



WEB COURSE

# THE ARCHAEOLOGY OF ENVIRONMENTAL CHANGE

(Anth 316-700)

Fall 2022

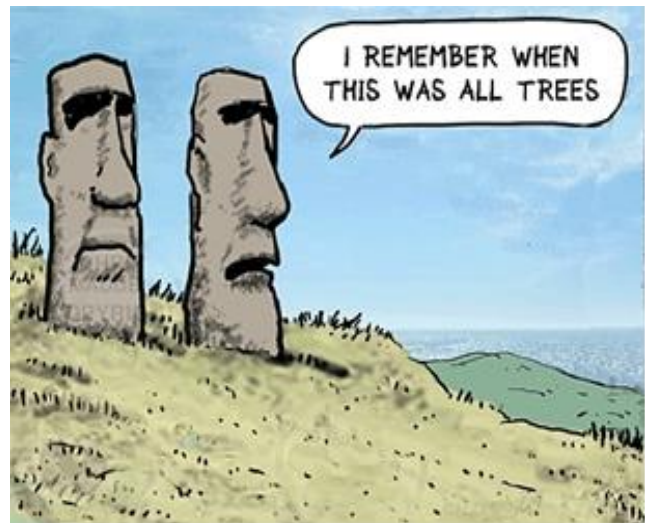
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**Office Hours:** T & Th 12:00-12:30pm; 2:15-2:45pm. I am also happy to set up a ZOOM meeting. If you have questions, please email me. I check my e-mail at least once a day, 5 days/week and will respond to all questions/problems within 24 hours, except on weekends and holidays.



“Environmental change” has become one of the most debated topics of our time. But is environmental change a new phenomenon? Or have humans been faced with climate change and been active agents of environmental change over longer periods of time?

This course will reveal how the deep time historical perspective of archaeology can contribute to a better understanding of humans’ relation to the environment and demonstrate how some of the environmental challenges facing humanity today can be better approached through an attempt to understand how past societies dealt with similar circumstances in the past. Concretely, we will examine the methods for recording environmental change and discuss case studies of the varied responses of past human societies to environmental change in different geographic regions and time periods with varying sociopolitical and economic systems. We will also explore aspects of resilience and rigidity of societies and issues of environmental sustainability.

In order to accomplish this, this course will draw upon an increasingly large body of empirical evidence from different regions of the world and from different time periods and explore a rapidly growing body of knowledge that is explicitly interdisciplinary, at the interface between archaeology, ecology, history, geography, environmental studies, geomorphology, and many other disciplines. Therefore, this course will appeal to a broad range of students interested in human-environment relationships and sustainability.

## Course Format

This is an asynchronous Web Course delivered completely through WKU’s *Blackboard* system, which means you work on the materials and turn things in on or before the due date. In *Blackboard*, you will access online video lectures, readings, films, assignments, quizzes, and resources. Accordingly, you must have access to a functional computer and a reliable Internet connection. You must also know how to use *Blackboard* before the course begins.

» Detailed **Weekly Lesson Plans** with objectives and learning outcomes are posted on the course’s *Blackboard* page to help students plan, structure, and prioritize study time.

**Learning Outcomes**

<p>In ANTH 316, students will examine local and global issues within the context of an increasingly interconnected world. In an age of global climate change, social unrest in many parts of the world, and a myriad of associated challenges here at home, students will examine human-environment relationships in different geographic regions and time periods with varying sociopolitical and economic systems in order to understand what were adaptive and maladaptive human strategies. This deep time historical perspective will in turn help students better evaluate the modern politics and social responses to climate/environmental change on both local and global scales in order to contemplate the implications of these on sustainable development.</p>	
<p><i>Connections Student Learning Outcomes</i></p>	<p><i>How does the course meet these learning outcomes?</i></p>
<p>1. Analyze issues on local and global scales.</p>	<p>Students will analyze a range of issues pertaining to human-environment interactions on both local and global scales. For example, students will analyze how different human social, political and economic motivations have impacted their environments differently through time – sometimes with success, sometimes not. A concrete example of this is examining ancient (and sometimes not so ancient) agricultural and water management practices in east and southeast Asia, northeast Africa, and the Middle East and comparing these to current practices in the US in order to contemplate the implications of these varied motivations on sustainable development.</p>
<p>2. Examine the local and global interrelationships of one or more issues.</p>	<p>Students will examine various case studies that deal with how local human actions can affect the environment both locally and globally and how global environmental change can affect human societies and cultural heritage resources locally in different ways. For example:</p> <p>In an age of global climate change, social unrest in many parts of the world, and a myriad of associated challenges here at home, students will examine the relationship that may exist between global climate change and instances of social conflict over the past 10,000 years all over the world.</p> <p>Another example involves examining the effects of climate change on cultural heritage resources. While climate change is global, a lot of consequences and solutions are local. Students will examine various ways archaeologists are dealing with the threats of rising sea levels, increased rainfall, creeping desert sands, and the melting of ice on archaeological sites here in the US and abroad – sites that are often a source of local identity, pride, and even income for many communities.</p>

<p>3. Evaluate the consequences of decision-making on local and global scales.</p>	<p>Students will consider the technological and cultural mechanisms people have developed over both short and long terms in the wake of ecological change, sometimes with success, other times facing catastrophes that led to urban abandonment and societal collapse.</p> <p>Students will evaluate the consequences of short-term economic and political concerns on sustainable lifeways in various world regions in the past and draw comparisons with such current concerns locally.</p> <p>Students will compare and contrast modern responses to climate change on a local and global scale with those of past societies, focusing specifically on consequences that are currently relevant, e.g. scapegoating, famine, migration, conflict.</p>
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In addition, it is my intent that by the end of the semester and upon successful completion of this course, students should be able to:

- Demonstrate a basic understanding of the approaches to environmental reconstruction and archaeological analysis
- Evaluate the social, economic, and technological issues human societies faced in the past when dealing with environmental change
- Assess what were adaptive and maladaptive human strategies in dealing with environmental change in the past
- Evaluate current debates about how human societies adapt to environmental change
- Think critically about issues and arguments proposed in the literature on environmental change.

» In this course, **regular and substantive interaction** will take place in the following ways:

- Weekly announcements and information about the content of the course (including instructions for upcoming assignments and reminders of upcoming deadlines),
- Timely and detailed feedback on assignments provided within one week of submission, and
- Scheduled face-to-face office hours with a virtual option.

**Required Readings:**

Because of the vastness of the topic matter for this class, there is no required textbook. Instead, reading assignments will come from research articles and individual book chapters that will be posted on *Blackboard*. The books listed below have additional helpful material, and you may wish to purchase or borrow them from the library.

The Archaeology of Environmental Change: Socionatural Legacies of Degradation and Resilience, edited by Christopher Fisher, J. Brett Hill, and Gary M. Feinman. 2009.

Human Impacts on Ancient Environments. Charles Redman. 2001.

**Note:** This document is a course syllabus, not a legal contract. As such, it is a good faith outline of course requirements and expectations. Note, however, that specific assignments, dates, deadlines, readings, and lecture topics are subject to alteration during the course of the semester. I will announce any changes via email. Finally, if you have questions, talk to me. I am always willing to discuss ideas or problems you might have.

### **Requirements and Grading: Total - 250 points**

Grading is based on 1) Syllabus Quiz: 5 points; 2) Midterm Assessment Test on basic concepts and methods: 60 points; 3) In-Video Quizzes: 75 points; 4) Reading Answers: 60 points; 5) Critical Article Review: 50 points.

**Midterm Assessment Test (60 points):** Assessment of basic terms, facts, concepts, and principles that will allow us to move forward during the second half of the semester and engage in more detailed and critical analyses of human-environment dynamics. The assessment test is a mix of multiple choice, true-false, and free-response questions. A study guide is provided one week before the midterm test. The test will be made available online in *Blackboard* on Friday 9/30 from 7:00am until 7:00pm. You will be able to take the test at any time during that 12 hour period, but once you begin you will have to complete it within a 1-hour period.

**In-Video Quizzes (75 Points):** These are short multiple choice & true-false questions embedded at the end of video lectures and films to assess content comprehension. They cover readings and video lecture/film content (so complete readings before watching videos). These are noted in parentheses in the Course Schedule below and will be announced at the beginning of each video lecture and film. They must be taken by Sunday 11:59 pm following the weekly schedule below.

**Reading Answers (60 points):** Reading Answers are short responses you are expected to write in reaction to six (6) of the topics we will cover this semester. A Word document (.doc) will be posted on *Blackboard*, which asks you specific questions about the week's readings. These questions are designed to focus your attention to important points and help you develop your critical thinking skills. These must be typed, using 12-point font, and uploaded through Blackboard. Reading answers are worth up to 10 points each, for a total of 60 possible points. Reading Answers are due via Blackboard by Sunday 11:59 pm starting Week 7 and following the weekly schedule below.

**Critical Article Review (50 points):** Choose a "peer-reviewed" article or book chapter (*not an unpublished Internet article from the web*) on a topic related to archaeology and climate/environmental change (see provided options on BB or another one subject to the instructor's approval). Write a review beginning with a summary of the article's contents and arguments. Then give your own critical evaluation including what may be unique about it and its significance (or lack of significance) to current local or global concerns (2-3 pages/~1000 words). I expect that you will use insights from the semester's readings and lectures.

**Grading Procedures:** I assign numerical grades (not letter grades) for each assignment. I will then calculate the final course grade by dividing the points earned by the total points possible. I then convert this percentage into a letter grade using a 10% scale: A (90-100%); B (80-89%); C (70-79%); D (60-69%); and F (less than 60% – we don't want any of these!). I do not curve final grades. In *some* cases, I may assign students with borderline percentages the higher grade based on improvement. **There is no extra credit, please do not ask.**

**NOTE:** Weekly content and assignments are posted by midnight CT each Sunday. **All assignments must be completed by 11:59pm CT on the following Sunday.** The only exceptions to this are the 'midterm assessment test' and the 'final assignment' (see schedule below). **Please note that the due dates/time will be strictly enforced.**

**How to Study for this Course:** Don't fall into the habit of being a passive learner, someone who just looks at the computer screen and thinks they have absorbed the material. If you want to succeed in this course, take good written notes when reading articles and when watching the online lectures—just like you would in a traditional lecture. Follow the **Weekly Lesson Plans** carefully.

**Build Rapport:** If you find that you have any trouble keeping up with assignments or other aspects of the course, make sure you let me know as early as possible. As you will find, building rapport and effective relationships are key to becoming an effective professional. Make sure that you are proactive in informing me when difficulties arise during the semester so that we can help you find a solution.

**Technology Requirements:** This is an online course, and all the work you do will require you to use a computer. You must have access to a functional computer and a reliable Internet connection. You must also know how to use Blackboard before the course begins. Always have a back-up plan in place. No make-up assignments or tests will be granted if your internet connection is not working. No exceptions.

Finally, your official WKU email must be used for all email correspondence related to this course. Check your official WKU email regularly.

**Email Communication:** Students can expect a response to emails within 24 hours, Monday through Friday. No emails will be answered after 5 pm on Friday until the following Monday.

**Blackboard:** Since this is an online course, you will be required to use WKU's Blackboard system. To access this class' page, students should visit and login using their WKU user ID and password. All assignments must be turned in via Blackboard and all grades and assignment feedback from the instructor will be posted there. It is recommended that students check the Blackboard page frequently for updates. Students can also download all of the class documents (syllabus, reading answers, assignments, articles, etc.) through the Blackboard page. Be sure that you check your WKU email regularly, since it is your WKU email that will be linked to the Blackboard system.

**Plagiarism:** Plagiarism will not be tolerated. Ideas that are not your own must be accompanied by a citation with the source and page number. Direct quotations must be in quotation marks and must also be accompanied by a citation. Paraphrasing is plagiarism. Copying another student or another author's work is cheating and is in violation of Western Kentucky University policy.

**Disability accommodation:** In compliance with University policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, 1074. SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at [sarc.connect@wku.edu](mailto:sarc.connect@wku.edu). Please do not request accommodations directly from the professor or instructor without a faculty notification letter (FNL) from The Student Accessibility Resource Center.

**Writing Center Assistance:** *The Writing Center on the Bowling Green campus* will have writing tutors available to offer advice to current WKU students on any stage of their writing projects. In-person tutoring is available in Cherry Hall 123 from 10-4 Monday through Friday and in the Cravens Commons (at the horseshoe-shaped reference desk) from 5-9 on Sunday through Thursday evenings. WKU students may also request feedback on their writing via email or arrange a real-time Zoom conference to discuss a paper. See instructions and how-to videos on the website ([www.wku.edu/writingcenter](http://www.wku.edu/writingcenter)) for making appointments. Walk-in feedback is available unless we are booked up. Students may also get short writing questions answered via email; just put "Quick question" in the subject line to ([writingcenter@wku.edu](mailto:writingcenter@wku.edu)).

*The WKU START Centers* will be offering writing tutoring sessions via Zoom as well as in person in their Glasgow and Elizabethtown locations. More information on how to make appointments and what to expect from your appointment will continue to be posted at (<https://www.wku.edu/startcenter/>).

### **HEALTHY ON THE HILL**

WKU's one-stop website with all Covid-19 related information.

# COURSE SCHEDULE

(FOLLOW THE ORDER OF READINGS AND ASSIGNMENTS)

SCHEDULE AND TOPICS	READINGS & ASSIGNMENTS
<p>Week 1</p> <p><b>Introduction to the Course:</b> Welcome Message Basic Concepts and Background</p>	<p><u>Readings:</u> Rosen, Arlene M. (2007). Holocene Climate and Society. In <i>Civilizing Climate: Social Responses to Climate Change in the Ancient Near East</i>. Altamira, Lanham, MD., Chapter 1, pp. 1-16.</p> <p><i>On the lighter side:</i> <a href="#">Archaeologist Brian Fagan on the Daily Show: 'The Great Warming'</a></p> <p><u>Assignments:</u> Syllabus Quiz Video Lectures Week 1 (in-video Quiz) Film - Out of the Past: Collapse (in-video Quiz)</p>
<p>Week 2</p> <p><b>Introduction to Archaeology:</b> Archaeology &amp; the relevance of the past for the future.</p>	<p><u>Readings:</u> Archaeology 101 (2018). Archaeological Institute of America, pp 1-4.</p> <p>Roddick, Andrew (2018). <a href="#">Using archaeology to understand the past, present, future of climate change</a>. <i>The Conversation</i>. Online article.</p> <p><u>Assignments:</u> Video Lectures Week 2 (in-video Quizzes)</p>
<p>Week 3</p> <p><b>Reconstructing Past Environments:</b> How do we learn about environmental change in the past?</p>	<p><u>Readings:</u> Dark, Petra (2008). Paleoenvironmental Reconstruction, Methods. In <i>Encyclopedia of Archaeology</i>, pp.1787-1790.</p> <p><i>Optional</i> (more detailed): Roberts, Neil (2014). <i>The Holocene: An Environmental History</i>. Blackwell, Oxford, Chapter 2, pp. 10-82. (There's lots here, but you can skim)</p> <p><u>Assignments:</u> Video Lecture Week 3 (in-video Quiz)</p>
<p>Week 4</p> <p><b>Human-Environment Interactions &amp; Conceptual Frameworks:</b> Resilience and the Adaptive Cycle.</p>	<p><u>Readings:</u> Redman, Charles L., Steven R. James, Paul R. Fish, and J. Daniel Rogers (2004). Introduction: Human Impacts on Past Environments. In <i>The Archaeology of Global Change: The Impact of Humans on their Environment</i>, edited by C.L. Redman, S.R. James, P.R. Fish, and J.D. Rogers, pp.1-8. Smithsonian Books, Washington.</p> <p>Redman, Charles L. (2005). Resilience Theory in Archaeology. <i>American Anthropologist</i>, 107: 70-77.</p> <p><u>Assignments:</u> Video Lectures Week 4 (in-video Quizzes)</p>



<p>Week 9</p> <p><b>Climate and Causation:</b> Is there a link between climate change, migration, conflict, and changes in social organization?</p>	<p><u>Readings:</u> Zhang, David D., Peter Brecke, Harry F. Lee, Yuan-Qing He, and Jane Zhang (2007). Global Climate Change, War, and Population Decline in Recent Human History. <i>Proceedings of the National Academy of Sciences</i> 104:19214-19219.</p> <p>Chen, Ed (2009). Climate Induced Migration and Conflict: Historical Evidence, and Likely Future Outlook. <i>Science</i> 2.0. (Note: Open Research article).</p> <p>Pederson, Neil, A. E. Hessler, N. Baatarbileg, K.J. Anchukaitis, and N. Di Cosmo (2014). Pluvials, droughts, the Mongol Empire, and modern Mongolia. <i>Proceedings of the National Academy of Sciences</i> 111(12):4375-4379.</p> <p><u>Assignments:</u> Video Lecture Week 10 (in-video Quiz) Reading Answers</p>
<p>Week 10</p> <p><b>Climate Change and the ‘Collapse’ of Civilizations:</b> Climate or Culture, who is to blame?</p> <p><b>Easter Island:</b> Did they “choose” to fail?</p>	<p><u>Readings:</u> Diamond, Jared M. (2005). Chapter 2: Easter Island, pp. 79-119. In <i>Collapse: How societies choose to fail or survive</i>. Penguin Books, London</p> <p>Hunt, Terry L. (2007). Rethinking Easter Island's Ecological Catastrophe. <i>Journal of Archaeological Science</i> 34(3):485-502.</p> <p><u>Assignments:</u> Video Lecture Week 11 (in-video Quiz) Reading Answers</p>
<p>Week 11</p> <p><b>Maya Collapse:</b> Did climate change play a role?</p>	<p><u>Readings:</u> Aimers, James J. (2012). Environment and Agency in the Ancient Maya Collapse. In <i>Climates, Landscapes, and Civilizations</i>, edited by Giosan, Liviu, Dorian Q. Fuller, Kathleen Nicoll, Rowan K. Flad, and Peter D. Clift, pp. 27-33. American Geophysical Union, Washington, DC.</p> <p>McAnany, Patricia A. and Tomás Gallareta Negrón (2010). Bellicose Rulers and Climatological Peril? Retrofitting Twenty-First-Century Woes on Eighth-Century Maya Society. In <i>Questioning Collapse</i>, ed. by Patricia A. McAnany &amp; Norman Yoffee, pp. 142-175. Cambridge University Press, Cambridge.</p> <p>Optional: Film - <a href="#">Ancient Apocalypse: The Maya Collapse</a></p> <p><u>Assignments:</u> Video Lecture Week 12 (in-video Quiz) Reading Answers</p>

<p>Week 12</p> <p><b>Can we learn from the mistakes of the past?</b></p>	<p>Film - Collapse 2210 (in-video Quiz)</p> <p><i>Imagine if hundreds of years from now, scientists excavated the abandoned ruins of some of our largest cities, what conclusions would they come to?</i></p>
<p>Week 13</p> <p><b>Societal Responses to Environmental Change in Recent History</b></p>	<p><u>Readings:</u> Rogers, J. Daniel (2004). 'A View from the Past' and 'The Global Environmental Crisis: An Archaeological Agenda for the 21<sup>st</sup> Century'. In <i>The Archaeology of Global Change: The Impact of Humans on their Environment</i>, edited by C.L. Redman, S.R. James, P.R. Fish, and J.D. Rogers, pp.243-247 and 271-277. Smithsonian Books, Washington.</p> <p>Oster, Emily (2004). Witchcraft, Weather and Economic Growth in Renaissance Europe. <i>Journal of Economic Perspectives</i> 18:215-228.</p> <p><u>Assignments:</u> Video Lecture Week 13 (in-video Quiz) Reading Answers</p>
<p>Week 14</p> <p><b>Climate Change and Archaeology:</b> The impact of climate change on archaeological sites</p>	<p><u>Readings:</u> Curry, Andrew (2009). Climate Change: Sites in Peril. <i>Archaeology</i> 62 (2). Online article. <a href="http://archive.archaeology.org/0903/etc/climate_change.html">http://archive.archaeology.org/0903/etc/climate_change.html</a></p> <p><u>Assignments:</u> Video Lecture Week 14 (in-video Quiz)</p>
<p>Week 15</p>	<p><b>FINAL ASSIGNMENT DUE</b> <b>Critical Article Review</b> <b>(FRIDAY, DECEMBER 2)</b></p>