

Enst./ Inst. 282: History of Global Climate Change

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How has the Earth's climate changed over time? Are human activities, such as burning of fossil fuels, redistributing fresh water, and changing land use patterns, contributing to global climate change? This course examines changes in Earth's climate through both geologic and recent time scales and considers the methods and technology we use to infer past changes and monitor present conditions. We address the degree of certainty or uncertainty regarding the rate and magnitude of present changes, the possible connections to human activities, and the likelihood of changes in the near future. We consider the history and present state of public awareness of and attitudes towards climate change and how governmental policies address, or don't address, climate change.

Course Requirements:

The following books are required reading. They are available for purchase at the College Bookstore:

Readings:

- Michael Davis, Late Victorian Holocausts: El Niño Famines and the Making of the Third World. London: Verso, 2001.
- Jared Diamond Collapse: How Societies Choose to Fail or Succeed. New York: Viking, 2005.
- Frances Drake, Global Warming: The Science of Climate Change. London: Arnold, 2000.
- Brian Fagan, Floods, Famines and Emperors: El Niño and the Fate of Civilizations. New York: Basic Books, 1999.
- Fred Spier, The Structures of Big History: From the Big Bang until Today. Amsterdam: Amsterdam University Press, 1996.
- David G. Victor, Climate Change: Debating America's Policy Options New York: Council on Foreign Relations, 2004.

In addition we've assigned chapters from books, papers, and articles from a three-part series in the New Yorker. All these readings are available on Reserve at the Library. [Some of the assigned readings will also be available as downloadable pdf files on the course Blackboard site.](#)

The final paper should contribute to the debate on climate history. While we're open to suggestion some possible topics include:

Choose a historical a case study that we have not considered in one of our assigned texts and compare this case with some of the societies that we've studied. What are the similarities? What **are the** differences? How does this case contribute to the analyses? How does it challenge them?

Examine the current scientific understanding, and lack thereof, of one of the following: glacial recession, declining Arctic ice cover and thickness. What are the current issues debated by scientists? What do you think are the most interesting and or urgent areas for study?

Consider the relationship between human population growth, and the control or lack of control of population growth, and subsequent environmental stress and societal collapse or sustainability. How have previous societies managed to control population growth?

Disabilities: Academic accommodations are available for students with disabilities who are registered with the Office of Disability and Support Services. Please schedule an appointment with me early in the semester to discuss any accommodations that may be needed for the course. All accommodations must be approved through the Office of Disability and Support Services (x 7584) as indicated in their accommodation letter.

Short three or four page “controversy” paper 10%, due Feb. 14.

Mid Term 20%, March 4 in class

Preliminary Statement of the Final paper is due on Feb. 19,

A second draft that includes a bibliography is due on March 27.

Final Paper 30%, due May 6. A longer eight to twelve page research paper.

Final Exam 25% TBA

Course Participation 15%

All papers must be handed in at the beginning of class on the day that they are due. Your paper grade will go down by one-third letter grade for every day that the paper is late. All written work must be typewritten on standard letter-sized paper, double-spaced, in a 12 point font with one inch margins. Please staple your papers and put your name on them before submission.

Plagiarism, presenting someone else's work as your own, is not acceptable and could result in a flunking grade or even expulsion. Some cases of plagiarism are open and shut but some are the result of poor judgment or inadequate knowledge of citation practices. If you have any questions about plagiarism consult *Originality and Attribution: A Guide for Student Writers at Vassar College* or come to me.

Remember that the internet remains a frail and undependable means of communication. It's better to come and see me to discuss important problems rather than to discuss

problems over the internet. All papers must be submitted in hard copy. Electronic submissions are not acceptable.

What follows is a list of assigned readings. Readings must be completed before the class on the date indicated in order to properly participate in discussions.

- Jan. 24 **Introduction**
- Jan. 29 **Big History**
Fred Spier, The Structures of Big History (SBH), pp. 1-44.
- Jan. 31 **Big History**
Spier, SBH, pp. 45-88.
- Feb. 5 **Global Warming**
Frances Drake, Global Warming (GW) pp. 1-27
- Feb. 7 **Global Warming**
Guest Speaker: Professor Kirsten Menking, Vassar, Geology, "How Geologists Reconstruct Climate History: Examples from the Estancia Basin of New Mexico."
Drake, GW, pp. 28-67.
- Feb. 12 **Global Warming**
Drake, GW, pp. 68-102
- Feb. 14 **Global Warming**
Drake, GW, pp. 103-169.
Controversy Paper due
- Feb. 19 **Contemporary Issues**
Jared Diamond, Collapse, Chapter 1 "Under Montana's Big Sky" pp. 25-76,
Elizabeth Kolbert, "The Climate of Man-I," **The New Yorker**
First draft of final project idea due
- Feb. 21 **Humans Take Control: Agriculture and Its Problems**
William F. Ruddiman, Plows, Plagues & Petroleum: How Humans Took Control of Climate. Chapters. 11-14, pp. 55-118.
Fagan, Floods, Famines and Empires (FFE) "The Little Ice Age," pp. 181-247
- Feb. 26 **The Norse**
Diamond Collapse, Chapters 6, 7 & 8, "The Viking Prelude and Fugue, " "Norse Greenland's Flowering," and Norse Greenland's End," pp.

178-276

- Feb. 28 **Polynesia**
Diamond, Collapse, Chapter 2 & 3, Twilight at Easter,” “The Last People Alive: Pitcairn and Henderson Islands, pp. 79-135.
- March 4 **Mid-term exam**
- March 6 **El Nino and Global Teleconnections**
Fagan, FFE. p. 3-72
Mike Davis, Late Victorian Holocausts (LVH) Chapter Eight, “Climates of Hunger,” pp.238-276.
- March 25 **Contemporary Issues**
Elizabeth Kolbert, "The Climate of Man-II," **The New Yorker** April 25, 2005. pp. 56-71.
- March 27 Late Victorian Holocausts-I
Davis, LVH, “The Great Drought” pp. 23-115.
Second draft of final project idea and initial bibliography due
- April 1 **Late Victorian Holocausts II**
Davis, LVH, “El Niño and the New Imperialism,” and “The Political Economy of Famine,” pp. 117-209, 279-310.
- April 3 **Climate History at the Movies**
"Convenient Fiction"
- April 8 **Contemporary Issues**
Diamond, Collapse Section Four, Chapter 14, “Why do some Societies Make Disastrous Decisions?”, “Big Business and the Environment” “The World as a Polder: What does It all Mean to Us Today” Chapters 15-16, pp. 417-526
- April 10 **Global climate models**
Elizabeth Kolbert, "The Climate of Man-II," **The New Yorker** May 2, 2005. pp. 64-73.
Drake, GW, pp. 171-202;
- April 15 **Rapid Climate Change**
“Reporting on Climate Change: Understanding the Science” (RCCUS)
pp. iii-38
- April 17 **Rapid Climate Change: How Would We Know?**

RCCUS pp. 39-74.
Drake, GW, pp. 203-227.

- April 22 **What can be done? Prudence vs societal costs**
Elizabeth Kolbert, "The Climate of Man-III," The New Yorker
May 9, 2004, pp. 52-63.
IPCC TAR-18 "Adaptation to Climate Change in the Context of
Sustainable Development and Equity" pdf
- April 24 David G. Victor, Climate Change: Debating America's Policy Options.
pp. 1-88
- April 29 Victor, Climate Change. pp. 89-114.
Drake, GW, pp. 228-248/
- May 1 Projects
- May 6 Projects
FINAL PAPER DUE

Final project ideas: