

Climate Change and Human Health: Assessing Vulnerability and Adaptation Strategies
HCOL 186 - Spring 2018

Course instructor:
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Office Hours: By appointment
Mondays 4:05 – 7:05 pm
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Purpose/Course Description

Global climate change is among the “greatest health risks of the 21st Century,” according to the World Health Organization. The health effects of climate change are already being felt around the world, including increased prevalence of heat-related illness, transmission and spread of infectious disease, risks from extreme weather events, and effects on the quality and quantity of environmental determinants of health including air, water, and food. Using a lens of sustainability, and engaging with authentic hope for creating a more sustainable future, this course will critically examine the human health effects of climate change, and the options for mitigating these negative health outcomes. We will focus our efforts around recent scholarship that suggests many mitigation and adaptation strategies will produce co-benefits that will promote both human and ecological flourishing.

Student Learning Objectives:

At the conclusion of this course, students will be able to:

1. Describe the major health impacts of climate change occurring at local, regional, and global scales.
2. Conduct preliminary climate and health assessments at the local scale, and identify vulnerable populations who would benefit most from supportive interventions.
3. Assess the co-benefits of mitigation and adaptation strategies, including policies, practices, and behavior.
4. Fulfill the UVM Sustainability requirement:
 - Students can have an informed conversation about the multiple dimensions and complexity of sustainability.
 - Students can evaluate sustainability using an evidence-based disciplinary approach and integrate economic, ecological, and social perspectives.
 - Students think critically about sustainability across a diversity of cultural values and across multiple scales of relevance from local to global.
 - Students, as members of society, can recognize and assess how sustainability impacts their lives and how their actions impact sustainability.

Course Materials:

1. Levy BS and Patz JA. 2015. Climate change and public health. Oxford University Press. ISBN 978-0-19-020245-3
2. Articles, podcasts, and videos available via BlackBoard (“BB”).

Course Grades

	Possible Points to Earn
In-class Participation	60
Student-led discussion	20
Take-home Exam #1: impacts of climate change on health	25
Take-home Exam #2: co-benefits of strategies for responding to climate change	25
Climate & Health Assessments	
o Local Burlington/Vermont assessment	
o Group assignments for learning the assessment process	50
o Assessment of selected location	
o Individual assignments	50
TOTAL	230

Final grades will be assigned as follows (there is no curve in this class):

A+ 98-100%	B- 80-82%	D 63-67%
A 93-97%	C+ 78-79%	D- 60-62%
A- 90-92%	C 73-77%	F below 60%
B+ 88-89%	C- 70-72%	
B 83-87%	D+ 68-69%	

In-class participation: This part of your grade will reflect the quality of your engagement with the class and in small group discussions, including your active and attentive listening. It will *not* reflect how often or loudly you spoke, rather I will evaluate insights into the material and reflections you share. It is therefore presumed that every student will get full credit in this regard, with deductions made for negligent participation.

Student-led discussion: During the first week of class, students will divide into groups to help lead the discussion of material for weeks 3 through 9. On weeks when you are leading the discussion, you will be expected to read all material thoroughly and guide the discussion with questions, insights, and prompts that you develop and receive feedback on from the instructor ahead of time. On weeks when you are not leading, you will be expected to read thoroughly and come prepared to support your classmates who are leading discussion that week by providing thoughtful responses to their prompts.

Take-home Exams 1 & 2: These learning assessments will give you an opportunity to reflect on what you have learned over the course of the semester and will cover readings, in-class discussion, and lecture material. These exams are meant to test your factual knowledge, your ability to find answers to questions using resources provided throughout the course, and your ability to synthesize and apply your knowledge to sustainability-related short essay questions.

Climate & Health Assessments: These group and individual projects will allow you to develop skills and expertise in methods and analyses relevant to assessing vulnerability to climate-related health impacts at a community level. These assessments will include writing assignments, constructive comments on colleague's work, and presentations.

Course Policies and Guidelines

Class meetings: If you arrive to class on time, I'll make sure I end class on time. If you miss class it is *your responsibility* to avail yourself of the material you missed by seeking notes from a classmate/group member. Unexcused absences will factor into your attendance & engagement grade.

Cell phones, laptops, and other distractors: I value our classroom time together highly. I find that cell phones, laptops, and other screen-based devices detract from classroom discussions and learning (the temptation to "multi-task" is just too high given wireless internet connectivity) and therefore *the use of these devices is only permitted in the classroom during specific times when I will guide our use of these technologies to support our collective learning.*

Late Assignments: Course work is due at the time assigned. Late work will only be accepted if you contact me ahead of time to discuss a legitimate reason for why the assignment will be late (e.g. serious illness, life event, etc.).

Academic Integrity: All students are expected to follow the University's guidelines on academic integrity, available at <http://www.uvm.edu/policies/student/acadintegrity.pdf>. Academic dishonesty, such as plagiarism, will not be tolerated.

Accessibility: Please let me know as soon as possible if you have any special needs that I can address to make it possible for you to fully participate in this course. Any student with a documented disability interested in utilizing accommodations should contact ACCESS, the office of Disability Services on campus. ACCESS works with students to create reasonable and appropriate accommodations via an accommodation letter to their professors as early as possible each semester. Contact ACCESS: A170 Living/Learning Center; 802-656-7753; access@uvm.edu; or www.uvm.edu/access

Note: the material in this syllabus is subject to change.

Tip: Check Blackboard early each week for updates to course materials and assignments.

Course Calendar and Topics

	<u>Date</u>	<u>Topic</u>	<u>Preparation for class</u>
Part I: Introduction			
Week 1	Jan 22	Climate change as a public health and sustainability challenge	Text p. 1-72 (skim p. 1-50; in-depth p. 51-72); BB: National Climate & Health Assessment
Part II: Climate & Health Assessments			
			Assignment: Burlington Climate & Health Assessment (group projects)
Week 2	Jan 29	Introduction to climate & health assessments and communicating climate-related health risks	Text p. 255-268; BB: WHO Vulnerability and Adaptation Assessment; Vermont Climate Assessment; EPA climate & health archives
Part III: Adverse health effects and specific preventive measures			
			Assignment: student-led discussions
Week 3	Feb 5	Health impacts of heat	Text p. 73-104; BB: Heat Wave (Klinenberg)
Week 4	Feb 12	Respiratory & allergic disorders	Text p. 105-128; BB: TBD
Week 5	Feb 26	Vector-borne, waterborne, and foodborne diseases	Text p. 129-1572; BB: Malaria, Zika, and cholera case studies
Week 6	Mar 5	Food and nutrition insecurity	Text p. 173-194; BB: UW MOOC videos
Week 7	Mar 19	Mental health impacts, migration, and violence	Text p. 195-230; BB: Solastalgia; Take-home Exam #1
Week 8	Mar 26	Student group presentations: Burlington Climate & Health Assessment	
Part IV: Policies and actions to address climate change and promote public health			
			Assignment: Climate & Health Assessment of selected locations (individual projects)
Week 9	Apr 2	Co-benefits of climate action	BB: IPCC 2014 (WGIIAR5)
Week 10	Apr 9	Public health policy and action	Text p. 231-254; BB: co-benefits video
Week 11	Apr 16	Energy, transportation, and agriculture policy	Text p. 269-342; BB: UN videos
Week 12	Apr 23	Planning healthy and sustainable built environments	Text p. 343-384; BB: Frumkin videos; Take-home Exam #2
Week 13	Apr 30	Student presentations: Climate & Health Assessments of selected locations	