

**The Science of Archaeology**  
**ANT 120**  
**Spring 2007**

Sections 301 and 302 Lecture: T Th 8:30-10  
O'Connell 360  
301 Lab T 10:10-11:40, 302 Lab: Th 10:10-11:40  
O'Connell 280

Dr. Anna Agbe-Davies  
2347 N. Racine Ave. B-02  
Office Hours: W 9-11, Th 5-6, or by appointment  
773 325 4036  
[aagbedav@depaul.edu](mailto:aagbedav@depaul.edu)

Overview: ANT 120 Introduces the subject of archaeology, emphasizing its scientific practice. Students will learn the principles of archaeology through simulation exercises as well as the analysis of actual archaeological data. Archaeologists use a specialized set of techniques to test important hypotheses about our past and develop theories about human behavior and human culture. Students will have the opportunity to experiment with these techniques, discuss the implications of their findings, and compare them with the research and ideas of professional archaeologists.

Texts: Required readings are contained in two **books** and a **course reader**. The books may be purchased in the Bookstore; the reader is available from the administrative assistant (Ms. Turner) in the Anthropology Department at 2343 N. Racine: M-F, 9-4.

Sutton, M. Q. and R. M. Yohe, II  
2006 *Archaeology: The Science of the Human Past*. 2nd ed. Pearson Education, Boston.

Price, T. D. and A. B. Gebauer  
2002 *Adventures in Fugawiland: A Computer Simulation in Archaeology*. 3rd ed. McGraw Hill, Boston.

Course requirements: In this course, the emphasis is on hands-on learning, informed by lectures and class discussions. **Assignments** completed outside of class prepare students for the execution of the **laboratory exercises**. **Lectures** and **readings** introduce key concepts and help to place the exercises in their context in the wider discipline of archaeology.

Course grades will be assessed as follows:

Lab exercises	20%
Mid-term	20%
Presentation	25%
Participation	10%
Final	25%

There will be four *laboratory exercises* that will be summarized in separate reports. The reports or products of these exercises will be turned in by the lab group to which each student is assigned, along with a statement of participation by each group member. The information from three additional lab exercises will be combined into the presentation, described below. Lab reports are due **in hard copy** at the start of the next week's lab session.

The *mid-term* on 26 April may consist of multiple choice, fill in the blank, short answer, and/or short essay questions covering the material presented (readings, lab, and lecture) through 24 April.

Each lab group will prepare a *presentation* reflecting their work on the DAACS\* -based lab exercises. The material from the DAACS labs will also be reflected in the final exam.

*Participation* will be gauged by each student's attendance, preparedness for lecture and lab, completion of out of class assignments, as well as individual assessments that are completed for the labs and the presentation.

The *final exam* on 5 June will cover material from the entire quarter, including findings from the DAACS analyses, but with an emphasis on the second half of the course. It will be in a format similar to the mid-term.

As you can see, several of the assessments are based on **group work** (lab reports, presentation), while others are based on **individual work** (mid-term, final, participation). Individual tasks should be executed on your own, although you are welcome to discuss your work with your peers. In other words, write your own individual assignments and exams and if you incorporate another person's ideas into your individual work, give credit where credit is due. See "Academic Integrity," below.

Detailed guidelines for the successful execution of each of these tasks will be available as handouts and on the course Blackboard site.

---

\* DAACS: The Digital Archaeological Archive of Comparative Slavery. <http://www.daacs.org/>

Reading and assignment schedule (PLEASE NOTE—readings and homework are listed with the class session by which they must be **completed**):

		<b>Readings</b>	<b>Assignments</b>
What makes archaeology a science?	29 Mar		
	3 Apr	Sutton & Yohe (S&Y) Ch 1,3.	
Observation and recording	5 Apr	S&Y Ch 4. Course Reader (CR) Rice. <i>Recommended: Price &amp; Gebauer (P&amp;G) Ch 1, as needed</i>	P&G pp 94-98
	10 Apr	S&Y Ch 5	
Archaeological dating	12 Apr	CR Brown & Muraca. <i>Recommended: P&amp;G 48-52, as needed</i>	P&G 99-102
	17 Apr	<i>Recommended: P&amp;G Part 3, as needed</i>	P&G 105, 110-112
People and their stuff	19 Apr	S&Y Ch 6. On-line Mullins TBA. <i>Recommended: P&amp;G 39-48, Part 3, as needed</i>	P&G 102-104, 106-109
	24 Apr	S&Y Ch 7	
Site simulation analysis	26 Apr		<b>Mid-term</b>
	1 May	S&Y Ch 9-10	
DAACS and historical archaeology	3 May	CR Samford, DAACS website	summary statements
	8 May	CR Franklin, DAACS data	Barber Ex 10
	10 May	S&Y Ch 11	
↓	15 May	CR Deetz 1987, DAACS data	Barber Ex 14
	17 May	S&Y Ch 12	
↓	22 May	CR Deetz 1996, DAACS data	Barber Ex 15
	24 May		
↓	29 May	S&Y Ch 13	<b>presentations during lab</b>
	31 May	S&Y Ch 14	<b>presentations during lab</b>
↓	5 Jun		<b>Final exam</b>

Lab schedule:

29 Mar & 3 April	Video and discussion
5 & 10 April	Mapping
12 & 17 April	Stratification and dating
19 & 24 April	Artifact analysis
26 & 1 May	Fugawiland
3 May (Thurs)	no lab
8 & 10 May	DAACS Faunal analysis
15 & 17 May	DAACS Ceramic analysis I
22 & 24 May	DAACS Ceramic analysis II
29 & 31 May	Presentation of DAACS findings
5 June (Tues)	no lab

Instructions for each lab will be distributed in class, and available on Blackboard.

Policies:

*Regarding course requirements*

- Lab reports are due at the start of lab, one week after the lab session they were assigned. They **must** be in **hard copy**. Late lab reports will **not** be accepted.
- I reserve the right to deduct points for assignments handed in electronically.
- If there is any scheduling conflict caused by a university-sanctioned activity, or a family emergency, please consult with me as soon as possible.
- ***Any request for a change to the evaluation schedule must be accompanied by written verification*** from the hospital, court, or the university (i.e.: the athletic department for a road trip; student affairs for a personal emergency, etc.) before I will consider making accommodations. Student Affairs is available by phone: 773.325.7290; and via their website: <http://studentaffairs.depaul.edu/dos/ourservices.html>.

*Regarding conduct*—Please behave in a manner that promotes effective teaching by your professor and learning by your classmates. This means coming to sessions prepared to focus on the matter at hand and avoiding activities that can distract from the focus of the class. Debates and discussions should be conducted respectfully, snacks consumed quietly and neatly (when in the archaeology lab: only water, no food), phones turned off, etc. When in doubt, think about the effect of your actions on everyone's ability to learn. Failure to comply with these policies will seriously affect one's grade, and may result in removal from the course.

*Regarding communication*—From time to time I may need to contact you individually or as a group. I will be using the course Blackboard site, either to post announcements or email you. **\*\*Be certain that your correct email address is included in your Blackboard profile, otherwise you may miss important course updates and information.\*\***

*Regarding academic integrity*—A statement from the Office of Teaching, Learning, and Assessment:

“*Cheating* is any action that violates University norms or an instructor’s guidelines for the preparation and submission of assignments. Such actions may include using or providing unauthorized assistance or materials on course assignments or possessing unauthorized materials during an examination. *Plagiarism* involves the representation of another’s work as your own, for example: (a) submitting as one’s own any material that is copied from published or unpublished sources such as the Internet, print, computer files, audio disks, video programs or musical scores without proper acknowledgement that it is someone else’s; (b) paraphrasing another’s views, opinions or insights without proper acknowledgement or copying of any source in whole or in part with only minor changes in wording or syntax even with acknowledgement; (c) submitting as one’s own work a report, examination, paper, computer file, lab report or other assignment which has been prepared by someone else. If you are unsure about what constitutes unauthorized help on an exam or assignment, or what information requires citation and/or attribution, please ask your professor. Violations may result in the failure of the assignment, failure of the course, and/or additional disciplinary actions.”

For further information, see <http://studentaffairs.depaul.edu/homehandbook.html>.

DAACS Lab: Faunal  
ANT 120  
Dr. Anna Agbe-Davies

This is the first lab using the DAACS dataset. Additional information about the structures and archaeology at Rich Neck / Palace Lands can be found at the DAACS website (<http://www.daacs.org>) and at the Colonial Williamsburg website (<http://www.history.org>). House for Families information can be found at the Mount Vernon website (<http://www.mountvernon.org>). Each group will be analyzing a feature or group of contemporary features from one of the sites, using faunal remains, pipes, and ceramics. This week focuses on the bones.

The faunal data are available as excel files from the class Blackboard site. The dataset includes information about: number of bones; species; amount of meat available on an adult or juvenile member of that species; element; body part; side of the body; weight of the bone; whether it is fused or not; type of tooth; bone size; bone condition; evidence of burning or chewing; butchering method; type of marking; and comments. These are most crucial for your basic analysis. There are also other categories of information that may be interesting or be a possible source for a hypothesis to test. Each file also contains information about the context from which the bones were recovered.

There is no write up for this lab, but your group's powerpoint presentation (due in lab either 29 or 31 May), will be presenting information from **all** of the DAACS labs, so pace yourselves! Also, please realize that the readings are much reduced for this portion of the course because you **will** need to do work on this outside of lab time. Use our lab time for tasks that require your group be together, and try to work out other tasks that can be done during your study time for this course.

**At minimum** you will need to summarize the faunal assemblage using measures you practiced with the homework (NISP, MNI, meat weight, niche width), and then explain what that tells us about life at the site.

Also consider the following questions

- what species were consumed?
- is there any way you can incorporate the faunal specimens that are only identified to the class level (e.g.: "large mammal") into your analysis?
- what species provided the most food (meat weight)?
- are the NISP, MNI and meat weight results compatible? if not, what might that mean?
- can you say about butchering or other food preparation techniques?
- does the faunal data speak to any particular season of the year, or environmental niche?
- does the faunal data speak to other reasons for an animal presence besides food?
- since you will be comparing your assemblage with the others (on the final), what are some good statistics and summary tables/graphics you can compile about your assemblage?
- can you make any interesting comparisons between different parts of your assemblage (i.e.: different layers in the same feature; different phases of the same site).

Ultimately, you will be assessed on your ability to 1) perform the necessary analyses and 2) apply them to relevant questions.

There may be other interesting things that you can learn from this assemblage. See the textbook as well as Barber Exercise 10, and Franklin 2001 for ideas.

Tips for using the excel files:

- some records include more than one artifact or ecofact, so **be sure to look at the “count” field** to tell how many there are of a given item
- excel has some very efficient **calculation, sorting, filtering and data display tools**, if no one in your group knows the program, just ask!
- if you can't figure out what a data field contains, check the DAACS **glossary** <http://www.daacs.org/resources/glossary/glossary.html> or the **coding manual** for that artifact type: <http://www.daacs.org/aboutDatabase/catalogingManual.html> . I will have printed copies of the coding manual for your reference during labs.
- be sure to **save your work often** on a device that you can take with you!

DAACS Lab: Tobacco Pipes  
ANT 120  
Dr. Anna Agbe-Davies

This is the second lab using the DAACS dataset. The pipe data are available as excel files from the class Blackboard site. Additional information about the structures and archaeology at Rich Neck / Palace Lands can be found at the DAACS website (<http://www.daacs.org>) and at the Colonial Williamsburg website (<http://www.history.org>). Information about the House for Families can be found at the DAACS site and <http://www.mountvernon.org>.

The dataset includes information on: modification after manufacturing; bowl shape; bowl type; stem bore diameter in /64ths of an inch; fragment weight; any images available; decorative motifs; makers' marks; and additional notes.

There is no write up for this lab, but your group's powerpoint presentation (due in lab either 30 May or 1 June), will be presenting information from **all** of the DAACS labs (faunal, pipe, and ceramics), so pace yourselves!

For the pipe analysis, consider the following questions

- What are the Harrington, Binford, and Hanson dates for your phase?
  - Do the dates agree with one another?
  - If not, what could be a source of disagreement?
- Is it reasonable to calculate Harrington, Binford, or Hanson dates for smaller groupings within your phase (i.e.: for a stratigraphic group, for a feature group, for a feature, or for an individual context?)

Note: you can find detailed information about how the different contexts are related to one another by looking at a detailed phasing query (conveniently pre-written:

<http://www.daacs.org/resources/sites/PalaceLandsQuarter/phase.html>,  
<http://www.daacs.org/resources/sites/RichneckQuarter/phase.html> and  
<http://www.daacs.org/resources/sites/HouseforFamilies/phase.html>).

- Do the dates you've obtained agree with the relative dating of these stratigraphic groups, feature groups, features, or individual contexts as shown in the Harris Matrix (i.e.: do the stratigraphically-older assemblages have older dates)?
- Can you determine dates from bowl shapes or maker's marks? This information will be in the notes fields. You can also make comparisons with the pipe chart I've posted with these instructions (inh pipes.jpg).

Note: if there is an image listed in your excel file, you can go back to [www.daacs.org](http://www.daacs.org) and look at it by

1. running the fourth type of artifact query "View All Artifact Attributes by Artifact Category."
2. after selecting your site, and "pipes," I recommend filtering the data by "context," so you're getting the information for only the context you need (i.e.: AL00090)

3. this returns a table, scroll to the right until you see the “images” column, there you will find links to images of your pipes.
- Based on your readings, and your assemblage, how reliable do you think these different dates are?

DAACS Lab: Ceramics  
ANT 120  
Dr. Anna Agbe-Davies

This is the third lab using the DAACS dataset. The ceramics data are available as excel files from the class Blackboard site. The dataset includes information on: material; manufacturing technique; ware; vessel category; vessel form; completeness of specimen; whether it was burned or otherwise modified after it was manufactured; pattern name; any maker's marks; images; notes; decoration; and evidence of use or wear.

The information on date ranges for the different ceramic types can be found on Blackboard, in the same location as the DAACS data files.

There is no write up for this lab, but your group's powerpoint presentation (due in lab either 30 May or 1 June), will be presenting information from **all** of the DAACS labs (faunal, pipe, and ceramics), so pace yourselves!

For the DAACS ceramics analysis, consider the following questions about dates and foodways

- What *termini post quem* can you determine, using the manufacturing dates for the different ware types?
- What is (are) the Mean Ceramic Date for your phase(s)?
- Is it reasonable to calculate MCDs for smaller groupings within your phase(s) (i.e.: for a stratigraphic group, for a feature group, for a feature, or for an individual context?)  
Note: you can find detailed information about how the different contexts are related to one another by looking at a detailed phasing query (conveniently pre-written:  
<http://www.daacs.org/resources/sites/PalaceLandsQuarter/phase.html>  
<http://www.daacs.org/resources/sites/RichneckQuarter/phase.html>  
<http://www.daacs.org/resources/sites/HouseforFamilies/phase.html>
- Do the TPQ and MCD dates agree? Do they agree with the dates you got from the pipes?
  - If not, what could be a source of disagreement?
- Do the dates you've obtained from all of these methods agree with the relative dating of the site as shown in the Harris Matrix (i.e.: do the stratigraphically older contexts have older dates)?
- Can you learn anything from the maker's marks?
- Can you learn anything from the post-manufacturing modification or use-wear evidence?
- Do different features or different areas of the site, or different time periods have different activities, based on ceramics?
- Are there more hollowwares or flatwares in your assemblages?
- What kinds of foodways activities are represented in your phase(s)?

ANT 120

Dr. Anna Agbe-Davies

Parameters for DAACS powerpoint presentation

Due in lab, either 29 or 31 May.

Your group will have 15-20 minutes to make its presentation. If all members of your group want to speak, that is fine, but not necessary. I leave it up to you to come up with an equitable distribution of the work load.

You must turn in an **electronic copy** of your presentation as well. It needs to be posted to the Blackboard site's Digital Drop-Box (find it by going to Tools -> Digital Drop-Box). **It must be posted by 5:30 on your lab day.**

An "A" presentation presents the analysis of the DAACS data in a way that

1. provides an accurate summary of the minimum required analyses and does not contain analytical errors.
2. demonstrates that the lab group has considered the questions outlined on the lab handouts (faunal, pipes, and ceramics).
3. demonstrates that the members of the lab group understand the strengths and weaknesses of the analytical techniques used.
4. successfully compares different datasets that are relevant to a single question (i.e.: dating, foodways).
5. links the lab group's findings with the relevant readings (Sutton and Yohe, and the items in the course reader).
6. clearly presents the lab group's findings to a viewer (i.e. one of your classmates) who is not familiar with the assemblage being described, but is familiar with the techniques we have all been using.

A "B" presentation presents the analysis in a way that accomplishes 1-4, but not 5 and 6.

A "C" presentation is missing any other two of the above six criteria.

A presentation that is unable to provide a summary of the data and shows poor understanding of the techniques, contains significant errors, and cannot adequately explain the lab group's findings will receive a grade of "D" or "F."