

Sust Comm 297G---Climate Change and Resilient Cities (3 cr) ---Spring 2018

Tuesday and Thursday, 11:30 – 12:45, Herter Hall Room 217
Professor Elisabeth Hamin

Office hours Tuesday and Thursday 2 – 3:30 or by appointment
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Climate change is one of the most pressing challenges facing us this century. Cities around the world have begun taking action to reduce their greenhouse gas emissions, identify their climate risks, and build resilience to the coming changes. Solutions can also achieve goals for jobs, public health, justice and a vibrant shared life. In this course we will explore the challenges of a changing climate and investigate frameworks and tools to understand and address climate issues that impact people and their communities. We use the UMass campus as our laboratory 'city' for applying knowledge and advancing the campus toward climate goals. By the end of the course students will feel knowledgeable and empowered to advocate for better decisions at a local, regional, national or international scale.

Key Learning Goals

Foundational knowledge: Develop/refresh knowledge of basic science of climate change and its particular effects in urban areas. Learn policies and design ideas for reducing greenhouse gas emissions in urban areas and for adapting urban areas for future climate. Become familiar with greenhouse gas inventories, hazard mitigation planning, and adaptation planning.

Applying knowledge: Prepare updates to selected sections of the campus greenhouse gas and hazard mitigation plans, and design one adaptation-based intervention on campus.

Integrate course learning with other aspects of your life: Reflect on the connections between your major or anticipated work and climate change. Understand the connections of climate change to justice and public health issues. Be able to recognize how local city or campus design and regulation influences the future.

Human dimension: Be able to calmly and respectfully discuss differences of opinion regarding climate change. Feel empowered to advocate for CC with others and with governments.

Learning skills: Gain strong skills in preparing, presenting, and evaluating research posters. Be able to design and implement a learning/evaluation rubric.

Assignments (*aka* 'Learning and Assessment Tasks')

Prepare three research posters

1. Use climate projections: Individual assignment: Students update the campus hazard mitigation plan to add a section on climate change and generally identify what difference it would make to include climate projections. Students will individually:
 - a. Read campus hazard mitigation plan
 - b. Write a new section on regional climate projections
 - c. Identify two changes you recommend to policies in the plan to respond to projections and prepare a research poster with these
 - d. Identify rubrics you will use to rate others and your ideas
 - e. Apply knowledge by rating other posters based on their rubrics
 - f. Reflect on your learning in this project, including reading the plan, applying projections, and the experience of presenting, rating, and being rated. Reflect on sufficiency of your rubrics.

2. Implement Climate Mitigation: Team-based, with client presentation: At the middle of the course, students will imagine themselves as consultants working for a firm hired by the campus to improve energy efficiency. Clients will come to class to view posters and evaluate. Each team will:
 - a. Read the campus sustainability chapter
 - b. Prepare a research poster with an idea that would improve energy efficiency
 - c. Develop rubrics they will use to rate other projects
 - d. Rate other posters based on your rubric
 - e. Individually, reflect on your learning in this project, including reading the plan, research, team dynamics, and the experience of presenting, rating, and being rated. Reflect on sufficiency of the rubric.

3. Implement Climate Adaptation: Team-based, with client presentation: At the end of the course, students design an intervention in the wider campus built environment, applying the knowledge from the semester to one specific site or system. Clients come to class to view posters and evaluate. Teams will:
 - a. Re-read the campus hazard mitigation plan and sustainability chapter of the master plan
 - b. Prepare a research poster with an idea for improving a built or natural space, including any policies or regulations
 - c. Identify rubric to use to rate other projects
 - d. Rate other posters based on your rubric

Other individual assessments

4. Assessments of reading annotations
5. Small assignments listed on syllabus below (each one is quite brief):

- a. Climate denier article and annotation
- b. Carbon footprint
- c. Springfield mapping comments
- d. Google maps exercise for developing country global cities
- e. Moodle forums: post two current(ish) news articles on the section of your choice and discuss the articles posted by others

Grading

Attendance in class is essential. Students are allowed two class absences with no need for any excuse; religious observances are an appropriate use of these absences. Any absences beyond that require a doctor's note or other university approved documentation. All absences require make-up work which can be viewing and writing up a webinar from the SAGE website, to be discussed in class.

Assignment	Percent of Grade
Individual poster climate projections	20
Team Mitigation poster	20
Team Adaptation poster	20
Reading annotations	10
5 small assignments listed above	30
Total	100

General evaluation criteria and expectations. Please submit all products on moodle. Small assignments should be done in Word. Draft posters should be submitted in ppt or word, or hand sketch. Final posters must be printed (plan ahead!) as well as submitted on line, and can be pdf or ppt. To grade your contribution, I will look for the following characteristics:

- Did the project meet the guidelines discussed in class (on time, right length, right format, appropriate citations, appropriate topic)?
- Was the quality of the final product high - grammatical and factually correct, well written without excess words and with clear, concise organization, graphically attractive?
- If I provided draft comments, were these addressed in the final product?
- Did you bring in appropriate outside resources where relevant? Resources may include on-line data or 'white papers' from highly recognized non-profit organizations and scholarly articles, and must be appropriately cited. If you have a question about whether a website is reputable, please ask.
- Did you demonstrate original analysis and thought and integrate a range of sources or ideas from class?

For team projects, students will evaluate each other. If outcomes suggest problems in the group, I will discuss it with you. If I believe there are substantiated differences in

contribution, some group members may receive a lower (or higher) score than others at the time of final grade calculation. For most teams, the same score will be given to all members.

Accommodation Policy Statement

The University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If you have a documented physical, psychological, or learning disability on file with Disability Services (DS), Learning Disabilities Support Services (LDSS), or Psychological Disabilities Services (PDS), you may be eligible for reasonable academic accommodations to help you succeed in this course. Please notify Disability Services who will then notify me of appropriate accommodations. This should occur within the first two weeks of the semester (except for emergent situations) so that we may make timely arrangements. I am also happy to talk with you in person about accommodations once notified by DS that accommodations will be required.

Policy on Maintaining a Respectful Learning Environment

We are all responsible for maintaining a classroom environment that is conducive to learning and discussion. In order to assure that we all have the opportunity to gain from time spent in class, I propose these standards for creating a respectful learning environment.

- The instructor, teaching assistants, and students say hello to each other.
- Respect includes appropriate humor, enjoyment, or other indications of a comfortable and pleasant classroom community.
- It is essential that all students, regardless of political affiliation, feel comfortable contributing in class. Respectful dissent and discussion is appropriate; vitriol and personal attacks on political leaders is not.
- We are on time for class: no late arrivals and no packing up early.
- We avoid disruptions during class: NO CELLPHONE USE, TEXTING, FACEBOOKING, ETC. Other obvious disrupters include private conversations, using a laptop for something other than current classroom work, and, of course, sleeping. If you get sleepy, feel free to stand up.
- We avoid negative language that is considered racist, sexist, or homophobic or in other ways may exclude members of our campus and classroom community.

STATEMENT OF ACADEMIC HONESTY AND INTEGRITY

It is expected that all students will abide by the Graduate Student Honor Code and the Academic Honesty Policy (available at the Graduate Dean's Office, the Academic Honesty Office (Ombud's Office) or online at http://www.umass.edu/gradschool/handbook/univ_policies_regulations_a.htm). Sanctions for acts of dishonesty range from receiving a grade of F on the paper/exam/assignment or in the course, loss of funding, being placed on probation or suspension for a period of time, or being dismissed from the University. All students have the right of appeal through the academic honesty board.