

EVS559: ENERGY, CLIMATE CHANGE, AND SUSTAINABILITY

SPRING 2020: M 5pm to 7:30pm



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Office Hours: MWF: 11:00am to 12:00pm; W: 2:00pm to 3:00pm; F: 12:00pm to 1:00pm		

COURSE DESCRIPTION, STUDENT LEARNING OBJECTIVES & MODES OF INSTRUCTION

Course Catalogue

Description: Examination of the scientific, social, economic and political aspects of energy generation, energy consumption, climate change, and sustainability. The course explores approaches towards sustainable transformations in energy generation to address the climate crisis.

1. Provide an in-depth examination of how humans, through fossil-fuel combustion to meet energy demands, are changing the composition of the Earth's atmosphere resulting in projected global average warming.
2. Examine the environmental, economic, policy and technological aspects of energy production and its relationship to projected future global temperature increases;
3. Develop an understanding of the complexity of ecosystem responses to increased global average temperature; and
4. Evaluate current and future policy and technology responses to global warming.

This course is a hybrid course. Some weeks will be online classes while other classes will be face-to-face on campus. The course schedule indicates which classes are online. During these classes, activities will consist of independent learning at postgraduate level e.g. journal article reading, video lectures, PowerPoints, reports, or policy documents.

COURSE SCHEDULE		
DATE	TOPIC	DEADLINE / NOTES
M 27 th Jan	Course Introduction; existing knowledge; and evidence of climate change. Introduction to assessments.	
M 3 rd Feb	Introduction to the climate system; Earth's heat budget; and sources and sinks	[ONLINE CLASS]
M 10 th Feb	Current and future US energy production and consumption The American Dream, coal and oil industries	PAPER 1
M 17 th Feb	NO CLASS: PRESIDENTS' RECESS	
M 24 th Feb	Climate Breakdown: biological, socio-cultural, political, environmental consequences of a changing climate	[ONLINE CLASS]
M 2 nd Mar	Energy: need vs. greed and the development race Unsustainability, lifestyles, and carbon footprints	PAPER 2
M 9 th Mar	Consilience of climate change and why we disagree about climate change	[ONLINE CLASS]
M 16 th Mar	NO CLASS: SPRING BREAK	
M 23 rd Mar	INTERIM PRESENTATIONS	INTERIM PRESENTATION
M 30 th Mar	Sustainability, vulnerability, and resilience Current and future US energy policy	PAPER 3
M 6 th Apr	Sustainable development: balancing environmental concerns, material consumption, and economic growth	[ONLINE CLASS]
M 13 th Apr	Strategies for addressing climate change Debate: economics, consumerism and degrowth	PAPER 4
M 20 th Apr	Climate negotiations, denialism, and the politics of incrementalism vs. transformation	[ONLINE CLASS]
M 27 th Apr	Energy mismatches and visioning for a sustainable future Energy transitions, technologies and behaviours	
M 4 th May	FINAL PRESENTATIONS	FINAL PRESENTATIONS

COURSE ASSESSMENTS

Critique Papers (40%):

You will complete 4 critique papers each worth 10%. These papers will be 2 pages each (size 12 font and 1.5 line spacing NOT double line spacing). These papers will critique a number of journal articles particularly the identification of an energy/climate related issue; what ways (methods) were applied to draw conclusions about the problem; what were the results and why are they significant; what are the implications these results have for the bio-physical environment, society, and the economy. Papers must be submitted as a paper copy at the start of the class for which they are due. Late assignments receive a grade of 0.

Participation (20%):

Formal contact time will consist of lectures, participation activities, and (mostly) seminars. As postgraduate students, you will be expected to lead the conversation following the reading you have done ahead of the class. To that end, all students are expected to participate in seminars and will be graded on the quantity, and quality, of their contributions.

Interim and Final Presentation (40%):

Interim Presentation (Paper Presentation). The task is to introduce your nation to the class including geography, demographics, economics, social issues, energy sources and energy use patterns, current environmental problems. Where in the world is your nation? (maps helpful). What is its physical geography? What is the population like? How many people are there and where do they live. How do they make a living? Is the country a developing or developed country? What are its primary sources of wealth? What are your countries major social issues? How important are they? What are the major sources of energy for your country? Oil, coal, wood? Do they import some of these? From where? What are the primary uses of energy? Are there major environmental problems? What are they and what is being done about them? Basically, what should your classmates know about your country?

Final Presentation (Poster Presentation). What does your country plan to do about climate change? What are their major sources of GHG emissions? How do they rank in terms of emissions compared with other nations? Do they have a plan to reduce emissions? How is your country planning on adapting to or responding to the impacts from climate change? Be specific as possible. What has your country agreed to do as a signatory to current climate treaties? Do you see any problems that your country might have living up to these commitments? What contribution can your country realistically make to world-wide GHG reductions?

Both presentations will be done in pairs and last for 15 minutes each. 12 minutes for the presentation itself with 3 minutes of questions.

COURSE POLICIES

Attendance and punctuality are crucial to your success. Please note that participation exercises for this course are part of your assessment and it is essential that you attend to augment your understanding of course themes.

Assignment submission. Assignments should be submitted as directed at the time specified during assignment workshops. Assignments submitted via email will **NOT** be considered.

Late assignment submission. Assignments that are submitted after the deadline will receive a mark of 0. Assignments should be submitted as directed, and *not* emailed to course staff following the deadline.

Deadline extensions and alternatives. Only in special circumstances e.g. medical circumstances etc. will alternative assignments or deadline extensions be provided. You must provide clear evidence regarding such special circumstances for an extension or alternative assignment to be granted. This should be communicated with the course instructor no later than 48 hours (2 days) before the original deadline. Deadline extensions are provided at the discretion of the Instructor.

Lecture format. Formal contact time will mainly consist of lectures, discussion, activities and multi-media material. Lectures will also be interactive and you are expected to participate during such activities. This supports different learning styles and supports lecture flow.

The grade you get, is the grade you get. Please ensure you take responsibility and ownership for your progression in this course. Grades will not be improved upon request (please do not ask!).

GENERAL ADVICE TO STUDENTS

Manage your time well. At university, you may experience an unprecedented workload. At first this may seem overwhelming, but you will mature into your own style and routines. You will have plenty of things to do for this course (and others) e.g. reading, exams and assignments. It is your responsibility to find the right balance of studying; exercise; eating well; and socialising (in moderation). Do prioritise your studies!

Plan your assignments, and prepare. The best way to get a good grade in your assignments is to plan them in terms of their structure and detail. Remember that the best way to complete a task is to start (and as early as possible). Make a plan, reference appropriately and correctly, and always proofread before submitting!

Communicate effectively and professionally. Many professors, including myself, prefer to be reached by email. Ensure your emails include a concise subject line beginning with the course code (in this case it is EVE559), and are written in a professional tone with complete sentences. Texting language (e.g. 'pls', 'u r' etc.), poor grammar and casual communication are inappropriate for professional workplaces. Be courteous and respectful; do not begin emails with "Hey". Emails should begin formally e.g. "Dear Dr. Axon". Unprofessional emails will not be responded to.

Take responsibility. Our role, as staff, is to come prepared to facilitate your learning each day. Your responsibility is to be present (in body and in spirit!) and ready to work. If you miss a class for whatever reason, it is your responsibility to catch up on any learning you have missed. We cannot re-run lectures for students who have missed classes.

SUPPORT FOR STUDENTS

Special accommodations for students with learning disabilities. Southern Connecticut State University provides reasonable accommodations in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act, for students with documented disabilities on an individualized basis. If you are a student with a documented disability, the University's Disability Resource Centre (DRC) can work with you to determine appropriate accommodations. Before you receive accommodations in this class, you will need to make an appointment with the DRC, which is located at EN C-105A. To discuss your approved accommodations or other concerns, such as medical emergencies or arrangements in case the building must be evacuated, please make an appointment to meet with the course instructor as soon as possible.

Documented and Undocumented Student Support. Southern Connecticut State University values diversity in all of its forms. We welcome and support students of all races, genders, linguistic backgrounds, abilities, sexual orientations, religions, nationalities and immigration status. In particular, we stand in support of the some 5,000 undocumented students currently studying at colleges and universities in Connecticut, many of whom arrived as minors and who call Connecticut their home. We consider them a valuable part of our community and are committed to ensuring they continue to pursue their personal and professional goals in a supportive and welcoming environment. SCSU has an Undocumented Student Support Team which has compiled a variety of resources for members of our community. If you need these resources, please visit <https://www.southernct.edu/undocumented-students/>. Members of the team, listed on the website, are available to offer their support as well.

ADDITIONAL RESOURCES

There are no assigned textbooks for this course. Resources that you will need to complete individual activities will be provided or signposted to you during class time or ahead of sessions.

Congratulations! You reached the end of the Syllabus. I'm looking forward to teaching you on this course, and I hope you're excited to learn and implement a sustainability project. Good luck! This is where the fun begins...