The Archaeology of Climate Change
ANT324L (Unique #31330/#37845)
Fall 2013

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Office: CLA 4.402
Office Hours: Tuesdays 2:30pm – 3:30pm;
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Time: Tuesday and Thursday, 12:30 – 2:00 pm
Location: SAC 4.174

Course Description: Climate change has impacted human societies over the course of human existence on the planet. It has played a role in everything from hominin evolution to the rise and fall of civilizations through to the present day economic and ethical decision-making. In this course we will examine why climate changes, the methods for recording climate change, and discuss case studies of the varied responses of past human societies to climate change in different geographic regions and time periods with varying socio-political and economic systems. We will explore aspects of resilience and rigidity of societies and issues of environmental sustainability in the past as well as the present. Finally we will compare and contrast modern responses to climate change on a global scale with those of past societies.

Goals: To familiarize students with the evidence for climate change and methods of climate change research; to increase their understanding of the social, economic and technological issues human societies faced in the past when dealing with climate change. To understand what were adaptive and maladaptive human strategies. To help students evaluate the modern politics and social responses to climate change. On successful completion of this course a student should understand how climate change is recorded and the basic climatic record for the period of human occupation of the earth. To be familiar with current debates about how human societies adapt to climate change. To be able to think critically about issues and arguments proposed in the literature, and to write a coherent essay arguing a point of view.

Flags: 
Ethics and Leadership
This course carries the Ethics and Leadership flag. Ethics and Leadership courses are designed to equip you with skills that are necessary for making ethical decisions in your adult and professional life. You should therefore expect a substantial portion of your grade to come from assignments involving ethical issues and the process of applying ethical reasoning to real-life situations.
Global Cultures
This course carries the Global Cultures flag. Global Cultures courses are designed to increase your familiarity with cultural groups outside the United States. You should therefore expect a substantial portion of your grade to come from assignments covering the practices, beliefs, and histories of at least one non-U.S. cultural group, past or present.

Requirements: The class will have regular lectures and class discussions; student participation is required. Students are expected to regularly attend all classes, complete the assigned readings in advance of class, and come ready to discuss readings or topics.

In addition to consistent classroom attendance and active participation, each student must complete all of the following:

1) Two in-class tests (15% each = 30% total) (Dates: Oct 1st and Nov 14th 2013)
2) A short (2-minute) in-class presentation (20%) concerning the impact of climate change on past societies (Dec. 3rd or Dec. 5th, attendance mandatory)
3) One 5 page (maximum) Term Paper (40%) on a topic concerning ethical issues of combating global climate change, past, present or future, DUE DATE: November 25, 2013
4) Class participation (i.e. active involvement in discussions, attendance, etc.) will count for 10% of the final grade.

Policy on late assignments: A late assignment will only be accepted with prior approval from the instructor. In this case, only a one-week extension of the deadline will be granted and 50% of the points possible will be deducted from the final assignment grade.

Grading Scale: 90 – 100 = A; 80 – 89 = B; 70 – 79 = C; 60 – 69 = D; 59 and below = F

Schedule and Assigned Readings
Subject to change

Theme 1: Tools for Understanding the Human Face of Climate Change

1) August 29: Introduction to the Class: Course organization, assignments and objectives;

2) September 3: Historical and Theoretical Background: Historical background to the discovery that climates change; Theoretical Perspectives: Climatic Determinism (the ‘zip-code lottery’ of climate and culture), Cultural Ecology, Political Ecology; Nature/Culture Debates.


4) September 10: The Impact of Climate Change on Human Communities: ENSO, Human Responses to Climate Change; Perception of Climate Change; Scales of Change; Adaptation; Resilience; Sustainability.


5) September 12: The Anthropocene: Biodiversity, Quaternary Extinctions, Sea Level Rise, the Ethics of Climate Change.


6) September 17: Reconstructing Past Climate Change: How do we learn about climate change in the past? Isotopic Records from Sea and Ice Cores; Pollen Studies; the Terrestrial Geological Record.


7) September 19: In Class Exercise: Building and Interpreting a Climatic History
Read the following chapter. Come to class prepared to use the data described in this chapter to construct a climatic sequence graph. Please bring graph paper, pencils, erasers, etc. You will work together in small teams.

Theme 2: Climate Change, Human Origins and Colonization of the Globe

8) September 24: Climate Change and our Early Ancestors; How did global climate change and a catastrophic volcanic blast help shape us?


9) September 26: Climatic influences on human environments from the Late Pleistocene to the Middle Holocene. Hunter-gatherer adaptations to fluctuating climates; How changing landscapes and coastlines influenced migrations and human adaptations.


10) October 1: In-Class Test

Theme 3: The Role of Climate Change in the Origins and Spread of Agriculture

11) October 3: Did climate change force the origins of agriculture? The critical importance of agriculture for the origins of civilization and complex societies. What was the role of climate change in the beginnings of cultivation?


12) **October 8: Spread of Rice Farming and its Impact:** The spread of rice farming in the Chinese Neolithic and beyond. How climate influenced farmers – how farmers influenced climate;


13) **October 10: The Desert vs the Sown:** Farmers and pastoral nomads in marginal lands.


14) **October 15: Discussion Topic: Perceiving and Managing Risk, is it better to be a farmer or forager when climates change?** One article-reading assignment will be handed out to each discussion group in the previous week. Groups will assemble in-class and prepare a discussion. Articles to be confirmed (Smith 2001; Asouti and Fuller, Zeder, Bar-Yosef; Rosen, Arlene M. (2010). Natufian plant exploitation: Managing risk and stability in an environment of change. *Eurasian Prehistory* 7(1):117-131.)

**Theme 4: Climate Change and the Collapse of Civilizations (Nature pleads “not guilty”)**

15) **October 17: The Rise and Collapse of Early Bronze Age cities of the Near East (Climate or Culture, Who is to blame?)**


16) October 22: Death on the Nile (in class video)

17) October 24: Roman Expansion into the Desert: Better Climate or Good Organizational Skills?


18) October 29: Student-Led Class Discussion: Maya Collapse, Did Climate Change Play a Role?


19) October 31: China’s Sorrow: Feast and Famine along the Yellow River.


20) **November 5: Southeast Asia: Climate Change and the Demise of Angkor, Cambodia**


21) **November 7: Easter Island**


22) **November 12: The Political Ecology of Drought Cycles in Native America**: Cahokia, Native Anasazis, Colonial Spaniards and the Pueblo Revolt.


Benson, Larry V., Timothy R. Pauketat, and Edward R. Cook 2009  Cahokia’s Boom and Bust in the Context of Climate Change. American Antiquity

23) **November 14: In Class Test**

24) **November 19: The Little Ice Age and its impact on the Greenland Norse populations.**


25) **November 21: Student Discussion: Societal Responses to Climate Change in Recent History**


26) **November 26: Cataclysmic Climate Change: Secrets of the Dead: Catastrophe!** (In-class video)

**November 28: No Class – Happy Thanksgiving!**

27) **December 3: Student Presentations:**

Attendance mandatory for both sessions of presentations; 5% subtracted if absent without acceptable excuse (my definition)
28) December 5: Finish Student Presentations; The Ethics of Climate Change in our Modern Age; The impact of global climate change on localities today, how climate change is represented in the media – are there hidden messages behind the coverage?; who controls information about climate change in politics and education? Who will be the ‘winners’ and who the losers with global warming? Global climate change: What Lies Ahead?


Additional Information

Disabilities
Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 512-471-6259, [http://www.utexas.edu/diversity/ddce/ssl/](http://www.utexas.edu/diversity/ddce/ssl/)

**UT Honor Code (or statement of ethics) and an explanation or example of what constitutes plagiarism:** [http://registrar.utexas.edu/catalogs/gi09-10/ch01/index.html](http://registrar.utexas.edu/catalogs/gi09-10/ch01/index.html)

**Accommodations for religious holidays:** By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.