

DEPARTMENT OF ANTHROPOLOGY
Anthropology 1537/2513 (30875/30996)
Tu/Th, 1-2:15pm, WWPH 2102
Fall Term, 2021

UNIVERSITY OF PITTSBURGH
Basic Laboratory Analysis
Instructor: Dr. Alexander J. Martín
Office hours: by Appointment
AlexMartin@pitt.edu
Office: WWPH 3139

SYLLABUS

COURSE DESCRIPTION

In this course we focus on learning basic laboratory techniques in archaeology. Field techniques are the primary means by which archaeologists acquire data. Laboratory techniques consist of methods for the coding and analysis of data. We will not emphasize statistical techniques; rather practical experience in basic techniques for the analysis of lithic and ceramic material will be the primary focus. You will get hands-on experience analyzing these two primary categories of archaeological data. In addition, we will discuss both research design and the interpretation of results. In much of the course, you will work with actual archaeological material from various prehistoric sources.

COURSE OBJECTIVES

By the end of this course, you will be able to:

1. Identify the major features of stone flakes and distinguish flakes that are produced by human actions from naturally occurring rocks.
2. Understand the relationship between the specific forms that lithics take, the activities that produced them, and their possible uses.
3. Understand the procedures involved in making pottery, how it was used, and how to analyze it.
4. Code and analyze lithics and pottery in such a way that you can comfortably carry out an analysis on another sample of cultural material.
5. Know how to develop a research design for the analysis of archaeological material and carry out that analysis.
6. Know how to write up a technical report on the analysis of material culture and be able to present data in a visual manner

REQUIRED READING

We will use two primary books for this course, both of which are available digitally free of charge through the library portal using Adobe Digital Editions (also freely provided by the University). Additional readings are required and will be available either through CANVAS or in e-journals that you can access yourselves.

Required texts:

Andrefsky, William

2005 **Lithics: Macroscopic Approaches to Analysis**, Second Edition. Cambridge University Press, New York. ISBN 978-0-521-61500-6 pbk.

Sinopoli, Carla

1991 **Approaches to Archaeological Ceramics**. Plenum Press, New York. ISBN 0-306-43575-6 pbk.

TOPICAL OUTLINE OF COURSE

Week	Date	Topic	Assignments/Readings due
1	Aug 31	Module 0: Introduction to the Course; Fieldwork, Laboratory analysis, and Artifact Types <ul style="list-style-type: none"> • Logistics • Types and stages of archeological work • Field, lab, analysis, results • Artifacts and ecofacts • Types of artifacts 	
	Sept 2	<ul style="list-style-type: none"> • Lithics: Properties and Characteristics • Haudenosaunee archaeology 	Allen, Kathleen M. S., 2010, Gender Dynamics, Routine Activities, and Place in Haudenosaunee Territory: An Archaeological Case Study from the Cayuga Region of Central New York State. In <i>The Archaeology and Preservation of Gendered Landscapes</i> , edited by S. Baugher and S. Spencer-Wood, pp. 57-79. Springer NY.
2	Sept 7	Module 1: Lithic Debitage <ul style="list-style-type: none"> • VIDEO: Flintknapping 101 	Andrefsky - pp. 1-40. Skim pp. 41-60. Article summary 1 due (Allen 2010)
	Sept 9	<ul style="list-style-type: none"> • Basics of chipped (flaked) stone terminology • Fracture mechanics • Stone tool morphological dynamics 	Odell, George H., 2009, The Development of Lithic Analysis in North America. In <i>Archaeological Lithic Analysis: Readings for American Antiquity and Latin American Antiquity</i> , edited by George Odell, pp. 1-14. Society for American Archaeology, Washington DC.
3	Sept 14	<ul style="list-style-type: none"> • Flintknapping Presentation 	Andrefsky - pp. 61-112
	Sept 16	<ul style="list-style-type: none"> • Mesh sizes and artifacts collected. • Chapter 5: Measuring attributes <ul style="list-style-type: none"> ○ Completeness ○ # of dorsal scars ○ Cortex, morphology, scar count ○ Striking platform attributes ○ Heat treatment ○ Measurement variables 	Undergrads: Andrefsky - pp 113-131 Grads: Andrefsky - pp 113-142

TOPICAL OUTLINE OF COURSE

4	Sep 21	<ul style="list-style-type: none"> • Excel <ul style="list-style-type: none"> ○ Entering data ○ Summarizing data as frequencies, averages, and proportions 	Andrefsky - pp. 201-251
	Sep 23	<ul style="list-style-type: none"> • Excel (continued) <ul style="list-style-type: none"> ○ Creating bar charts vs histograms 	<p>Article summary 2 due (?????)</p> <p>Sinopoli - Appendix, pp.171-210, as needed</p>
5	Sep 28	<ul style="list-style-type: none"> • Chapter 6 • Separating debitage using Sullivan and Rozen's typology 	Sullivan, Alan P. and Kenneth C. Rozen, 1985, Debitage Analysis and Archaeological Interpretation. <i>American Antiquity</i> 50(4):755-779.
	Sep 30	<ul style="list-style-type: none"> • Explain lithic debitage project to class <ul style="list-style-type: none"> ○ Data measurement ○ Create tables and figures for comparison ○ Describe assemblages in different contexts ○ Draw conclusions ○ Make everything a single cohesive PDF 	Kelly, Robert L., 1988, The Three Sides of a Biface. <i>American Antiquity</i> 53(4):717-734.
6	Oct 5	<ul style="list-style-type: none"> • Work on project in class (stay all morning in lab to help out) 	
	Oct 7	<ul style="list-style-type: none"> • Work on project in class (stay all morning in lab to help out) 	Lithic debitage Project due on Sunday
7	Oct 12	<p>Module 2: Stone tool analysis</p> <ul style="list-style-type: none"> • VIDEO: Woman the Toolmaker • Video discussion – The complete cultural system 	<p>Andrefsky - pp. 143-200</p> <p>Kuhn, Robert, 1996, A Comparison of Mohawk and Onondaga Projectile Point Assemblages, <i>Journal of Middle Atlantic Archaeology</i> 12:27-34.</p>
	Oct 14	<ul style="list-style-type: none"> • Introduction to Coast Ecuador pre-Columbian craft production and survey techniques. 	Martín, Alexander, 2010, The Domestic Mode of Production and Its Implications for Social Complexity. <i>Research in Economic Anthropology</i> , 30:11-155

TOPICAL OUTLINE OF COURSE

8	Oct 19	<ul style="list-style-type: none"> • Discussion of article • Introduction to project and data from CADB 	Article summary 3 due (Martin 2010)
	Oct 21	<ul style="list-style-type: none"> • Discuss result tables of exercise in class 	Lithic Tool project due on Sunday
9	Oct 26	Module 3: Ceramics <ul style="list-style-type: none"> • Introduction to ceramic production 	Sinopoli - pp. 1-42
	Oct 28	<ul style="list-style-type: none"> • Ceramic production continued • VIDEO: The Potters of Buur Heybe 	Optional: Braun, David P., 1983, Pots as Tools. In <i>Archaeological Hammers and Theories</i> , eds. J. A. Moore and A.S. Keene, pp. 107-134. Academic Press, NY.
10	Nov 2	<ul style="list-style-type: none"> • Ceramic production continued 	Sinopoli - pp. 43-68
	Nov 4	<ul style="list-style-type: none"> • VIDEO: Martinez Native American Pottery • Typologies and measuring attributes 	Sinopoli - pp. 69-117
11	Nov 9	<ul style="list-style-type: none"> • Measuring ceramic attributes and creating a typology 	Arthur, John W., 2009, Understanding household population through ceramic assemblage formation: ceramic ethnoarchaeology among the Gamo of southwestern Ethiopia. <i>American Antiquity</i> 74(1):31-48.
	Nov 11	<ul style="list-style-type: none"> • Measuring ceramic attributes and creating a typology (cont.) 	Article summary 4 due
12	Nov 16	<ul style="list-style-type: none"> • Go over Arthur 2009 • Explain lithic debitage project to class 	Michelaki, Kostalena, 2007, More than meets the eye: Reconsidering variability in Iroquoian ceramics. <i>Canadian Journal of Archaeology</i> 31:143-170.
	Nov 18	<ul style="list-style-type: none"> • Students work on their projects in class 	
	Nov 23	NO CLASS	

TOPICAL OUTLINE OF COURSE

	Nov 25	NO CLASS	
13	Nov 31	Students work on their projects in class	Article summary 5 due
	Dec 2	Students work on their projects in class	
14	Dec 7	Presentations	
	Dec 9	Presentations	
FINALS	Dec 13-17	No Final	

METHODS OF EVALUATION

Grading

There are no exams in this course. Your grade will be based on your performance in six components of the course as follows:

1. *Article summaries* – five written comments worth 2 points each for a total of 10 points (10%).
2. *Lithic debitage analysis project* - 30%
3. *Lithic tool analysis project* – 10%
4. *Ceramic analysis project* - 20%
5. *Final project* - 20%
6. *Class participation* - 10% (This grade will be based on attendance, participation in class discussions of readings and in group presentations of lithic and pottery assignment preliminary results, and attention to class assignments during class periods.)

Requirements

Students will complete four project assignments during the semester, in addition to writing up short annotations for assigned articles. These assignments include two on lithic analysis (one on debitage and one on tools), one on pottery analysis, and one final project based on the analysis of excavated material.

All assignments require the coding and compilation of information on certain attributes or characteristics of the items you are examining. You will learn to create tables and charts for your data, and then discuss and interpret your results. In the last part of the course, you will apply your analysis, data organization

and presentation skills to a specific research project. Through examining several different kinds of material, we will focus on developing research questions and interpretations based on material from specific spatial contexts.

All analysis exercises will be started in class although *you will need to spend non-class time in the lab every week* to complete the assignments. In many cases, you will be working in groups while doing analysis projects. However, *the work you turn in to be graded must be your own*. You must write your own reports citing specific references for ideas where appropriate. *Data presentation must be your own work* unless you receive the instructor's approval for some alternate arrangement.

Extra Credit

There is no extra credit available in this course.

Grading Scale

The following grading scale is utilized for student evaluation:

A	90% and above
B	80-89%
C	70-79%
D	60-69%
F	59% and below

COURSE POLICIES

Academic Integrity Policy

Cheating/plagiarism will not be tolerated. Students suspected of violating the University of Pittsburgh Policy on Academic Integrity, noted below, will be required to participate in the outlined procedural process as initiated by the instructor. A minimum sanction of a zero score for the quiz, exam or paper will be imposed.

E-mail Communication Policy

Each student is issued a University e-mail address (username@pitt.edu) upon admittance. This e-mail address may be used by the University for official communication with students. Students are expected to read e-mail sent to this account on a regular basis. Failure to read and react to University communications in a timely manner does not absolve the student from knowing and complying with the content of the communications. The University provides an e-mail forwarding service that allows students to read their e-mail via other service providers (e.g., Hotmail, AOL, Yahoo). Students that choose to forward their e-mail from their pitt.edu address to another address do so at their own risk. If e-mail is lost as a result of forwarding, it does not absolve the student from responding to official communications sent to their University e-mail address..

Attendance

You are expected to attend all classes. Attendance is required for satisfactory progress through the course. If you are unable to attend a class, notify me in advance.

Make-up work/Late penalties

You are expected to turn in all assignments by their due date. Late assignments will be marked down 2 points for every day they are late. Please contact your instructor if you foresee any difficulty in meeting assignment deadlines.

DISABILITY RESOURCES AND SERVICES

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Resources and Services, 216 William Pitt Union, 412-648-7890/412-383-7355 (TTY), as early as possible in the term. Disability Resources and Services will verify your disability and determine reasonable accommodations for this course.