditional Teaching Methods

This course uses active, inquiry-based, project-based, service- and collaborative learning methods, as well as a partial "flipped" classroom model to enrich student understanding of the material and help students develop professionally and personally (for more information, see: https://www.youtube.com/watch?v=Mdym161hLPY&list=PLE8C54256779B374D&index=3&feature=plpp_vid eo). There will be times we will use a traditional lecture-style approach to class, but most of the time in class, students will be expected and required to actively engage in discussions, debates, problem-solving, and other activities that help improve learning outcomes, problem-solving and critical thinking skills, confidence, retention of information, group collaboration, and many other important aspects of learning. In order to participate fully in these activities, students will need to do readings, watch videos, and complete written assignments outside of class, on time. Students will be graded on each of these important components of learning, in-class and out-of-class.

True to the spirit of inquiry-based learning, I may not always give a direct answer to a question but rather encourage students to find the answers on their own. This may seem frustrating and inefficient at times, but finding answers on their own helps students understand concepts at a deeper level and retain information better. I will provide direct answers when necessary, and I will be open about when I am being indirect and why.

Service-learning is a “teaching method which combines community service with academic instruction as it focuses on critical, reflective thinking and civic responsibility. Service-learning programs involve students in organized community service that addresses local needs, while developing their academic skills, sense of civic responsibility, and commitment to the community” (<http://umaine.edu/volunteer/service-learning/>). Community service related to sustainable energy is a required component of this course because it helps students better understand their own role in achieving a sustainable energy future.

GRADING AND COURSE EXPECTATIONS

Components of Final Grade:

Homework Assignments	30%
In-Class Assignments	30%
Final Project	20%
Service	20%

The final semester grade will be the sum of the weighted total In-Class Assignment, Homework, Service, and Final Project grades and will be assigned as follows:

A (90 or above)	B+ (87-89.9)	B (82-86.9)	B- (80-81.9)
C+ (77-79.9)	C (72-76.9)	C- (70-71.9)	D+ (67-69.9)
D (62-66.9)	D- (60-69.9)	F (59.9 or less)	

Homework Assignments (30%)

It is very important for students to come to class ready to actively participate and learn. In many ways, the rest of the class depends on each student doing his/her part in this way. Weekly homework assignments are essential to being prepared. Homework assignments will consist of reading and/or watching videos and writing a reflection; answering specific questions about course material; and/or conducting independent research. Homework assignments will be submitted through the Google Classroom website <https://classroom.google.com> (*instructions for access will be given on first day of class*). The 1 lowest homework assignment grade will be dropped at the end of the semester. Homework assignments may taper off toward the end of the semester as the Final Project component becomes more prominent.

In-Class Assignments (30%)

All students are expected to attend class each day and be prepared with a **calculator** (phone, tablet or computer are acceptable substitutes), **paper, pen and/or pencil, and a device** for use with **Top Hat** (cell phone, tablet or computer). To take advantage of the active learning classroom, it is recommended (but NOT required) that you bring a **computer** with **HDMI hookup** capability. Students are welcome to take notes on a computer or tablet, but they must also bring paper and pen/pencil.

Students are expected to attend ALL scheduled class meetings and participate in ALL learning activities during class times, which may include group discussions, reflections, debates, games, problem-solving (sometimes involving math – hence the calculator, paper and pencil), individual writing, quizzes, etc. For some of these assignments, you will work collaboratively with people at your **learning table**, which will be identified at the

beginning of the semester and may change throughout the semester. In-class assignments will build off of Homework assignments and help students build knowledge to work toward future assignments and the final project. The 1 lowest in-class assignment grade will be dropped at the end of the semester.

Depending on the specific assignment, **problem-solving** assignments usually will be graded on whether the student (or group) obtained the correct answer and/or used the appropriate procedure to arrive at the correct answer. **Discussions, debates, and individual writing assignments** will be graded either based on whether all parts of the assignment were complete or using rubrics posted in Classroom. **Games** will be graded in a similar fashion to a quiz – the grade will depend on getting the correct answer, providing the correct explanation, etc. On average, 1-5 in-class questions each day will require **Top Hat** (see above). Most Top Hat questions will be graded 50% on correct answer and 50% on participation.

Final Project (20%)

The final project will be a 1-min video or audio recording and accompanying 1-2 page fact sheet that expresses your vision for a sustainable energy future, tailored to a specific audience (e.g., President of the United States, Governor of Maine, members of your local community, the UMaine student body, etc). Specific instructions will be posted on Classroom.

Service (20%)

Over the course of the semester, students will engage in a minimum of 10 hours of local community service that helps improve energy sustainability. For example, in the past, students have helped build interior window inserts to reduce heat loss through old drafty residential windows in the Bangor/Orono area, worked with local municipalities to analyze an energy problem they are having, volunteered at an energy or other sustainability-focused fair, etc. Students may also design their own project to improve energy sustainability at the University or in a local community. Students will be graded based on meeting the required number of hours, providing high quality service in a dedicated, caring, and professional manner, and submitting a brief service reflection paper. More information, including a list of potential service opportunities will be posted on Classroom.

Course Policies

Extra Credit

A limited number of extra credit opportunities will be available at different times throughout the course – I will post these on Classroom as they become available. Students are welcome to propose ideas for extra credit assignments that I have not yet made available. All extra credit assignments must be submitted to Classroom by the last day of classes. Students may earn up to a maximum of 20 extra credit points to be applied to either their Homework OR In-Class Assignment total semester points (the equivalent of 2 additional assignments). Please see “Extra Credit” in Classroom for instructions and a list of acceptable ideas.

Late/Missed Assignments

I understand that life happens, and I don't want to waste your time and mine discussing excuses and/or valid reasons for missed assignments. For this reason, I will drop the 1 lowest Homework assignment and 1 lowest In-Class Assignment at the end of the semester. You also have the opportunity to earn credit for up to 2 additional Homework/In-Class assignments through Extra Credit. Therefore, there will be NO opportunities to makeup missed work, and late assignments will NOT be accepted. The only exception is if the University has granted you a leave from course duties for some reason - in this case, the proper documentation would be required to makeup missed or late assignments within the appropriate timeframe specified on the University documentation. You must arrange a meeting with me (outside of class time) as soon as possible in a situation like this, so we can work out the timeline for makeup work. If you know in advance you are going to miss an assignment due to sporting events, field trips for other classes, or some other official event, you are expected to let me know as soon as you know of the conflict and complete assignments prior to the deadlines if possible or meet with me to schedule new deadlines.

Communication Policy & Extra Help

Check Google Classroom regularly for announcements, assignments and other communication from me.

If you have a question or need extra help, please do the following **in order**:

- 1) Review the course materials on Classroom (i.e., syllabus, instructions, announcements, readings, videos, etc.) and see if there are already answers available in these materials.

- 2) Check the discussion threads surrounding the course materials to see if your question has already been asked and answered.
- 3) If your question has not been asked yet in Classroom, but it may apply to other students, please post your question to Classroom and/or ask your question in class so all students can benefit.
- 4) If your question is more individual in nature and/or you have not found an answer after completing steps 1-3, please email me. There may be time to ask a quick question before or after class, but for some questions – especially where I may need to look something up – email works better. Please send email requests for meetings **at least 48 hours ahead of time** – depending on my travel and research schedule, I may need more time than this.

I expect emails from students to me (and vice versa) to be composed professionally with complete sentences and proper English writing style with no spelling mistakes or cryptic abbreviations (i.e., an email is not a text message), a CLEAR subject line that includes the course designator (e.g., ECO 180) and a clear, concise question. I reserve the right not to respond to emails that don't meet these qualifications.

During the weekdays, I will try to respond to emails within a 36-hour turnaround time. I will try to respond to emails sent on weekends/holidays within 60 hours. I teach other courses, do research, and have a personal life, so please be patient and respectful.

University Policies

Student Accessibility Statement

If you have a disability for which you may be requesting an accommodation, please contact Student Accessibility Services, 121 East Annex, 581-2319, as early as possible in the term. Students who have already been approved for accommodations by SAS and have a current accommodation letter should meet with me (the instructor of the course) privately as soon as possible.

University Academic Honesty Statement

Academic honesty is very important. It is dishonest to cheat on exams, to copy term papers, to submit papers written by another person, to fake experimental results, or to copy or reword parts of books or articles into your own papers without appropriately citing the source. Students committing or aiding in any of these violations may be given failing grades for an assignment or for an entire course, at the discretion of the instructor. In addition to any academic action taken by an instructor, these violations are also subject to action under the University of Maine Student Conduct Code. The maximum possible sanction under the student conduct code is dismissal from the University.

University Sexual Discrimination Reporting Policy

The University of Maine is committed to making campus a safe place for students. Because of this commitment, if you tell a teacher about an experience of **sexual assault, sexual harassment, stalking, relationship abuse (dating violence and domestic violence), sexual misconduct or any form of gender discrimination** involving members of the campus, **your teacher is required to report** this information to the campus Office of Sexual Assault & Violence Prevention or the Office of Equal Opportunity.

If you want to talk in confidence to someone about an experience of sexual discrimination, please contact these resources:

For confidential resources on campus: **Counseling Center: 207-581-1392** or **Cutler Health Center: at 207-581-4000.**

For confidential resources off campus: **Rape Response Services: 1-800-310-0000** or **Spruce Run: 1-800-863-9909.**

Other resources: The resources listed below can offer support but may have to report the incident to others who can help:

For support services on campus: **Office of Sexual Assault & Violence Prevention: 207-581-1406, Office of Community Standards: 207-581-1409, University of Maine Police: 207-581-4040** or 911. Or see the OSAVP website for a complete list of services at <http://www.umaine.edu/osavp/>

Course Schedule Disclaimer (Disruption Clause)

In the event of an extended disruption of normal classroom activities, the format for this course may be modified to enable its completion within its programmed time frame. In that event, you will be provided an addendum to the syllabus that will supersede this version.

Tentative Course Outline

This will be posted on Classroom on the first day of classes and is subject to change.

ⁱ Population and the Environment: help students to understand how humankind interacts with our finite physical and biological environment by addressing:

- The role of both local and global environmental change on the quality of human life
- The pervasive role of human population growth on environmental quality and the quality of life, both in industrial and developing countries
- The influence of cultural, religious, economic, educational and political factors on population growth and environmental quality
- Possible solutions to the population/environmental problems, which may include the role of technological advancements, a re-examination of educational and political institutions, enlightened reassessment of traditional religious and economic conceptions, and rethinking contemporary Western conception of “the good life”

Social Context and Institutions: focus upon the ways in which social contexts shape and limit human institutions. The specific focus may be upon ways in which social contexts and institutions interact with human values, the role of institutions in expressing cultural values, or the social and ethical dimensions attendant upon particular academic disciplines.