

Anth 426W: Archaeological Laboratory Analysis
Carpenter 107: MW 3:35-4:55

Fall 2009
Dr. K. Hirth
Carpenter 115
Phone: 865-9647

Office Hours
MW 1:00-3:30
or by appointment
kgh2@psu.edu

Teaching Assistant
Ms. Jen Haney
Carpenter 409

jenhaney@juno.com

Archaeology is a subdiscipline that requires primary data collection. In addition to field techniques, archaeologists must control a wide array of laboratory techniques to process and analyze the data collected by excavation and surface survey. In fact, most archaeologists would argue that successful research design begins with a thorough evaluation of the question and how the data will be analyzed before fieldwork begins.

This course has two objectives. The first is to provide an introduction to data analysis using laboratory procedures and its relationship to research design. The course uses *real* data sets to provide experiential training in archaeological data analysis. As the course progresses, students will analyze data that can be used to explore a range of archaeological questions ranging from chronological reconstruction and experimental archaeology, to behavioral and functional analysis. The use of real data provides a more meaningful approach for learning archaeology than text book discussions or web-based exercises. It also provides students with useful analytical skills for examining ceramic and lithic materials for use during their professional careers.

The second objective is to teach how to write up the results of archaeological research in an acceptable professional format. Writing/communication skills are required in all professions including archaeology. Your writing needs to be well organized, precise, and clear, not flowery or profound. Clarity and organization is what is required in the writing exercises in this course.

Course Requirements and Grading

Each student will be required to complete all class projects and writing assignments during the semester before a grade will be assigned. The course is project driven and will be conducted as a seminar which means class participation is important and mandatory. To complete class projects students will have to spend time in the laboratory working outside the class to work with the archaeological collections that they use. The classroom laboratory will be open until **7:00 pm** on Mondays and Wednesdays to insure that all students have sufficient time to work with project collections. Additional times may be arranged to meet student needs. Because the lab will not be open every hour of the school day students will have to arrange their personal schedules to get laboratory time when needed. Students are advised to begin their projects early and work in the laboratory when it is open to insure that they have enough time to

complete them. If you have questions about a particular project or are having difficulties with the analysis take advantage of the supervised hours when a course instructor will be available for consultation.

Grading will be based on a combination of class participation, project design, data analysis, presentation, and final writeup. The written component is important and time needs to be spent by students in preparing the results of their analysis in written form. Students should *expect to rewrite and resubmit* their assignments *more than once* to produce an acceptable final product. Time in class also will be spent on oral student presentations of results. Class projects will be assigned on a weekly basis and will provide the foundation for the course grading. All projects must be submitted **on paper** using a typed double space format. Projects will be discussed briefly in class, graded and returned. Because of the pace of the class, projects must be turned in on a timely fashion. Grades will be lowered if projects are turned in late. Because project objectives and analytical techniques will be discussed in class it is vital that students attend the class lectures if they expect to perform well on class assignments. Class projects vary in point content and the final point total for all projects will be used for grading. Students are expected to adhere to the PSU standards of academic integrity in the completion of all class assignments.

There are no required texts for the course although a laboratory manual and several other books are recommended for general procedures and for reference in handling laboratory materials. Instead, individual readings will be used from journal and book length publications. These readings will be available from on-line sources as PDF files. Each student will be required to supply a variety of personal items used in the analysis which include: drawing paper, a small pliers, a ruler, hand lens, cardboard, etc. The class breakdown is summarized below:

Class projects and quizzes	80%
Class discussion and attendance	<u>20%</u>
Total	100%

Recommended Laboratory Manuals and General References

Andrefsky, William

1998 *Lithics. Macroscopic approaches to analysis.* Cambridge University Press, Cambridge.

Crabtree, Donald

1972 *An introduction to flintworking.* Occasional papers of the Idaho State University Museum, Number 28. Pocatello, Idaho.

Hirth, Kenneth

2003 *Mesoamerican lithic technology. Experimentation and interpretation.* University of Utah Press, Salt Lake City.

Rice, Prudence

1987 *Pottery analysis. A sourcebook.* University of Chicago Press, Chicago.

Shepard, Anna O.

1954 *Ceramics for the archaeologist.* Carnegie Institution of Washington Publication 609.

Sinopoli, Carla

1991 *Approaches to archaeological ceramics.* Plenum Press, New York.

Sutton, Mark, and Brooke Arkush

2002 *Archaeological Laboratory Methods. An Introduction.* 3rd edition. Kendall/Hunt Publishing Company, Dubuque.

Whittaker, John

1994 *Flintknapping. Making and understanding stone tools.* University of Texas Press, Austin.

Class Outline

Topic	Description	Readings
1)	Class Introduction and Archaeological Pattern Recognition Project #1a: <i>Contemporary Material Cultural Patterning</i> Project #1b: <i>Research Design</i> Project #1c: <i>Data Collection and Analysis</i>	Rathje/McCarthy
2)	Archaeological Classification: Functional and Chronological approaches Project #2a: <i>Preparing a Descriptive Classification</i> Project #2b: <i>Preparing a Cladistic (Evolutionary) Classification</i>	Ford Adams
3)	The Analysis and Classification of Flaked Stone Lithics Project #3a: <i>Kaminaljuyu Lithics: Technology Quiz</i> Project #3b: <i>Kaminaljuyu Lithics: Problems and Predictions</i> Project #3b: <i>Kaminaljuyu Lithics: Technological Classification</i>	Sutton/Arkush chpt 4 Andrefsky, chapt 2 Andrews Michels
4)	The Analysis and Classification of Archaeological Ceramics Project #4a: <i>Critiquing Ceramic Classification</i> Project #4b: <i>Drawing and Measuring Ceramic Forms</i> Project #4c: <i>Classification of Ceramic Form</i> Project #4d: <i>Identifying Surface Finish and Decoration</i> Project #4e: <i>Classification of Surface Finish</i>	Sutton/Arkush chpt 6 Thomas Blitz Pyne
5)	Archival Work: Cataloguing the Unknown Project #5: <i>The William T. Sanders Archive</i> http://www.archivists.org/governance/presidential/fleckner.asp http://www.archivists.org/governance/presidential/jimerson.asp http://www.archivists.org/governance/presidential/GreeneAddressAug08.pdf	Webster/Evans
6)	Experimental Archaeology (if time permits) Project #6a: <i>Estimating Core Diameter</i> Project #6b: <i>Usewear Analysis</i>	No reading