

An 16: WORLD ARCHAEOLOGY SYLLABUS
Spring 2021 Virtual

Instructor: Dr. Bridget Alex

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Office Hours:

Starting Week 2, Weekly drop in Zoom session 1 – 2 pm Thursdays
Or schedule a phone or Zoom appointment at another time by emailing me

Hours: T / Th 2:30 – 4 pm

Units: 3-0-6

Course description: How do we know what we *think* we know about ancient peoples and societies? Archaeology is the study of past societies through the material traces they left behind — from the great pyramids to microscopic bits of garbage. This course will review the global archaeological record from the earliest stone tools, roughly 3.3 million years ago, through the rise and fall of ancient civilizations of the Middle East, Africa, South and East Asia, and the Americas. We will examine evidence and theories pertaining to global dispersals, origins of agriculture, urbanization and societal collapse. We will discuss methodologies of site discovery, excavation, chronometric dating, skeletal analysis, and artifact characterization. We also discuss how the past is used for modern political and social agendas. Students will create virtual museum exhibits on archaeological topics of their choosing.

Course goals:

Content:

- Review the history of archaeology and its ongoing ethical issues
- Survey methods and themes in archaeological research using case studies from diverse contexts
- Use archaeological evidence to compare past societies and reconstruct experiences
- Evaluate hypotheses for significant changes in the archaeological record, including the origins of agriculture and urbanism

Skills:

- Interpret evidence and evaluate hypotheses in archaeology
- Read and critique scientific research
- Distinguish, comprehend, and evaluate different sources including research papers, reviews, commentaries and news
- Present archaeological findings, themes, and issues in multimedia

Course format: Meets twice weekly for 1:25 hour sessions. Lecture and class discussions.

Grading policy: Letter or pass/fail

Required reading: No textbook. Assignments include articles, chapters, podcasts, and videos posted to the course website.

Assignments & Grading

Assignments summary:

Introductory meeting	1
Explainers	30
<i>(2 submissions, 15 points each)</i>	
Challenge questions	30
<i>(2 submissions, 15 points each)</i>	
Build an Exam	
Midterm	30
Final	30
Participation	4
Virtual Museum exhibit	
Work plan	10
Conference + annotated bib	20
Exhibit + tour	30
Pre-class work	ungraded
Total	155

Assignments details:

1) Introductory meeting: During the first two weeks of class you will schedule a meeting with your Instructor to introduce yourself and discuss course goals. [1 point]

2) Explainers: Choose a key term or concept from the week and explain it to the public by making a written, audio, still visual, or video piece. The goal is to define the concept, explain what it is or how it works, and convey its relevance to archaeology. The pieces should be creative, entertaining, and comprehensible to the general public — and accurate, of course. **These should be submitted the Monday following the week the term was covered in class** (For example an explainer about a Week 2 term, should be submitted by Monday night of Week 3). You will do 2 throughout the semester, during any weeks of your choice. [2 submissions, 15 points each]

3) Challenge questions: Each week I will post a prompt for you to reflect on, research, and respond to in a 400-600 word essay. **The prompts will require you to engage with lectures and readings from the week, and to independently investigate published literature and web resources.** You should be prepared to share your findings and ideas verbally in class the following week. Like the explainers, these should be submitted by Monday night, following the week the question was posted (e.g. responses to the Week 2 challenge question are due Monday night of Week 3). You will do 2 throughout the semester, during any weeks of your choice. [2 submissions, 15 points each]

4) Build an Exam: Rather than taking exams in this class, you will make exams + answer keys. Your mission is to create two exams, which could test classmates on the skills and knowledge gained during Units 1 and 2. You must also create answer keys for your exams. [2 exams, 30 points each]

5) Virtual Museum exhibit: In small groups you will choose a topic or theme and create a virtual museum exhibit for it. We will work on this project throughout the semester with milestones (deadlines) along the way. Midway through the term your group will have a conference with Dr. Alex to present an outline, sketch, or draft of your exhibit. By the end of term you will create a slide deck or webpage that shows the exhibit items, written descriptions of each item, and a summary of the exhibit's theme or goals. You will give the class a tour of your exhibit [work plan 10 points, conference + annotated bibliography 20, exhibit + tour 30 points]

6) Participation: Throughout the semester you attend or watch our virtual meetings, prepared to engage with the material. When you attend “live” you respectfully listen to classmates and contribute thoughtful comments. When you watch recorded sessions you contribute to the “ongoing post-class discussion board.” [4 points]

7) Pre-class work: For most (but not all) classes I will assign a short reading, podcast, or video that complements the class lecture. To prepare for class discussion, you should complete these assignments *before* class the day they are due.

Expectations & Policies

Attendance: We will generate knowledge and build community during our virtual class meetings. **Attending will enhance your enjoyment and mastery of course material.** Attendance is expected and will be reflected in your class participation points. If you cannot attend “live,” you can attend afterwards by watching the recorded video and posting to the “ongoing post-class discussion board.”

Late assignments: I know it will be challenging to meet deadlines this semester. Unanticipated trials will affect us variably at different times.

Written assignments are due at or before the posted deadline, unless there is an emergency. **In most cases extensions will be granted provided they are requested at least 3 days prior to the assignment due date.** Late submissions without prior permission will be penalized 1 point every two days. If you have technical difficulties submitting an assignment, directly email it to your instructor along with screenshots showing the file, the final time it was edited, and the technical issue preventing you from submitting the assignment.

Academic Integrity Policy:

You are expected to abide by the Caltech Honor Code: “No member of the Caltech community shall take unfair advantage of any other member of the Caltech community.” In An 16, discussion and the exchange of ideas are encouraged. However, written work should reflect your own thoughts, inspired by class readings and lectures. **For Written Reflections and Build an Exam assignments, you may discuss ideas with others, but the submitted documents must be written independently. You must also state your collaborators.** You must also adhere to standard citation practices in this discipline. Properly cite any books, articles, websites, lectures, etc. that have helped you with your work.

Accessibility and accommodations: I am committed to providing an accessible academic setting. The Accessibility Office offers a variety of accommodations and services to students with documented disabilities. Please visit <http://cass.caltech.edu/>

Course Schedule: Overview

Subject to change. Consult Canvas for up-to-date schedule and assignments.

SUN	MON	TUES	WED	THURS	FRI	SAT
Unit 1 - Methods						
March 28 Week 1 Intro meeting DUE →	29	30 First Zoom class: Intro	31	Apr 1 Site discovery	2	3
4 Week 2 Intro meeting DUE →	5	6 Landscape	7	8 Sites Dating I	9	10
11 Week 3 Exhibit groups formed	12	13 Dating II	14	15 Faunal bones	16	17
18 Week 4	19	20 Human bones	21	22 Plant remains	23 Exhibit work plan DUE	24
Unit 2 - Themes						
25 Week 5	26	27 Human evo Stone Age	28 Midterms →	29 Sedentism Ritual	30	May 1
2 Week 6	3 Midterm Build exam DUE	4 First farmers	5	6 Urbanism Inequality	7	8
9 Week 7 Exhibit Conferences + annotated bib DUE →	10	11 Human- environment	12	13 Record keeping	14	15
16 Week 8	17	18 Craft production	19	20 Politics	21	22
23 Week 9	24	25 Gender Identity	26	27 Virtual exhibits I	28 last day seniors	29
30 Week 10	31 Memorial Day	June 1 Museum ethics	2 senior finals →	3 Virtual exhibits II	4 last day classes senior Build a Final DUE	5 Study period →
6	7	8	9 Final exams →	10	11 Build a Final DUE	12

Course Schedule: Detailed

Subject to change. Consult Canvas for up-to-date schedule and assignments.

Week	Date	In Class Content	Pre-class work
Unit 1 – Methods and Evidence How do we do archaeology?			
1	3/30	Course Overview History of archaeology Archaeology as anthropology	Douglas and Knudson 2018. "Chapter 2 A Brief History of Archaeology" In <i>Principles of Archaeology</i> Mitchel, P. 2018. "Introduction to Archaeological Methods and Sources" In <i>African History. Oxford Research Encyclopedias</i> .
	4/1	Site Discovery & Remote Sensing How do we decide where to dig? What can we discover without digging? Guest: Kate Rose, PhD candidate at Harvard, on drone survey in Sudan	Alex, B. "How Archaeologists Know Where to Dig" <i>Discover</i> Jan 2020. https://www.discovermagazine.com/planet-earth/how-archaeologists-know-where-to-dig Ur 2003. "CORONA Satellite Photography and Ancient Road Networks: A Northern Mesopotamian Case Study." <i>Antiquity</i>
	4/5	Challenge question 1: It's been said, "American archaeology is anthropology or it is nothing" (Binford 1962). In the United States archaeology is part of the broader discipline of anthropology. Why? Do you think archaeology belongs within anthropology, another discipline like history, or on its own, as an independent discipline? What do anthropological perspectives or methods lend to archaeology? What does archaeology contribute to anthropology?	
2	4/6	Landscape archaeology What can we discover without digging? Guest: Dr. Sarah Klassen, European Research Council postdoctoral fellow, on LiDAR in Greater Angkor, Cambodia	Chase et al 2012. "Geospatial revolution and remote sensing LiDAR in Mesoamerican archaeology" <i>PNAS</i> . Cohen, Klassen, & Evans 2020. "Ethics in Archaeological LiDAR." <i>Journal of Computer Applications in Archaeology</i> .
	4/8	Excavation Site formation processes Dating I	Rybczynski, Witold 1992. We Are What We Throw Away [Book Review]. <i>New York Times</i> . Weiner 2010. "Chapter 3 Completeness of the Archaeological Record." In <i>Microarchaeology: Beyond the Visible Archaeological Record</i> .
	4/12	Challenge question 2: This week we discussed site formation processes, which	

		<p>determine what ends up in the archaeological record. Artifacts are mostly past people's most durable trash.</p> <p>Choose one distinct event, like the Rose Bowl Parade, a wedding, or a city's marathon. Or, choose a place that hosts repeated events, such as a baseball field in a park, a restaurant, or a pre-school classroom. Predict what would preserve for future archaeologists. Project site formation processes or taphonomic processes into the future. Describe the sequence of disappearance, deterioration, and transformation of various types of evidence from your site. For example, what materials are first to vanish? What traces would remain 2 years from now, 2 centuries, and 2 millennia?</p> <p>In this case there may not be obvious outside sources to support your arguments. However, our reading this week will be handy. Also you could find research papers or news describing similar sites from ethnoarchaeology or ancient archaeology. For example if you're doing a wedding, how about the site of an ancient feast? What preserved there?</p>	
3	4/13	<p>Dating II</p> <p>Guest: Dr. Elizabeth Niespolo, postdoctoral scholar in geochemistry at Caltech, on Ar/Ar dating in East Africa</p>	<p>WoldeGabriel et al 2004. "Geoscience Methods Lead to Paleo-anthropological Discoveries in Afar Rift, Ethiopia" <i>EOS</i></p> <p>Ludwig & Renne 2000. "Geochronology on the Paleolithic Time Scale" <i>Evolutionary Anthropology</i></p>
	4/15	<p>Faunal bones</p> <p>Guest: Jada Ko, PhD candidate at Harvard, on zooarchaeology in China</p>	<p>Albarella, U. 2017. "Zooarchaeology in the twenty-first century: where we came from, where we are now, and where we are going." In <i>The Oxford Handbook of Zooarchaeology</i></p> <p>Russell, N. 2014. "Social Zooarchaeology." In <i>Encyclopedia of Global Archaeology</i>.</p> <p>Steadman, D. 1995. "Prehistoric extinctions of Pacific island birds: biodiversity meets zooarchaeology" <i>Science</i></p>
	4/19	<p>Challenge question 3: Human-animal relationships are complex and culturally variable. When did people start perceiving some animals as "pets," kept mainly for companionship or curiosity? What archaeological evidence is there for pets in past societies? How do we distinguish pets from animals that entered the zooarchaeological record because of they were food or served other functions? Describe evidence that can help distinguish pets AND discuss how that evidence was interpreted in 2-3 real archaeological cases.</p>	
4	4/20	<p>Human bones Bioarchaeology</p> <p>Guest: Rachel Kalisher, PhD candidate at Brown, on bioarchaeology in the Near East</p>	<p>Knüsel 2010. "Bioarchaeology: a synthetic approach" <i>Bull. Mem. Soc. Anthropol. Paris</i></p> <p>Riggs, C. "Confronting Cultural Imperialism in Native American Archaeology" <i>Sapiens</i> Aug 2017. https://www.sapiens.org/archaeology/native-american-archaeology/</p>
	4/22	Plant Remains	<p>Caramanica et al 2020. "El Niño resilience farming on the north coast of Peru" <i>PNAS</i></p>

		Guest: Dr. Ari Caramanica, Peru's Universidad del Pacifico, on paleoethnobotany in the Andes	Watkins 2005. "Through Wary Eyes: Indigenous Perspectives on Archaeology." <i>Annual Review of Anthropology</i>
	4/26	Challenge question 4: When is it sanctioned, justified, or appropriate for archaeologists to excavate human burials? Consider laws and ethnical concerns of different stakeholders - local communities, descendants, scientists, and humanity. Whose concerns matter most? Describe and contrast 2-3 real cases of appropriate or inappropriate excavations of human remains. Incorporate points from our readings this week about indigenous-ness, imperialism, and archaeology.	
Unit 2 – Themes What does archaeology tell us?			
5	4/27	Human evolution Paleolithic archaeology Stone tool analysis	Johnson, M. 2010. Chapters 1-2 In <i>Archaeological Theory: An Introduction</i> .
	4/29	Global spread Sedentism Ritual sites and monuments Are pots people? Genes, languages, and (material) cultures	Douglas and Knudson 2018. "Chapter 3 Interpretations in Archaeology" In <i>Principles of Archaeology</i> ONE of the following: Anthony and Ringe 2015 "The Indo-European Homeland from Linguistic and Archaeological Perspectives." <i>Annual Review of Linguistics</i> OR Kirch, Patrick V. 2010 "Peopling the Pacific: A Holistic Anthropological Perspective" <i>Annual Review of Anthropology</i>
6	5/4	Domestication Guest: Dr. Max Price on pig domestication and taboos in the Near East	Diamond 2002 "Evolution, consequences and future of plant and animal domestication" <i>Nature</i>
	5/6	Urbanism and Inequality Guest: Dr. Michele Koons, Denver Museum of Nature & Science, on exhibits, collections, and mummies	Smith 2009 "V. Gordon Childe and the Urban Revolution: a historical perspective on a revolution in urban studies" <i>Town Planning Review</i>
	5/10	Challenge question 6: Choose one domesticated plant or animal species.	

		Explain what scientists understand about domestication of this species, based on genetics, archaeology, or other lines of evidence. How does the domesticate differ from its wild ancestor? Where, when, and why was it likely domesticated? How did the domesticate spread?	
7	5/11	Human-environment interactions Collapse Narratives Guest: Dr. Kenneth Seligson, Cal State University Dominguez Hills, on resource management in the Maya Yucatan and experimental archaeology	Seligson, K. "Misreading the story of climate change and the Maya" 20 May 2019 <i>The Conversation</i> https://theconversation.com/misreading-the-story-of-climate-change-and-the-maya-113829 OPTIONAL: Boivin et al 2016 "Ecological consequences of human niche construction: Examining long-term anthropogenic shaping of global species distributions" <i>PNAS</i>
	5/13	Record Keeping Writing, Non-writing systems Currency	
	5/17	Challenge question 7: The anthropocene has been defined as the recently entered geological epoch, in which humans are the primary drivers of earth's climate and biodiversity. When did the anthropocene begin? Can archaeological data help us answer this? Here are some articles to get you started: Subramanian 2019 <i>Nature</i> news and Ellis et al 2016 <i>Nature</i> .	
8	5/18	Craft Production and Reconstruction Guest: John Hirx, Senior Objects Conservator LACMA, on Maya ceramic painted vessels	Alex, B. et al 2012 "Complementary compositional analysis of Formative Period ceramics from the Teotihuacan Valley" <i>Archaeometry</i>
	5/20	Sociopolitical systems How do we unearth ancient government? Guest: Dr. Jacob Holland-Lulewicz, Washington University in St. Louis, on democratic institutions in Native North America	Alex, B. "Sacred site reveals how Indigenous people resisted colonial forces for 130 years" July 2020 <i>Science</i> news https://www.sciencemag.org/news/2020/07/sacred-site-reveals-how-georgia-s-muscogee-tribes-resisted-colonial-culture-130-years
	5/24	Challenge question 8: When did past societies begin to use money? How can archaeologists identify forms of currency? Evaluate the case made for shell bead money in Gamble 2020. Also, find and discuss at least one other specific case, where archaeologists identify (or claim to identify) early forms of money.	
9	5/25	Gender Social identity	Gibbons, A. "Woman the Hunter: Ancient Andean remains challenge old ideas of who speared big game" <i>Science</i> news https://www.sciencemag.org/news/2020/11/woman-

			hunter-ancient-andean-remains-challenge-old-ideas-who-speared-big-game
	5/27	Virtual museum tours	
	5/31	Challenge question 9: Free pick. Respond to any prior questions.	
10	6/1	Museums, ethics, and descendant communities Guest: Dr. Alyce de Carteret, LACMA, on the history of museums, repatriation, and community engagement	
	6/3	Course summary and "great discoveries"	
June 5-8 Study period			
	6/11	Build a Final DUE	