

NRSM 426: Climate and Society

Tuesday/Thursday 2:10-3:30pm
Gallagher Business Building (GBB) Room 225
3 Credits

Instructor: Wylie Carr

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Office Hours: Tuesday 3:30-5:00 and by appointment

Course Description

This course examines the social, economic, political, and ethical aspects of climate change, with a focus on both domestic and international processes and case studies. Students will explore social aspects of climate change at multiple scales, from individual behavior to global governance. The course will draw on diverse disciplinary perspectives within the social sciences to examine the causes and consequences of climate change as well as proposed solutions including mitigation, adaptation, and climate engineering. This will provide a window into the complex interactions between climate, actors, scales, and social structures.

Course Objectives

Upon completing this course students will:

1. Understand the social, economic, and political impacts of climate change
2. Understand contemporary responses to climate change such as mitigation, adaptation, and climate engineering
3. Understand key debates within different societies as they relate to climate change
4. Have improved critical thinking and analytic skills, including the ability to interact with social science data, engage in respectful discussions with different viewpoints, and speak and write clearly and concisely about climate related issues

Why you should take this course:

1. You care about climate change.
2. You want to know why climate change is so hard to solve.
3. You like in-class discussions.
4. You like to have your ideas challenged and stretched.
5. You want to learn what social science is all about.
6. You enjoy having input into what you study in a course.

Why you should not take this course:

1. You don't plan to come very often.
2. You're unwilling to speak up in class.
3. You're not comfortable reading and writing at an upper-division level.
4. You don't believe in this climate change nonsense.
5. You want to sit back and be entertained by a lecture.
6. You're not flexible about changes in the syllabus.

Course Readings

There are no required texts for purchase. All readings are available electronically on the course Moodle Page: <https://moodle.umt.edu/course/view.php?id=8094>. The readings are organized by unit and date and labeled Author_Year_Title. You will see that many of the readings come from *The Oxford Handbook of Climate and Society*. There is a copy on reserve at the library that can be checked out for 24 hours at a time if you prefer to read a paper copy.

Readings must be completed prior to class. To adequately prepare for class students must be familiar with the content of posted readings. As you read, focus on the who, what, where, when, and why of each article. Take notes: what are the key points; do you have any questions; do you agree or disagree with the author; how does this reading connect with other issues we've discussed in class already, etc. Be prepared to discuss and critique the readings in class.

Evaluation

<i>Assignment</i>	<i>Percentage of Final Grade</i>
Attendance and Participation	25%
Reading Quizzes & Response Essays	25%
Research Paper (Due May 11 th)	40%
Research presentation (May 7 th or 11 th)	10%

Attendance and Participation

Students are expected to take an active role in their education in this course, and course grades will be based, in large part, on student attendance and participation. Attendance and participation includes punctuality, attentiveness, effort, and being prepared for class (having completed any assignments, including the reading for that day). Participation also means offering one's thoughts, ideas, opinions, and questions during class. There will be frequent opportunities for discussion during class, providing time for you to explore the complexity of social processes and, in particular, work on issues you find confusing. Your participation grade is not based on knowing the "right" answers or the quantity or length of your comments (in fact, concise and succinct comments are favorable), but rather on your willingness to contribute, evidence that you have completed and thought through material presented in the reading, and the quality of your contributions. In addition to talking in class, participation includes respect for differing opinions. Students who arrive late, miss class, fail to do readings on time, and/or do not engage in class discussions will be penalized.

There are two required "assignments" that will also fall under the participation grade: 1. Meeting with the instructor; and 2. Sharing a piece of positive news about climate change.

Meeting with Instructor

All students are required to meet with the instructor at least once outside of class for ten minutes by March 5th. This meeting is intended as an opportunity for me to get to know you and vice versa and for us to discuss your research paper. An important aspect of success in college is connecting with your teachers and advisors, this is a good opportunity to practice that skill!

Positive News about Climate Change

Climate change can be a difficult and depressing topic. To help us keep things positive, all students will be required to share one piece of positive news about climate change at least once during the semester. Examples will be provided and discussed in class.

In-Class Reading Quizzes and Response Essays

It is critical that students do the reading before each class in order to participate in class discussions. Therefore, throughout the semester, students will be asked to respond to course material (readings, films, lectures) through 5-8 short in-class quizzes and essays. Responses on these assignments must demonstrate a basic understanding of the material and thoughtful analysis of the key issues.

Research Papers

Students will be required to write a research paper on one of the topics we focus on in the course. These papers are your opportunity to dig deeper into an area of the course you are particularly interested in. Papers should respond to a specific question related to social aspects of climate change that you would like to know more about (i.e. How does political affiliation affect people's views on climate change? Why have international climate negotiations been ineffective?) Research papers must be clearly written, utilize evidence to support arguments/assertions, and provide a thoughtful, detailed analysis of the topic. This assignment is broken into several parts to make it more manageable and to help you succeed:

1. A one page description of your paper topic and a bibliography of relevant sources is due on March 3rd. This will not be graded, but you will get feedback about your chosen topic and the sources you are planning to use.
2. An optional *complete* draft of your paper can be turned in on or before March 26th for feedback. I will provide extensive comments and indicate what you can do to improve your final paper (and grade). Drafts will not count towards your final grade, but you are almost guaranteed to do significantly better on your final paper if you turn in a draft!
3. Final papers are due on May 11th by 5:00 pm (please feel free to email them to me). Papers should be 8-10 pages long, 12 point font, double-spaced, 1 inch margins. In-text citations and a bibliography must be used.

Research Paper Content:

Be sure to briefly introduce your topic/issue and spend the bulk of your paper on a detailed analysis of that topic, supporting your argument/claims with evidence from publications or other materials. Evidence can include results from scientific studies, quotes from politicians, the public, and others, historical information, anecdotes and examples, etc. To produce a high quality paper (an A paper), you will need to: Spend time in the literature, reading articles, reports, and other documents on your topic. Carefully outline an argument/flow of ideas for your paper. Write clearly! Support your arguments/claims with evidence (and citations). Provide your own insights and analysis.

Be sure to use quotation marks for any direct quotes from publications (you need to paraphrase and cite ideas that come from publications; you need to use quotation marks and cites for direct quotes from publications). We will discuss citations and bibliographies in class.

Short Presentation

Students will be required to provide a 5-minute presentation on their research paper topic on either May 7th or 11th. This presentation must be clear and concise and convey the key points of your analysis. You will not have time to use PowerPoint. Be sure to focus on your key points and practice to ensure that you do not exceed the 5 minute limit.

Course Schedule

Unit 1: Introduction

1/27 Class introduction

What is this class about and how do we think about climate and society?

Reading: none

1/29 Climate Change 101

The biophysical basis of climate change and key terms

Reading:

1. US Global Change Research Program (2009). *Climate Literacy: The Essential Principles of Climate Science*. Washington D.C., U.S. Global Change Research Program. (pp. 1-18).
2. "Overview" at the National Climate Assessment Website:
<http://nca2014.globalchange.gov/highlights/overview/overview>

2/3 Climate Change 102

An introduction to the social, economic, political, and ethical aspects of climate change

Reading:

1. Dryzek, J.S., et al. (2011) *Climate Change and Society: Approaches and Responses*. In J.S. Dryzek, R.B. Norgaard, and D. Schlosberg (Eds.), *The Oxford Handbook of Climate and Society* (pp. 3-20). Oxford: Oxford University Press.

Unit 2: Conceptualizing Impacts

2/5 Socioeconomic Impacts

Socioeconomic impacts from climate change both here in Montana and around the world

Readings:

1. Earthwatch Institute. (2009). *Climate Change: The Social and Economic Impacts*. Oxford: Conservation Education & Research Trust. (pp. 1-8).
2. The Nature Conservancy. (2009). *Climate Change in Montana*. (pp. 1-3).
3. "Climate Impacts on Society" at the EPA Climate Change Website:
<http://www.epa.gov/climatechange/impacts-adaptation/society.html>

2/10 Equity and Justice, Burdens and Blame

Ethical dimensions of climate change: Who is being harmed and who is responsible?

Readings:

1. Sagar, A. and P. Baer. (2010). Inequities and Imbalances. In *Climate Change Science and Policy*. Eds. Schneider et al. (pp. 251-261). Washington D.C.: Island Press.
2. Baer, P. and A. Sagar. (2010). Ethics, Rights, and Responsibilities. In *Climate Change Science and Policy*. Eds. Schneider et al. (pp. 262-269). Washington D.C.: Island Press.

2/12 Vulnerability

What does it mean to be 'vulnerable' to climate change? Who is vulnerable and why?

Reading:

1. Denton, F. (2002). Climate change vulnerability, impacts, and adaptation: Why does gender matter? *Gender & Development* 10:2, 10-20.

2/17 Migration, Security, and Climate Related Conflict

How climate change could reshape where people live and international relations.

Readings:

1. Homer-Dixon, T. (2007). Terror in the Weather Forecast. *The New York Times*. (pp. 1-3).
2. CNA Military Advisory Board (2014). *National Security and the Accelerating Risks of Climate Change*. Alexandria, VA: CNA Corporation. (pp. 1-47).

Unit 3: Understanding Different Views of Climate Change

2/19 Public Perceptions I: Polls and Public Opinion

What do people know and think about climate change?

Reading:

1. Weber, E. U., and P.C. Stern. (2011). Public understanding of climate change in the United States. *American Psychologist*, 66(4): 315-328.

2/24 Public Perceptions II: Politics, Ideology, and Science

What role do politics play in public perceptions of climate change?

Reading:

1. McCright, A. and Dunlap, R. (2011). The Politicization of Climate Change and Polarization in the American Public's Views of Global Warming. *The Sociological Quarterly* 52(2), 155-194.

2/26 Public Perceptions III: Americans as an Audience

Is there more to American perspectives on climate change than Politics?

Reading:

1. Take the survey from in the reading first at the Yale School of Environment's Website:
<http://environment.yale.edu/climate-communication/surveytool.html>
2. Leiserowitz, A., Maibach, E., and C. Roser-Renouf. (2008). *Global Warming's "Six Americas": An audience segmentation*. New Haven, CT: Yale Project on Climate Change Communication. (pp. 1-29).

3/3 Religion and Climate Change

A case study of religion beliefs and climate change perceptions in the US

****Research paper prospectus due in class****

Reading:

1. Max Transcript from Wylie's Master's Thesis (pp. 1-16)
2. Brandon Transcript from Wylie's Master's Thesis (pp. 1-11)

3/5 Climate Denial

A closer look at climate denial in the US

Reading:

1. McCright, A.M., and R.E. Dunlap. (2011). Cool Dudes: The Denial of Climate Change among Conservative White Males in the US. *Global Environmental Change* 21 (4): 1163-1172.
2. "Why are people still skeptical about climate change" at Talking Climate Webpage:
<http://talkingclimate.org/guides/beyond-climate-science-why-people-are-still-skeptical-of-climate-change/>

3/10 The Climate Denial Machine

An examination of the concerted effort to promote climate confusion and denial

Reading:

1. Dunlap, R.E., and A.M. McCright (2010). Climate change denial: Sources, actors, and strategies. In C. Lever-Tracy (Ed.) *Routledge Handbook of Climate and Society* (pp. 240-259). New York: Routledge.

3/12 Media and Communication

What are some effective and ineffective ways to communicate about climate change?

Reading:

1. Moser, S.C. and L. Dilling. (2011). Communicating Climate Change: Closing the Science-Action Gap. In J.S. Dryzek, R.B. Norgaard, and D. Schlosberg (Eds.), *The Oxford Handbook of Climate and Society* (pp. 161-174). Oxford: Oxford University Press.

Unit 4: Solutions and Decision-making

3/17 Behavior Change I

What can individuals do to stop climate change?

Readings:

1. Ropke, I. (2010). Ecological Economics: Consumption Drivers and Impacts. In C. Lever-Tracy (Ed.) *Routledge Handbook of Climate and Society* (pp. 121-130). New York: Routledge.
2. Calculate your Carbon Footprint and read about ways to reduce it on the EPA Climate Change Webpage: <http://www.epa.gov/climatechange/ghgemissions/ind-calculator.html>

3/19 Behavior Change II

Why don't individuals change their behavior?

Reading:

1. Gifford, R. (2011). The Dragons of Inaction: Psychological Barriers that Limit Climate Change Mitigation and Adaptation. *American Psychologist* 66(4): 290-302.

3/24 Mitigation I: Domestic Policy

Mitigation efforts and policy in the United States

Reading:

1. Bianco, N.M, et al. (2013). *Can the US Get There From Here?* Washington D.C.: World Resources Institute. (pp. 1–32).

3/26 Mitigation II: International Policy

Global governance and international policy

****Optional research paper draft due by 5pm****

Readings:

1. Leggett, J.A. (2011). *A U.S.-centric Chronology of the International Climate Change Negotiations*. Washington D.C.: Congressional Research Service. (pp. 1-10)
2. "Essential Background" on the UNFCCC website:
http://unfccc.int/essential_background/items/6031.php
3. "International Climate Negotiations and the UNFCCC Explained" on the ICLEI Website:
<http://www.icleiusa.org/action-center/affecting-policy/international-policy-resources/faq-on-the-unfccc-and-international-climate-negotiations>

3/30–4/3 Spring break, no class

4/7 Mock Negotiation I

Can we do better than the UNFCCC?

Reading:

1. Briefing materials for mock negotiation exercise – handed out in class on 3/26

4/9 Mock Negotiation II

In-class mock negotiations continued.

Reading: none

4/14 Adaptation I

Adaptation efforts and barriers in the United States

Reading:

1. National Research Council. (2011). *Adapting to the Impacts of Climate Change: Report in Brief*. Washington, D.C.: National Academies Press. (pp. 1-4).

4/16 Adaptation II

Global governance, policy, and adaptation efforts

Readings:

1. Hallegate, S. (2009). Strategies to adapt to an uncertain climate change. *Global Environmental Change* 19: 240-247
2. IPCC. (2014). Summary for Policy Makers. In: *Climate Change 2014: Impacts Adaptation and Vulnerability, Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. (pp. 1-34). Cambridge, UK: Cambridge University Press.

4/21 Climate Engineering I

Introduction and overview of social, political, and ethical concerns

Reading:

1. Keith, D. (2013). *A Case for Climate Engineering*. Cambridge MA: MIT Press. “Preface” and “Chapter 1: Engineering the World’s Sunshine” (pp. ix-18).

4/23 Climate Engineering II

Discussion about the role of climate engineering in addressing climate change

Reading:

1. Hulme, M. (2014). *Can Science Fix Climate Change?* Cambridge, UK: Polity Press. “Preface” and “Chapter 1: Imagining an Engineered Climate” (pp. viii-31).

4/28 Changing Social Structures I

Going beyond mitigation and adaptation to consider deliberative transformation

Reading:

1. O'Brien, K. (2012). From Adaptation to Deliberative Transformation. *Progress in Human Geography* 36(5): 667-676.

4/30 Changing Social Structures II

Considering different economic models and new lifestyles

Reading:

1. Hulme, M. (2009). *Why We Disagree About Climate Change*. Cambridge, UK: Cambridge University Press. "Chapter 10: Beyond Climate Change" (pp. 322-365).

5/5 Flex day

Extra day to spend more time on topics of interest

Reading:

To be announced

5/7 Last day of class

Student presentations

Reading: none

5/11 Exam Period (1:10-3:10pm)

Student presentations

****Research paper due by 5pm****

Reading: none

General Grading and Attendance Policies

Because your presence in class has an important effect on your learning, attendance will be recorded and counted toward your participation grade. There will be no penalty for missing three class periods. Missing more than three class periods will affect your grade. If you have an emergency that interferes with attendance, please let me know and I will take the circumstances into account (but please know that I may ask for documentation).

If you miss class at any time, you are responsible for inquiring about any missed in-class reading quizzes, activities, etc. Late research papers will be accepted, but your grade will be lowered at least one letter grade (and potentially more depending on your circumstances and how late the paper is – *bottom line: if you are late with your research paper, you should still turn it in, but get it to me as soon as possible*).

Please note that this class is offered for *traditional letter grade only*; it is not offered under the credit/no credit option.

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the [Student Conduct Code](#).

Grading Scale

Final course grades will be determined based on the following scale:

93-100 A	73-77 C
90-92 A-	70-72 C-
88-89 B+	68-69 D+
83-87 B	63-67 D
80-82 B-	60-62 D-
78-79 C+	59- F

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students (DSS). If you think you may have a disability adversely affecting your academic performance, and you have not already registered with DSS, please contact DSS in Lommason 154 or 406.243.2243. I will work with you and DSS to provide an appropriate modification.

Important Dates for Changing Course Options:

To 15 th instructional day	Students can drop classes on Cyberbear with refund	February 13 = last day
16 th to 45 th instructional day	Drop requires form with instructor and advisor signature, a \$10 fee from registrar's office, student will receive a 'W' on transcript, no refund.	February 14 through April 6
Beginning 46 th instructional day	Students are only allowed to drop a class under very limited and unusual circumstances. Not doing well in the class, deciding you are concerned about how the class grade might affect your GPA, deciding you did not want to take the class after all, and similar reasons are not among those limited and unusual circumstances. If you want to drop the class for these sorts of reasons, make sure you do so by the end of the 45 th instructional day of the semester.	April 7