

# Archaeological Data Analysis, S'20: syllabus

## Course web site

<http://shot.holycross.edu/courses/ada/S20/>

## Basic information

Instructor: Neel Smith. Contact information: <http://neelsmith.info/holycross/contact/>

Regular class schedule: TTh 2:00-3:15, Fenwick 420.

## Course description

This course offers both a hands-on introduction to data analysis, and an introduction to the specific kinds of problems archaeologists study from the material remains of the human past. It is intended for students with no specific background other than curiosity about archaeology. We will learn a small amount of coding and statistical methods (less than you would cover in half a semester of an introductory statistics or programming class), along with fundamental principles of archaeology. This combination will enable you to make new discoveries about real archaeological data sets.

Course assignments will give you hands-on experience describing and characterizing large data sets, clustering and classifying data into meaningful interpretive groups, spatial analysis, network analysis, accounting for the complex ways archaeologists reconstruct chronological sequences, and integrating textual and archaeological data. The skills you develop in this course can be directly applied to other historical, literary or social- science data sets.

## Goals

In this course, you will become familiar with basic archaeological ideas about how material culture is created and preserved, what constitutes the archaeological record, and how we interpret it. You will learn how to evaluate the contents

of archaeological data sets from an archaeologist's perspective, taking into consideration what is absent from the data set, and what principles of selection or bias have influenced its creation. You will work with publicly available data sets from real archaeological projects to answer original, unsolved questions, and will present your work orally and on line.

You will gain practical experience working with real-world data, both born-digital material and data digitized from legacy print sources. Among the computational methods you will apply are statistical summaries of data, classification, and spatial analyses such as proximity and density measurements and spatial clustering. You will develop data-science notebooks both to explore archaeological data, and to present your results with arguments backed up by code you have written, and supported by computer-generated visualizations.

## Objectives

Specific objectives include:

- using version control with `git`
- basic use of the `bash` shell
- writing short scripts in Scala
- using Jupyter notebooks for data exploration and publication
- basic geographic visualization and spatial analysis using QGIS

In addition, you will have the option of hosting a personal web site on github.

## Course requirements and grading

Course grades will be determined by specification grading, an assessment system in which assignments are graded on a satisfactory/unsatisfactory scale according to a previously circulated rubric. One aim of specification grading is to give you control over your grades. Grades are not arbitrarily assigned – they are earned by the work that you do. Further, you get to decide how much time and energy you want to commit to the course in order to achieve the grade you desire.

### Grade specifications

	Other lab modules	Oral presentation	Project module	Project presentation	Base course grade
Lab module 1					
Complete module 1	-	-	-	-	C
Complete module 1	any 1 additional module	-	-	-	C+

Lab module 1	Other lab modules	Oral presentation	Project module	Project presentation	Base course grade
Complete module 1	any <b>1</b> additional module	1 oral presentation	-	-	B-
Complete module 1	any <b>2</b> additional modules	1 oral presentation	-	-	B
Complete module 1	any <b>3</b> additional module	1 oral presentation	-	-	B+
Complete module 1	any <b>3</b> additional modules	1 oral presentation	Complete project module	-	A-
Complete module 1	any <b>3</b> additional modules	1 oral presentation	Complete project module	Oral presentation of project	A

For details on lab modules: <http://shot.holycross.edu/courses/ada/S20/labs/>

For details on oral presentations: <http://shot.holycross.edu/courses/ada/S20/presentations/>

For details on self-designed projects: <http://shot.holycross.edu/courses/ada/S20/projects/>

## Class attendance

Class attendance is required. You will not be penalized for a single unexcused absence, but beginning with the second unexcused absence, your course grade will be lowered by 1/3 of a letter grade for each unexcused absence.

## Academic integrity

You should be familiar with the college's policy on academic integrity: <https://catalog.holycross.edu/requirements-policies/academic-policies/#academicintegritytext> Much of our classwork will be collaborative. You are expected to take part fully on all parts of collaborative assignments.

If you have any questions or are uncertain how it applies to our course, please speak to me.

## **Diversity and inclusion**

Studying the ancient Mediterranean world at Holy Cross is one way to challenge a centuries-long tradition that reserved that study for a privileged elite. The challenge goes beyond simply welcoming students however they identify their race, ethnicity, gender identity and expression, religious or spiritual tradition, or socioeconomic background. As we work to understand the multicultural world of the ancient Mediterranean, we reflect on and actively explore how this can help us recognize and respond to structures of power and privilege in our own lives.

This work is especially important today, when historically false images of the ancient world are being invoked to support particular political viewpoints. Studying Classics helps us see through erroneous assertions about the “whiteness” of the ancient Mediterranean, and reject claims that the Greco-Roman world is the special province of any ethnic or political group.

## **Academic accommodations**

All academic accommodations need to be approved through the Office of Accessibility Services, in accordance with the college’s policy on requests for reasonable accommodation: <https://catalog.holycross.edu/requirements-policies/academic-policies/#coursepolicies>

If you are already registered with Accessibility Services, please let me know.

If you feel the need for accommodation based on the impact of a disability, you should contact the Office of Accessibility Services to discuss support services available.

Once the office receives documentation supporting the request for accommodation, you would meet privately with Accessibility Services to discuss reasonable and appropriate accommodations. You can reach the office by calling 508-793-3693 or by visiting Hogan Campus Center, room 505.

## **Resources for students**

Contact information for many of the resources available to Holy Cross students (including Academic Services and Learning Resources) are posted at <http://shot.holycross.edu/S20-Resources-for-Students.pdf>

## **Confidentiality and mandatory reporting.**

All instructors are mandatory reporters. This means that while I will keep any information you share about your life experiences in classroom discussions, written work, one-on-one meetings private whenever legally possible, I am

required to share any information you disclose about sexual misconduct, a prior suicide attempt or an intention to attempt suicide.

I am expected to share information about sexual misconduct with the College's Office of Title IX Initiatives. You can also get in touch with Title IX directly at 508-793-3336 or [titleix@holycross.edu](mailto:titleix@holycross.edu). For more information, please visit <https://www.holycross.edu/sexual-respect-and-title-ix>. If you would like to discuss the matter confidentially, the following confidential resources are available to you: the Chaplains' Office, 508-793-2448; Counseling Center, 508-793-3363; Health Services, 508-793-2276.

Following the College's Suicide Protocol, if you disclose a prior suicide attempt or an intention or plan to attempt suicide, I will share that information with the Chair of our student CARE Team, who will engage in appropriate outreach.

## **Recording of classes**

Please note that Massachusetts law prohibits recordings without the permission of all involved parties.