UNIVERSITY OF MARY WASHINGTON
Department of Historic Preservation

HISP 462 Laboratory Methods in Archaeology

Prof. Douglas Sanford — T/R: 12:30-1:45 PM
Fall 2010 — Combs 12

"In a very real sense, the essential work of archaeology is performed in the lab."
Robert Chenall in *Data Bank Applications in Archaeology* (1981).

COURSE DESCRIPTION AND OBJECTIVES

This course encourages students to understand and experience how laboratory procedures form an integral part of the archaeological research process. The recovery of artifacts and other data from an archaeological excavation or survey marks only the beginning of interpreting people's actions in past societies and cultures. Studying material culture in relation to a research design within the various stages of laboratory methods comprises the crucial middle ground of organizing, analyzing, and interpreting information.

In "the lab" artifacts from the field are processed (washed, labeled, and stored), identified, catalogued, analyzed, conserved, and made presentable to a variety of audiences. Data from artifacts and field records also are critical types of information that are recast in the lab and form the basis for reports and publications. This multifaceted, indoor set of procedures not only informs and re-directs ongoing field archaeology, but critically affects site interpretations and research conclusions. Archaeological studies are never complete until the "lab work" is done and reports are produced. In addition, the lab supports key administrative, conservation, and collections management tasks for archaeologists.

Through readings and lectures, discussions, speakers, and hands-on experience, this course provides students the opportunity to acquire the basic skills essential to proper laboratory methods and to analytical techniques. Such skills are critical to archaeological careers, whether in research or applied settings. Beyond gaining familiarity with laboratory procedures, students will become acquainted with quantitative methods having archaeological applications. Statistics, the numerical summaries and descriptive interpretations of data, are not only integral and commonplace to archaeology, but occupy a similar position within most other scholarly endeavors. This class emphasizes applied statistics, those of practical use to archaeologists concerned with better ways to understand and communicate archaeological information.

Major Course Objectives

To gain a working knowledge of:
(1) how archaeological laboratories are organized, as well as the common purposes and functions for these indoor spaces;
(2) standard archaeological laboratory methods and procedures;
(3) basic archaeological analytical methods; and,

(4) basic archaeological quantitative methods, including statistical applications.

Instructor Information

Office: Combs 133, Phone: 540-654-1314; **I work best by e-mail:** dsanford@umw.edu. Office hours: M: 11 AM-12 noon; Tu.: 3-4 PM; W: 1-2 PM; Th.: 2-3 PM; F: 11 AM–12 noon; **and by appointment**.

CLASS REQUIREMENTS

Assignments: each will be discussed in class and addressed through handouts:

(1) Distribution study – an analysis of the "density contours" of different artifact types and soil chemicals on a given site.

(2) Critical review – an examination and critique of a published example of an archaeologist's artifact analysis.

(3) Analytical research project – an analysis of different artifact types, amounts, and dates to aid in discussing the stratigraphy and sequencing of a backfilled feature. A schedule for structuring and implementing this project will be set in class. Project results will be reported in a paper submitted at the end of the semester using proper formats for archaeological and scholarly production.

Class Participation: students are expected to participate in class meetings, discussions, and practical exercises. This means coming to class ready to talk about readings and assignments.

Statistical Methods: students will need access to a hand calculator. Access to computerized statistical and graphic applications is required through the use of Excel and SPSS (statistical package for the social sciences, now called PASW). Both applications will be addressed in class and through the College's on-line system.

Texts:Required texts include *Statistics for Archaeologists, A Commonsense Approach* by Robert D. Drennan (1996), and *Archaeological Laboratory Methods, An Introduction* by Mark Q. Sutton and Brooke S. Arkush (5th edition, 2008). Additional readings will be made available through photocopies and reserve readings on Blackboard.

Grading: The final grade is determined on the following basis:

Analytical project:	25%
Critical review:	15
Distribution study:	15
Artifact analysis exercises:	10
Final examination:	20
Class participation:	15 (& statistical homework)
	100%

Exercises or assignments submitted after the announced due date will receive a penalty of a letter grade reduction per day.

In keeping with the College's +/- grading system, the following numerical divisions will be used to determine letter grades:

A: 94-100; A-: 90-93 B+: 87-89; B: 83-86; B-: 80-82
C+: 77-79; C: 73-76; C-: 70-72 D+: 67-69; D: 60-66; F: < 60%.

CLASS SCHEDULE

Aug. 24 Course introduction & lab tour; Collections Management.
Reading: Sutton & Arkush, Chpt. 15.

Aug. 26 The Lab & the Overall Archaeological Process. Artifact Processing & Analysis.
Reading: Sutton & Arkush, Chpts. 1, 2

Aug. 31 Artifact Identification & Cataloging Practicum.
Reading: Sutton & Arkush, Chpts. 3, 9.

Sept. 2 Practicum (continued).

Sept. 7 Archaeology & Quantitative Analysis: Basic Statistics – Characterizing Information through Numbers and Pictures.
Reading: Drennan, Chpts. 1, 2, 3.

Sept. 9 Descriptive Statistics (continued).

Sept. 14 Field Trip: Visiting a Local Archaeological Laboratory.

Sept. 16 Spatial & Distribution Analysis: SURFER at Site ST116 at Stratford.
Reading: Sam Hilliard, Introduction to the *Atlas of Antebellum Southern Agriculture* (1984).

Receive Assignment for Distribution Study

Sept. 21 Basic Statistics II – Quantitative Description and Common Assumptions.
Reading: Drennan, Chpts. 4, 5.

Sept. 23 Basic Statistic II (continued).

Sept. 28 Seriation Practicum: Fieldwork in Cemetery Analysis.

Sept. 30 Cemetery Analysis: Typology & Seriation.

Due Date for Submission of Distribution Study

Oct. 5 Seriation and Distribution: Cemetery Analysis.

Oct. 7 Finish Cemetery Analysis.

Oct. 12 **No class – Fall Break**

Oct. 14 Relation, Association, & Significance.
Reading: Drennan, Chpt. 11.

Due Date for Choice of Critical Review Article

Oct. 19 Significance (continued).
Reading: Drennan, Chpts. 13, 14.

Oct. 21 Historic Ceramics: Identification, Analysis.

Analytical Project Assignment Introduction

Oct. 26 Ceramics Praticum: MCD & Assemblage Composition Analysis.

Oct. 28 Ceramic Analysis discussion.
Reading: Eleanor Breen, "Mending the Past: Reconstructing Virginia's History through Ceramic Analysis" (2007) **or** Lu Ann DeCunzo, "Material Culture of a Woman's Reform: The Magdalen Society Asylum," pp. 69-74 (1995).

Nov. 2 Archaeology and Computers: Excel; SPSS, Part 1 & Introduction to Regression.

Nov. 4 Class Exercise: Comparing (small) Assemblages: Composition, Dating, Function.

Nov. 9 Native American Material Culture.
Reading: Sutton & Arkush, Chpts. 4, 5.

Due Date for Submission of Critical Review

Nov. 11 Practicum in Native American Lithic & Ceramic Identification & Analysis (Speaker).
Reading: Sutton & Arkush, Chpt. 6.

Nov. 16 SPSS – Part II.

Due Date for Analytical Project "Outline"

Nov. 18 Final Statistics Review.

Nov. 23 Back to Basics: Bottle Glass & Window Glass (discussion & practicum)
Reading: Lu Ann DeCunzo, "Material Culture of a Woman's Reform: The Magdalen Society Asylum," pp. 74-80 (1995)

Nov. 25 **No Class – Thanksgiving**

Nov. 30 Bottle and Window Glass practicum.

Dec. 2 Finish Glass Analysis. Final Business & Review.

TBA: Due Date for Submission of Analytical Project Papers

FINAL EXAMINATION: Tuesday, December 7th, noon – 2:30 PM