

GEOG/ANTH 2400 Climate Change and Lost Cities

General Education SF, BF

Fall 2022, GC 1900

YOUR TEACHING TEAM!

Professors: *Andrea Brunelle* (PHYSICAL GEOGRAPHER!), GC 4847

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Rick Paine (ANTHROPOLOGIST!), GC 4442

Richard.paine@anthro.utah.edu

Andrea's student hours:

Tues 1:45-2:45 (live, GC 4847), Monday 9-10 (zoom), and by appointment

Join Zoom Meeting

<https://utah.zoom.us/j/98606008256>

Meeting ID: 986 0600 8256

Passcode: climate

Rick's student hours: Tues/Thurs 10:30-11:30 (live, GC 4442), and by appointment

Graduate TA: *Daniel Dalmas*, daniel.dalmas@utah.edu

Student hours: Wed from 12:00 to 1:00 in person (GC 4520), and Mon 1:00 to 2:00 via Zoom:

<https://utah.zoom.us/j/95368171273>

Meeting ID: 953 6817 1273

Passcode: 482653

Student hours (office hours) are windows of time where the instructor and TAs are available to help you! We will be sitting in our office or on the zoom link waiting for you to ask questions. These hours are often underused- come see us!

Required Texts:

- The Collapse of Western Civilization: A View from the Future by Erik M. Conway and Naomi Oreskes
- Readings posted on CANVAS

Course Web Page: <https://utah.instructure.com>

Familiarize yourself with Canvas. The [Canvas Getting Started Guide for Students](#) can be helpful.

Essential Learning Outcomes: ELOs are skills that should be gained in general education coursework that prepare students to be "effective 21st century global citizens" (U of U General Education Guidelines). These also include course specific content-related learning goals. Through the discussions over the course of the semester and with assignments described above, we will specifically work on several of these outcomes and they will be incorporated and assessed as follows:

- *Critical Thinking and Reasoning*- Critical thinking and reasoning skills will be developed and employed on a daily basis through the presentation, discussion, and consideration of scientific data on climate change and anthropological data. These skills will be assessed during the in-class and online quizzes and on the exams, which will include short answer and essay responses. We specifically will focus on the *understanding* of basics of climate systems, for example, the role of CO₂ in regulating Earth's climate, the current concern about climate change, archaeological investigation, methods of paleoclimatic reconstruction. You will also be expected to be able to *link* and *compare* consequences of human behavior (re: resources, ecology) in ancient contexts to contemporary conditions and behaviors and how human modification of the environment and climate over thousands of years has negatively impacted multiple civilizations. This includes considering how the impacts and costs of climate change have not and will not affect all populations and cultures evenly.
- *Inquiry and Analysis*- The students will be responsible for conducting several small analytical exercises throughout the semester using climatic and anthropological data which include assessments of issues related to human actions, equity within and among societies, and societal economic structures. You will be expected to *analyze* and *evaluate* claims regarding contemporary climate change and its human effect. Our assessment of these responses will be the tool for evaluating your ability to inquire and analyze data.
- *Written Communication* – Student written communication skills will be assessed and constructive feedback provided on the reflections assignments.
- *Teamwork* – Students will work on several projects, assignments and quizzes in small, standing groups. This ELO will be assessed based on the student scores on assignments and also peer evaluations of teamwork by the group members.

Grading:

- Participation (quizzes and in-class exercises) 30%
 - Syllabus quiz
 - Weekly lecture quizzes
 - In-class and on-line discussions
 - Peer review of group participation
 - Reading guides and quizzes
 - Viewing guides and quizzes
- Writing assignments and knowledge assessment 50%
 - 3 integrated Reflections
- Group semester research Project 20%

Course Description: Climate change has been occurring throughout Earth's history. Inherent processes such as the planet's tectonic activity, the Earth's relationship to the Sun and other extraterrestrial bodies, as well as atmospheric and hydrological processes have dictated an ever-changing climate pattern over a variety of time scales. However, the relatively recent evolution and expansion of humans around the globe has cast climate change in a new light.

Humans are altering the atmosphere in an unprecedented manner, and stand to suffer greatly from even relatively minor alterations in climate. This course will examine several historical and recent examples of how human modification of an environment and/or climate led to the collapse of cities to civilizations. In addition to the cultural examples, students will be introduced to the methods and review the evidence used to study climate changes of the past, and will examine the data being used to forecast climate change into the future.

Class Policies

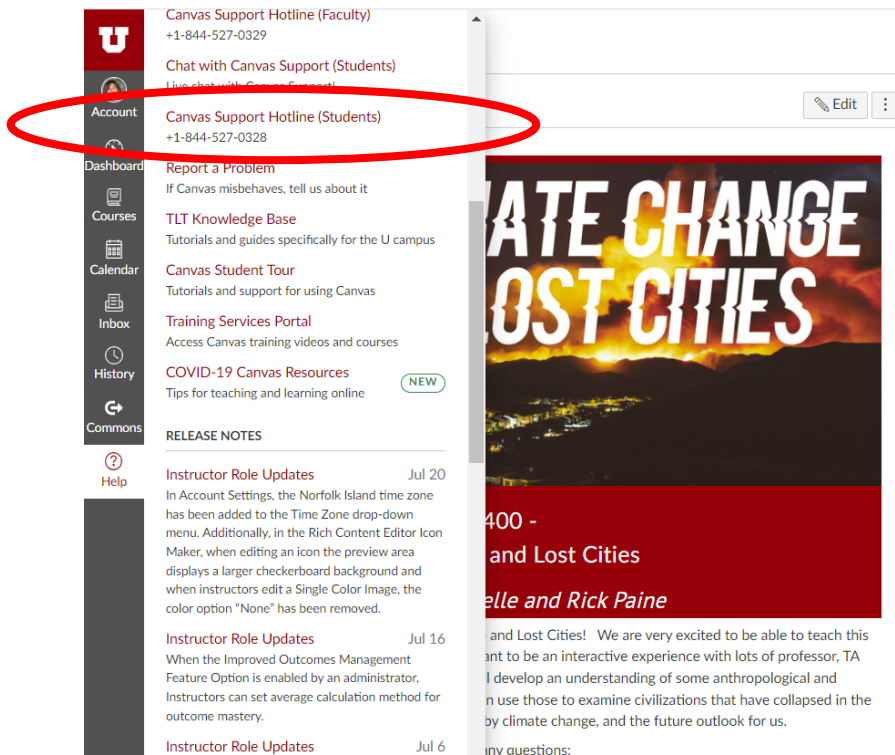
Quizzes - **There are NO make-up quizzes**; however, you will be given the points equivalent to ~two quizzes, which means you can miss two with no penalty. If you don't miss any quizzes you still get the points and they will be extra credit on your grade. Freebie points are meant to cover all manner of life issues (illness, family issues, skiing). Use them wisely and please don't ask us to reopen a quiz. We won't and it will make us both uncomfortable when we say no. The quiz will be posted by Friday after we finish that topic and due Monday night before midnight.

Attendance/Class recordings – this class is designed to be an in-person, active learning environment with lots of discussion and interaction. There may be a few instances of recorded lectures, watch CANVAS for announcements and details.

Groups – You will begin to organize your group starting the first day of class. Groups will need to sit together in the same location each class period. After the second week of class, any students not yet in a group will be assigned by the teaching team.

Late work - All assignments will be due as scheduled, but to allow for issues that come up, quizzes and assignments will be accepted with a 10% penalty PER DAY. No work will be accepted after a week, no exceptions. Don't ask us and make us tell you no.

Technical issues – Technical problems will NOT be an acceptable excuse for late work. To avoid this issue, submit early. If you do have difficulty you can get help via the Canvas hotline:



Plagiarism –Any submission that has a Turnitin score 25% or higher will not be graded without a statement explaining that high score submitted in that assignments comment box. Ungraded assignments will be assigned a zero and will not be eligible for resubmission past the due date.

Grading – The university grading scale is below. We reserve the right to round your grade up if you show exceptional engagement in the class and/or you show improvement in your work over the course of the semester.

A	100%–94%	A-	93.9%–90%		
B+	89.9%–87%	B	86.9%–84%	B-	83.9%–80%
C+	79.9%–77%	C	76.9–74%	C-	73.9%–70%
D+	69.9%–67%	D	66.9%–64%	D-	63.9%–60%
E	59.9%–0%				

ANTH/GEORG 2400 Semester Group Project

The goal of this project is for you to apply your understanding to specific cases of changing climate affecting how societies' function and even their survival, using real, specific data. Your visit to the NHMU will help you to prepare by showing you some examples of professionals explaining real data. Your poster is an opportunity to explore real data for a location that is

interesting to you, and to apply what you have learned over the course of the term to explain how a locale came to be in its present situation and how it might survive climate change in the future.

Part I (the warm up):

Visit the NHMU with your group (Go together on the class period assigned for it). A main part of this assignment is team building and connecting with your classmates. Find two exhibits that have a human-climate component. Describe them and submit a short report on the exhibit. Include your own pictures with you in them. One report per group.

Part II (poster - the main event):

After your group has visited the museum, choose a place, it could be Salt Lake City, one of your hometowns, or just another locale that you find especially interesting. Provide information on a) any past cultures that lived there and how/whether they were affected by past climate change; b) the current climate setting; c) what the outlook is for the future; d) what climate challenges does your locale face; and e) what factors make it potentially vulnerable or resilient? This information will be presented in a poster format and viewed the last week of class.

Part 1: [30 pts total]

- [5 pts] Student gives clear indication of which exhibits are used for report
- [5 pts] Essay is clearly written and free of grammatical errors
- [20 pts - 10 pts each] Student accurately describes the role of climate change in each of the (2) exhibits, relates to course content

Part 2: [90 pts total]

- [10 pts] Poster is neatly organized and free of grammatical errors
- [10 pts] Poster layout (use of bullets instead of blocks of text, font size is readable, headings are clearly indicated, etc).
- [10 pts] References are clearly cited, bibliography included. Poster includes at least 5 scholarly references. Scholarly references include peer reviewed journal articles (you need at least 2 of these, try google scholar to help you find some) and governmental websites (you need at least 3 of these, examples include NOAA, IPCC, National Climate Assessment). Ask us if you wonder if your reference is acceptable.
- [10 pts – 5 pts each] Poster includes at least 2 visualizations (plots, maps, etc.) that assist in explanation of poster content. These need to be cited and large enough to see them and read all the information from 3 feet away.
- [50 pts] Clear description of each of these with section headings to make it easy to read.
 - a) any past cultures that lived there and how/whether they were affected by past climate change;
 - b) the current climate setting;
 - c) what the outlook is for the future;
 - d) what climate challenges does your locale face; and
 - e) what factors make it potentially vulnerable or resilient?

*Incompletes will only be given at the professor’s discretion and only if the student is passing at the time.

*You are responsible for all information presented in lecture and over the course website (Canvas).

Schedule (allow for ebb and flow of topics, we may finish some early and others might go long)

MODULE(S)	WEEK OF:	Topic
1	August 19	1. Class Introduction/Syllabus/start forming groups/seating 2. Introduction to The Maya
2	August 26	The Archaeological Process
3	September 2	1. Intro Group in-class exercise: The House Inventory 2. Start Climate Change Foundations
4	September 9	More climate basics and climate archives
5	September 16	Long-term & recent variations in CO2
6	September 23	The Rise and Fall of Tikal and the Classic Maya
6 7	September 30	1. The Environmental context of the Maya 2. lecture time is for groups to visit the NHMU for final project part 1. <i>All members are expected to attend.</i>
---	October 7	<i>FALL BREAK – no class, no office hours</i>
7	October 14	Chaco
8	October 21	1. The Environmental context of Chaco 2. Angkor Wat and the Khmer
8	October 28	1. More Angkor 2. The Environmental Context of Angkor Wat
9	November 4	Future Climate Change
10	November 11	Future Lost Cities-Dry ones
---	November 18	1. no class on Tuesday, use the period for group poster work 2. no class -Thanksgiving!
11	November 25	Future Lost Cities-Wet ones
	December 2	Poster Sessions!

Final exam period: Thursday 12/12/24 10:30 am – 12:30 pm (held for possible overflow poster session)

The Americans with Disabilities Act. The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, (801) 581-5020. CDS will work with you and the instructor to make

arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the Center for Disability Services.

University Safety Statement. The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit safeu.utah.edu.

Addressing Sexual Misconduct. Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).

Undocumented Student Support Statement. Immigration is a complex phenomenon with broad impact—those who are directly affected by it, as well as those who are indirectly affected by their relationships with family members, friends, and loved ones. If your immigration status presents obstacles to engaging in specific activities or fulfilling specific course criteria, confidential arrangements may be requested from the Dream Center. Arrangements with the Dream Center will not jeopardize your student status, your financial aid, or any other part of your residence. The Dream Center offers a wide range of resources to support undocumented students (with and without DACA) as well as students from mixed-status families. To learn more, please contact the Dream Center at 801.213.3697 or visit dream.utah.edu.

"Some of the writings, lectures, films, or presentations in this course may include material that conflicts with the core beliefs of some students. Please review the syllabus carefully to see if the course is one that you are committed to taking. If you have a concern, please discuss it with me at your earliest convenience." - *Per Accommodations Policy, Office of Academic Affairs*

Academic Misconduct Policy

University of Utah Academic Honesty Statement

It is expected that students adhere to University of Utah policies regarding academic honesty, including but not limited to refraining from cheating, plagiarizing, misrepresenting one's work, and/or inappropriately collaborating. This includes the use of generative artificial intelligence (AI) tools without citation, documentation, or authorization. Students are expected to adhere to the prescribed professional and ethical standards of the profession/discipline for which they are preparing. Any student who engages in academic dishonesty or who violates the professional and ethical standards for their profession/discipline may be subject to academic sanctions as per the University of Utah's Student Code: <https://regulations.utah.edu/academics/6-410.php>

Academic misconduct will not be tolerated. Penalties may include failure of an assignment, the entire course, and/or the filing of formal charges with appropriate university authorities. Academic misconduct includes, but is not limited to, cheating, misrepresenting one's work, and plagiarism:

- Cheating involves the unauthorized possession or use of information in an academic exercise, including unauthorized communication with another person during an exercise such as an examination.
- Misrepresenting one's work includes, but is not limited to, representing material prepared by another as one's own work or submitting the same work in more than one course without prior permission of all instructors.
- Plagiarism means the intentional unacknowledged use or incorporation of any other person's work in one's own work offered for academic consideration or public presentation.
 - When you gather information from any source (internet, book, newspaper, journal article, etc), you need to paraphrase. This means changing the words from the original source into your own. Even though the words are yours, the content is still from somewhere else, so it still needs a citation.
 - COPYING FROM MY SLIDES VERBATIM IS PLAGIARISM. THEY ALSO NEED TO BE PARAPHRASED.
 - All writing assignments go through a plagiarism checker called "Turn It In." You have access to your score when you submit. LOOK AT IT.
 - Remember, any submission that has a Turnitin score 20% or higher **will not be graded without a statement explaining that high score**. Ungraded assignments will be assigned a zero and will not be eligible for resubmission past the due date. If you receive a zero more than once, we'll begin academic misconduct proceedings. Again, you will have access to this score when you submit. Give yourself enough time to solve any similarity issues.
 - In-text referencing is when you refer to the article or source of the information you are presenting. The format should be: Blah blah blah blah (Brunelle 2023). Then you will have the full citation at the end like this:
Brunelle, A. 2023. A Plea to Not Plagiarize. Journal of Important Stuff, Volume 1, pages 1-6.

- If there are two authors the in text would be (Brunelle and Runburg 2021) with both authors listed in the citation at the end. If there are 2+ authors it would be (Brunelle et al. 2020).
- The way I paraphrase is I'll read something and make notes on what I read. Then I put the original source away and explain it using my words and notes.
- Technically, you can take text directly from a source if you put the material in quotation marks, cite the source and the page number from the excerpt. However, **I don't want to see any direct quotations** in any of your work. **I only want paraphrasing with appropriate citations.**
- Here is a good and bad example of paraphrasing from the Wikipedia entry on Milutin Milankovitch.

BAD:

Milutin Milankovic was a Serbian mathematician who gave two fundamental contributions to global science. These include the “Canon of the Earth’s Insolation” which characterizes the climates of all the planets in the solar system. The other contribution is the explanation of the Earth’s long-term climate changes caused by the position of the Earth and Sun.

GOOD:

Milutin Milankovitch made many contributions to our understanding of the Earth’s climate. He was widely trained in the Earth, Geological and Astronomical sciences but is best known as a Serbian mathematician and astronomer. His most important contribution was his explanation for the ice ages, which is based on changes in the Earth’s relationship with the Sun, known as Milankovitch Cycles (Wikipedia, 2012).

References Cited

Wikipedia. Accessed Dec. 30, 2012. Milutin Milanković, <http://en.wikipedia.org/wiki/Milankovitch>