

Environmental Archaeology (116.313)  
Syllabus—Fall 2013

Lecture: 04-405-3  
Lab: 05-116  
Mondays 1:00-4:00

Dr. David K. Wright  
[msafiri@snu.ac.kr](mailto:msafiri@snu.ac.kr)  
[daudi.wright@gmail.com](mailto:daudi.wright@gmail.com)  
010-9041-3070

Office 05-416  
Office Hours: Thursdays 10:00-12:00  
Appointments welcome

---

This course will offer you an understanding of how archaeologists reconstruct past environments in order to understand how humans interact with the natural (and sometimes artificial) world. This class will be very technical, and you will be assigned readings and lab assignments that will be very challenging. I will lecture for about one hour every week, and then you will work in groups on lab assignments that are designed to give you practical experience in environmental archaeology.

This class will cover basic archaeological data collection techniques including survey, mapping and excavation, geoarchaeology, dating techniques, palynology, faunal analysis, and how to use stable isotopes to reconstruct past landscapes. You will not leave this course as an expert on any of these techniques, but if you are thinking about going to graduate school in the applied archaeological sciences, this will give you a solid foundation to decide what you want to study further.

There is one textbook for the class:

Reitz, Elizabeth J. and Myra Shackley  
2012 *Environmental Archaeology*. New York, Springer.  
(<http://site.ebrary.com/lib/snulibrary/docDetail.action?docID=10652605>)

The textbook for the class is online through the SNU library. You must be registered for the class on the eTL system in order to receive assignments and access the textbook. There will be other readings as well (as described in the syllabus below). I know that the textbook is very detailed and will be hard to read, but you should use it as a reference guide for completing your lab assignments and preparing for your exams.

**Grading:** Labs (50%); Midterm exam (25%); Final exam (25%)

Your grade will be based on two factors: your performance on laboratory assignments and two exams.

*Laboratory assignments:* Each week (other than exam weeks), we will have a brief lecture about the topic of the week, and then will move to the laboratory where you will learn how to apply the techniques you are studying to a specific scenario. Although the scenarios are constructed, they are based on my real-world experiences and dozens of other archaeologists who I have worked with to compile this manual. You should be able to complete lab assignments in the two hours allotted, but I will leave the materials out for you to work with until at least Wednesday of the scheduled week. If you need more time to complete your lab assignment, you must contact me before Wednesday and I will make arrangements to leave some portion of the lab assignment out for you to access. However, if you make a habit of procrastinating on completing your lab every week (or leave class early), I will lose patience and enforce a strict deadline on completing the assignment. There are 14 lab assignments worth 50% of your final grade.

Each lab assignment is due on the Monday that follows the class discussion of that topic. Late assignments are graded down 10% each day that they are not given to me. **No exceptions will be made to this rule.**

*Exams:* There will be two in-class exams. You will not pass the exams unless you are in class and taking good notes and complete all of the assigned readings (I strongly recommend that you take notes on the readings as well). The exams are essay style. I will allow you to use as many **handwritten** notes that you can fit onto **two pages** of A4 paper (front and back). You will not be allowed to use a computer, mobile phone, personal data device or any printed material whatsoever. ***I will walk around the class periodically to ensure that you do not abuse this rule. Extra material, if found, will be confiscated, and your examination will be graded as a 0.*** Because you are allowed to have notes, I will expect that you will give me well thought-out essays.

### **Class outline:**

Class 1 (September 2): Class Introduction.

- DISCUSSION: Brief introduction to environmental archaeology and topics pertaining to the class
- We will review the syllabus and ensure that everyone has access to the reading material for the class.
- LAB 1: Garbology and the science of inference
- Read for September 9: Reitz and Shackley Ch. 1 and 2
- Also, watch the video “AZ – A: Archaeology” on <http://archaeosoup.com/a-z-of-archaeology-a-archaeology/>

Class 2 (September 9): Archaeological site formation processes

- DISCUSSION: How do archaeologists know how sites form?
- LAB 2: Inference using artifacts, Part 2.
- Read for September 16: Reitz and Shackley, Ch. 3
- Also, watch the video “AZ – E: Excavations” on <http://archaeosoup.com/a-z-e-excavation/>

Class 3 (September 16): Archaeological research methods

- DISCUSSION AND LAB 3: Surveying, mapping and digging archaeological sites
- Read for September 23: Reitz and Shackley, Ch. 5
- Also watch the video “AZ – H: Harris Matrix” on <http://archaeosoup.com/a-z-h-harris-matrix/>

Class 4 (September 23): Geoarchaeology

- DISCUSSION AND LAB 4: Reconstructing the environment using soils and sediments
- Read for September 30: Reitz and Shackley, Ch. 6

Class 5 (September 30): Simple organisms (which are quite complex)

- DISCUSSION AND LAB 5: Life under a microscope...parts of the natural world you don't see with the naked eye
- Read for October 7: Reitz and Shackley, Chapters 7 and 8
- Also, watch the video “AZ – S: Seeds” on <http://archaeosoup.com/az-s-seeds-botanical-remains/>

Class 6 (October 2): Attend the colloquium “By Land, By Sea, and By Air: How the Environment Affects Human Settlement Choices” 2 – 5 pm. I will give you a study

question that you must answer, which counts as LAB 6. \*Please come and see me if you can't attend the symposium and I will provide you with three articles to read that will count instead of attending the symposium. You will still need to complete the study question.

Class 7 (October 7): Palynology 1

- DISCUSSION AND LAB 7: Plants, wood and analysis of organic remains
- Read for October 14: Reitz and Shackley Chapter 9
- Also, watch the video "AZ – O: Organic Remains" on <http://archaeosoup.com/az-o-organic-material/>

Class 8 (October 14): Palynology 2

- DISCUSSION AND LAB 8: Pollen, phytoliths and starchy remains
- NO READING—Study for the midterm exam!

Class 9 (October 21): MIDTERM EXAM

- NO LAB OR DISCUSSION
- Read for October 28: Reitz and Shackley, Ch. 12
- Also, watch the video "Aspects of Archaeology: Archaeozoology" on <http://archaeosoup.com/category/aspects-of-archaeology/>

Class 10 (October 28): Vertebrates, Part 1

- DISCUSSION AND LAB 9: Phylum Chordata and what's for dinner?
- Read for November 11: Choy et al. (2012) Stable isotopic analysis of human and faunal remains from the Incipient Chulmun (Neolithic) shell midden site of Ando Island, Korea. *Journal of Archaeological Science* 39(7):2091-2097.

Class 11 (November 4): Vertebrates, Part 2

- DISCUSSION AND LAB 10: Using fauna to reconstruct environments
- Read for November 18: Reitz and Shackley, Ch. 13

Class 12 (November 11): Stable isotopes

- DISCUSSION AND LAB 11: Life on the molecular level
- Read for November 18: Larsen 2002, Bioarchaeology: The lives and lifestyles of past people. *Journal of Archaeological Research* 10(2): 119-166.  
Also, watch "AZ – B: Burials" at <http://archaeosoup.com/a-z-of-archaeology-b-burials/>

Class 13 (November 18): Bioarchaeology

- DISCUSSION AND LAB 12: How does the environment shape humans and how do humans shape their environments?
- Read for December 2: Chapter 4 of *Archaeological Computing* (Harrison Eiteljorg, II and W. Fredrick Limp, 2008)
- Also, watch the video "Aspects of Archaeology: GIS" on [http://www.youtube.com/watch?v=F6Sb1lmi\\_lk](http://www.youtube.com/watch?v=F6Sb1lmi_lk)

Class 14 (November 25): GIS

- DISCUSSION AND LAB 13: Using computers to map space, time and ecosystems
- NO READING—Pick a video on your favorite archaeological method and give a 10-minute presentation on how one specific technique was used to develop an environmental archaeology
  - You can pick your video from one of the following sources:

- [http://archaeology.about.com/od/videos/Archaeology\\_Videos.htm](http://archaeology.about.com/od/videos/Archaeology_Videos.htm)
- <http://www.archaeologychannel.org/video-guide/video-guide-menu/video-guide-list>
- <http://archaeosoup.com/>
- <http://www.pasthorizons.tv/>
- <http://cnx.org/content/m19527/latest/>
- How were the data collected in the field?
- What kinds of lab techniques were used in the environmental reconstruction?
- How did humans respond to environmental changes? What role did culture play in helping people survive in their environment?

Class 15 (December 2): Review and presentations

- DISCUSSION: Present your 10-minute summary of the video you watched. Be sure to relate your discussion to the questions asked! (This counts as LAB 14)
- Class summary and review for the final exam
- NO READING—Study for final exam

Class 16 (December 9): FINAL EXAM