

School of Global Studies
SGS 494
Senior Capstone: Coping with Climate Change
Spring 11



Instructor:
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Time: T Th 4:40-7:30
Location: WHALL 167
Line #: 16220

Office Hours:
Tues 12:30-2:30 pm
Other times by email appt.

Course Description

This is an advanced seminar that will explore topics in social and political aspects of climate change. We will look at the science of climate change and how the scientific process works and why it has been so contested in some quarters; the existing and predicted physical, economic and societal impacts of climate change; how vulnerability to climate change is measured and whether societies will be able to adapt to forecasted changes; the ethical and social justice dimensions of acting or not acting on climate change; the international relations strategies for climate change mitigation that have been tried to date, as well as country and subnational strategies; and the economic costs of action and inaction.

Required Reading

We will make use of several books in the course. All are available for purchase at the bookstore or online.

- * Archer, D and Rahmsdorf, S. (2009) *The Climate Crisis*. Cambridge University Press. ISBN 978-0-521-73255-0.
- * Lynas, M (2007). *Six Degrees: Our Future on a Hotter Planet*. National Geographic Press. ISBN 978-1-4262-0385-5.
- * Hulme, M (2009). *Why We Disagree about Climate Change: Understanding Controversy, Inaction and Opportunity*. Cambridge University Press. ISBN 978-0-521-72732-7.

We will supplement these books with a number of required readings that will be posted on Blackboard as the course progresses. Students are responsible for monitoring Blackboard and announcements in class and keeping up on these additional readings.

Requirements & Grading

This course will serve as a vehicle to emphasize reading skills, discussion skills, writing skills, and research skills of the student; this is a capstone, which is supposed to be the culmination of your SGS career. As a result, there will be a fairly

intense amount of reading spread throughout the semester. Please budget your time for homework that you can devote the necessary time to staying up to date with the readings. Students are expected to do all of the required readings for the assigned dates and to be prepared to discuss them in class. I reserve the right to call on any student in class: please be prepared! As this is a small class, our discussions will not work if you do not do the readings ahead of time.

Written work and their points are listed in the table below. Dates and details of assignments will be finalized throughout the course. Please discuss with me if any assignment or due date is unclear.

Grades

There are 100 points that are possible to achieve in the work in this class. I will grade according to the following scale. (According to university policy, C- and D+ are not available.) Cutoffs are firm, especially given the use of pluses and minuses

Grading Scale

A	90 - 100
A-	89
B+	88
B	80 - 87
B-	79
C+	78
C	70 - 77
D	60 - 69
E	- 59

The points you will be graded on in the class include the following assignments:

Assignment	Points (100 total)	Due Date
Blog briefing	20	Depends on date chosen by student, by 5pm
Draft outline of research paper	10	Mar 1, 5pm
Course syllabus (group work)	20	March 29, 5pm
Final research paper	30	May 3, 5pm
Blog commenting/posting	10	All semester
Attendance/Participation	10	All semester

Written Assignments:

-- Blog briefing

You will be asked to choose one date on which you will answer the question posed by that class (listed on the syllabus) in a blog 'briefing' that consists of review of the readings assigned for that day, summary of the class discussion for that day, and additional links to resources online relating to that topic of the day that you found. This blog briefing will be posted on our public website (mcelweelab.clas.asu.edu) and will be due 1 week after the class in which we discussed these issues. Dates will be assigned the first week of class.

-- Blog commenting/posting

You will read the blog briefings done by fellow students and add your own comments and discussion to their briefings, along with other materials you have found on the topic at hand. Your comments should be active

throughout the semester and will count for 10 points of your grade.

-- Syllabus assignment (group work)

We will form groups in the class according to the SGS track you are most closely associated with. As a group of 3-4, you will develop a course syllabus for your track having to do with climate change (i.e. Conflict/Violence and Climate Change, Economic Development and Climate Change, etc). The syllabus will consist of selected readings you have found on this topics and an explanation of the major issues to be covered in your proposed course. Please follow the format of this syllabus in providing full bibliographic information, as well as annotations on the content (see <http://owl.english.purdue.edu/owl/resource/614/03> for examples). I suggest each group set up a Google Document for your syllabus to work on collectively. This syllabus will be due Mar 29.

-- Research Paper :

You will write a 12-20 page research paper looking at some aspect of climate change in depth with my approval (I suggest you also combine your paper topic with your chosen blog briefing topic to maximize your resources). More details on the content and format of the research paper will be discussed in class. You will need to start working on the paper early in the semester, as a draft outline and sample bibliography for the paper are due on **Mar 1**. I will make comments on these outlines to help you improve them as you work toward a final paper. You will need to meet with me during office hours to discuss your choice of paper and research strategies to complete it, so please see me so you can give yourself plenty of time to start working on it. The final paper will be due on the last day of class, **Tues, May 3**.

The criteria for the outline and bibliography is as follows:

1. The outline must be typed in 12 point font and be single spaced.
2. The bibliography must be in APA style (see <http://owl.english.purdue.edu/owl/resource/560/01/>)
3. The outline should consist of a clear research question/thesis and approach to your final paper, an outline of the key arguments you expect to make in the final paper, and a bibliography of initial sources consulted.
4. You must list 5 academic (peer-reviewed) sources that you have found on your topic, and brief annotations on their content (<http://owl.english.purdue.edu/owl/resource/614/03>).
5. The outline must be turned in on the date due of **Mar 1** on the BB website. .

The criteria for the research paper is as follows:

1. The paper must be typed in 12 point font and be double spaced.
2. The paper must be in APA style (see <http://owl.english.purdue.edu/owl/resource/560/01/>)
3. The paper must be turned in on the date due of **May 3** on the BB website for the class. You will be deducted 10 points for each day the paper is late. Failure to turn in a paper will result in a failing grade for this class.
4. You must have used 10 sources in your bibliography, of which a minimum of 7 will be academic (peer-reviewed) sources.
5. Papers should be proofed carefully, and please pay attention to readability and writing style, as well as to content. An A paper is not only well-researched, but well-written. If you need help with writing, please give yourself time to consult the on-campus Writing Center before the paper is due.

Blackboard Information

This course will have a Blackboard site. The site will contain the syllabus, and I will post on the website announcements, additional handouts/readings (there are lots of them and will be updated throughout the semester), as well as class PowerPoint presentations. The website is only a supplemental aid, and not a replacement for attending class. We will also have a class blog (mcelweelab.clas.asu.edu) which is open to the

public. More details will be discussed in class.

Attendance and Make-ups

Because this is a seminar and lecture class that meets only once a week, attendance and participation is an important part of making the class work. Excessive absences will detract from your participation grade. You will need to actively participate in most class sessions in order to earn the full 10 points for participation. Additionally, if you cannot attend a class it is YOUR responsibility to obtain notes, syllabi changes, assignments etc. from another student. If you know you will have to miss class in advance because of something beyond your control (NOT, for example, a routine appointment), let me know (with relevant documentation) in time to arrange when you should hand in your work. Make-up after the fact is available only for a documented emergency. Students who will miss class due to an athletic competition or other official university events are required to follow official ASU policies if they wish to make up an assignment. You must notify me immediately, and at that time we can make arrangements for turning in missed work. Those who fail to do so will not be accommodated.

Withdrawals and Incompletes

Please see me if you feel you will need to withdraw from the class. You will need to follow ASU and SGS rules on dates for withdrawal. I will not give incompletes for this course, except for extreme and ongoing situations such as family problems or illnesses that you or an immediate family member suffer that would make it impossible for you to come to class. Documentation is required. For more information, please see: <http://www.asu.edu/aad/manuals/usi/usi203-09.html>

Academic Dishonesty

Academic dishonesty is not tolerated in any shape or form. If you are unclear on what constitutes dishonesty, please see <http://clas.asu.edu/files/AI%20Flier.pdf> Dishonesty includes any forms of plagiarism, cheating on tests, turning in the same work for more than one class, and other things. **I have a zero tolerance policy on academic dishonesty: An initial incident will result in the student receiving no credit for the assignment. A second incident will result in a failure in the class, and a grade of XE is an option for cases in which I feel there has been serious misconduct. It is your responsibility to be aware of what plagiarism is, and not to do it in any shape or form.** There may be additional university consequences, including expulsion.

Other Policies

Please note the following.

1. There is no extra credit work.
2. The classroom is a place of mutual respect. Everyone is expected to treat each other and his/her questions and comments with civility. Cell phones must be off or on silent. Please, no text messaging, surfing websites, reading outside material, and the like during class. If you are using a computer during class I reserve the right to ensure you are using it for class purposes.
3. Announcements and instructions throughout the course (in class and on Blackboard) will amplify, supplement, and possibly change the syllabus. The student is responsible for keeping up-to-date on these announcements and for understanding any changes.
4. Email is a medium that should be used carefully. I do not answer emails immediately and especially not on nights and weekends, so be aware that emailing me the night before your assignment is due is not acceptable. Please plan ahead and try to make use of my office hours, not email, for more complicated or in-depth discussions.

5. If you have any disability or need any special consideration in the classroom or with assignments, please see me so that we can make appropriate arrangements. You may contact the Office of Disability Resources at (480) 965-1234 or www.asu.edu/drs for more information.

Outline and Schedule of Class Periods and Readings

--This schedule is subject to change – pay attention to Blackboard announcements--

* Indicates readings that will be posted on-line. The rest are from the required books.

Jan 18 Introduction

Jan 25 What are the basic scientific theories underpinning climate change?

Archer and Rahmstorf, Preface, Ch1, Ch2, Ch3

Hulme, Ch 2 The discovery of climate change

Feb 1 What are the key pieces of evidence showing anthropogenic climate change?

Archer and Rahmstorf, Ch 4, Ch 5, Ch 6

*NYT, 2010, As Glaciers Melt, Science Seeks Data on Rising Seas:

<http://www.nytimes.com/2010/11/14/science/earth/14ice.html?pagewanted=all>

*McDonald, G. 2010. Climate Change and Water in Southwestern North America Special Feature: Water, climate change, and sustainability in the southwest. *Proceedings of the National Academy of Sciences* 107 (50): 21256-.

*US EPA. 2010. *Climate Change Indicators in the United States* (skim)

Feb 8 What is the role of science and scientists in discussions of climate change?

Hulme Ch 3, The performance of science

*Oreskes, N (2004). "Beyond the Ivory Tower: The Scientific Consensus on Climate Change". *Science* 306 (5702): 1686

*Oreskes, N. (2007) "The Scientific Consensus on Climate Change: How Do We Know We're Not Wrong?" in *Climate Change*. Joseph F. DiMento, Pamela Doughman, eds. MIT Press, pp. 66-98.

* Schiermeier, Q (2009) Storm clouds gather over leaked climate e-mails. *Nature* 462 (26 Nov): 367

*Schiermeier, Q (2010). The real holes in climate science. *Nature* 463 (21 Jan): 284-287.

*Schiermeier, Q (2010) IPCC flooded by criticism. *Nature* 463 (Feb 4).

*The Economist (2010). The clouds of unknowing. *The Economist*, Mar 18th 2010.

*Merali, Z (2010). UK climate data were not tampered with. *Nature News*:

<http://www.nature.com.ezproxy1.lib.asu.edu/news/2010/100707/full/news.2010.335.html>

Feb 15 Why do some people still deny anthropogenic climate change is happening?

*McCright, A and R. Dunlap (2000). Challenging Global Warming as a Social Problem: An Analysis of the Conservative Movement's Counter-Claims. *Social Problems*, 47(4): 499-522.

* Hoggan, James (2010). *Climate Cover-up*, p 31-133 (skim)

*Will, G. (2009) Dark green doomsayers. *Washington Post* Feb 15.

*Leshner, A (2009) Don't let the climate doubters fool you. *Washington Post* Dec 9.

* McCright, A and R. Dunlap. 2008. A widening gap: Republican and Democratic views on climate change. *Environment* Sept/Oct.

* NYT (2010). Climate Change Doubt Is Tea Party Article of Faith. *The New York Times*, Oct 20.

Feb 22 What are the predictions for future emissions?

Archer and Rahmstorf, Ch 7

*Fisher, B.S et al (2007): Issues related to mitigation in the long term context, In *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Inter-governmental Panel on Climate Change* [B. Metz, et al. (eds)], Cambridge University Press, Cambridge (skim)

- *Monastersky, R (2009) A burden beyond bearing. *Nature* 458 (30 Apr)
- *Davis, S. and K. Caldiera (2010). Consumption-based accounting of CO2 emissions. *Proceedings of the National Academy of Sciences*: www.pnas.org/cgi/doi/10.1073/pnas.0906974107
- *Selection from Berners-Lee, M. (2010). *How Bad are Bananas?* London: Profile Books.

Mar 1 What impact are predicted for the future?

Archer and Rahmstorf, Ch 8

Lynas, Ch 1-3 (to Three Degrees)

*U.S. Global Change Research Program (2009). Regional Climate Impacts: Southwest. In *Global Climate Change Impacts in the United States*.

* IPCC (2007). Summary for Policymakers (skim)

OUTLINE DUE

Mar 8 What are the worst case scenarios for impacts?

Lynas Ch 4-6 (to Six Degrees)

*Mann, M (2009). Defining dangerous anthropogenic interference. *PNAS* 106 (11): 4065–4066.

*Smith, J. et al (2009). Assessing dangerous climate change through an update of the Intergovernmental Panel on Climate Change (IPCC) “reasons for concern”. *PNAS* 106(11): 4133–4137.

*Parry, M et al (2008). Squaring up the reality. *Nature Reports Climate Change* 2 (June): p 68—70.

*Schneider, S (2009). The worst-case scenario. *Nature* 458 (30 Apr): 1104-1105.

March 13-20 Spring Break – No Class

Mar 22 Who is most vulnerable globally to climate change impacts?

*CARE (2008) *Humanitarian Implications of Climate Change*.

*Morris, R (2009) What happens when your country drowns? *Mother Jones* November 30, 2009.

*Gemenne, F (2011). Climate-induced population displacements in a 4° C+ world. *Phil. Trans. R. Soc. A* 2011 369, 182-195

*Klein, R. (2009). Identifying Countries that are Particularly Vulnerable to the Adverse Effects of Climate Change: An Academic or a Political Challenge? *Carbon & Climate Law Review* 3

*Morello-Frosch, R et al (2009). *The Climate Gap: Inequalities in How Climate Change Hurts Americans & How to Close the Gap*.

Mar 29 Can people just adapt to climate changes?

*Orlove, B. (2005) Human adaptation to climate change: a review of three historical cases and some general perspectives. *Environmental Science & Policy* 8 (2005) 589–600

*Smithers, J and B. Smit (2008) Human adaptation to climatic variability and change. In *The Earthscan Reader on Adaptation to Climate Change*. Earthscan: London.

*Adger, WN et al. (2007). Assessment of adaptation practices, options, constraints and capacity. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, et al. , Eds., Cambridge University Press, Cambridge, UK, 717-743 (skim)

* Adger, WN and Barnett, J. (2007) Four reasons for concern about adaptation to climate change. *Environment and Planning A* 41: 2800 - 2805

*Cruce, T (2009) *Adaptation Planning – What U.S. States and Localities are Doing*. Pew Center on Global Climate Change.

Assignment: GROUP SYLLABUS DUE

Apr 5 How do values and risk assessment influence our willingness to act to mitigate climate change?

Hulme Ch 5, The things we believe, Ch 6, The things we fear & Ch 7, The communication of risk

* Leiserowitz, A. (2007) Communicating the risks of global warming: American risk perceptions, affective images, and interpretive communities. In S. C. Moser & L. Dilling (Eds.), *Creating a climate for change: Communicating climate change and facilitating social change* (pp. 44-63). New York: Cambridge University Press.

*Yale Project on Climate Change (2009). *Global warming's six Americas 2009*.

April 12 What are the policy options to mitigate climate change?

Archer and Ramsdorf, Ch 8, Ch 9

Hulme Ch 9, The way we govern

*Gupta, J (2010) A history of international climate change policy. *Wiley Interdisciplinary Reviews: Climate Change* 1 (5) pp. 636-653

*Stavins, R and Stowe, R (2010) What Hath Copenhagen Wrought? A Preliminary Assessment. *Environment* 52(3)

*Rogelj, J. Et al (2010). Copenhagen Accord pledges are paltry. *Nature* 464 (22 April): 1126-1128.

April 19 What are the economic costs of different policies?

Hulme Ch 4, The endowment of value

*Stern, N. (2006). Executive Summary of *The Stern Review: The Economics of Climate Change*.

*Economist (2009) Is it worth it? What economists have to say about mitigating climate change. *The Economist* Dec 3, 2009.

*Heburn, C (2007) Carbon trading: a review of the Kyoto mechanisms. *Annu. Rev. Environ. Resour.* 2007. 32:375–93

*Skjærseth, J and J. Wettestad (2009) The Origin, Evolution and Consequences of the EU Emissions Trading System. *Global Environmental Politics* 9(2): pp. 101-122

Apr 26 What are some US domestic policy actions?

*Harrison, K. (2010) "The US as outlier: Economic and Institutional Challenges to US climate policy." In *Global Commons, Domestic Decision: The Comparative Politics of Climate Change*, ed. K Harrison and L Sundstrom. Cambridge: MIT Press

*Burger, N. et al. (2009) In Search of Effective and Viable Policies to Reduce Greenhouse Gases. *Environment* 51(3)

*Dickenson, T. (2010. Climate bill, RIP. *Rolling Stone*, July.

*Pooley, E. (2010). In Wreckage of Climate Bill, Some Clues for Moving Forward. *Yale Environment* 360

*NYT, 2010. In Kansas, Climate Skeptics Embrace Cleaner Energy. *The New York Times*, Oct 18
Climate Bill, R.I.P.

*Lutsey, N and D. Sperling. (2008) America's bottom-up climate change mitigation policy. *Energy Policy* 36: 673–685

May 3 What else can be done?

Hulme Ch 8, The challenges of development, Hulme, Ch 10, Beyond climate change

Lynas, Choosing our Future

*Aldy, J and R. Stavins (2008) Climate policy architectures for the post-Kyoto world. *Environment* 50(3): 7-17.

* Specter, M (2008) Big Foot. *The New Yorker* Feb 25.

*Revkin, A (2007) Carbon-neutral is hip, but is it green? *The New York Times* April 29.

*Dietz, T et al (2009). Household actions can provide a behavioral wedge to rapidly reduce U.S. carbon emissions. *PNAS* 106(44):18452-456.

*Selection from Goodall, C (2010) *How to Live a Low-Carbon Life*. London: Earthscan

FINAL PAPER DUE