Laboratory Methods in Archaeology
ANTH 329/529

Professor Mark Hill
Classroom: Burkhardt 309
Time: Wednesday, 2:30 to 5:50 pm
Office: 314a Burkhardt Building
Phone: 285-5328
Email: mahill2@bsu.edu
Office Hours: Tuesday and Thursday 2:00 to 4:00 pm, Wednesdays 10:00 to 11:00, or by appointment

Course Description
Archaeology is a science that attempts to understand human behavior, yet typically we have no living people of whom to ask questions or to observe. How, then, do we attempt to understand these past lives and societies? Archaeology uses the materials they have left behind – their tools, the remains of their meals, their broken pottery, the remains of plants that grew on and around their settlements, the soils they lived and grew crops on, and other elements of their material culture.

Analysis of material culture is fundamental to archaeology. In this course we will learn the techniques and concepts of archaeological laboratory methods. Through readings, presentations, and laboratory exercises, we will learn how archaeological materials such as stone tools, ceramics, animal and plant remains, metal artifacts, and others are used to provide the data we use to explore past human behavior and societies. In the process, you will learn some basic skills and knowledge in the analysis of archaeological materials.

But the course is more than an introduction to laboratory techniques. Through readings, presentations, and (for graduate students) a research project, you will also learn how to formulate research questions, design methods, and apply these laboratory techniques to anthropological issues. Classic and contemporary archaeological research will be used to understand the issues behind the methods, and the various kinds of research questions being addressed through the methods and materials introduced in the class. These examples will help you gain skills in the formulation of research designs, identifying appropriate methods, and applying archaeological research to the study of past human behavior.

Course Objectives
At the end of the semester, you will have developed basic skills in the identification, processing, and analysis of archaeological materials such as lithics, ceramics, plant and animal remains, and historic artifacts.

More importantly, you will also have developed a critical approach to the formulation of archaeological research issues, the development of research designs, and the application of your newly developed techniques to important anthropological issues.
You will also gain practice and experience in presenting archaeological research to audiences through oral presentations, and will have opportunities to improve your writing skills through laboratory assignments and (for graduate students) a research paper.

Readings and Texts
While this course will involve laboratory assignments, it is also a rather reading-intensive course. We will read much of our assigned text, and use that to guide our laboratory assignments. However, you will also read several classic and contemporary research publications as listed in this syllabus and in supplemental handouts. You will be expected to come to class having read those materials, and will need to participate in class discussions of the issues and questions raised by those readings.

The required text is:


Blackboard
Announcements, syllabus, assignments, and other materials will be available on the class Blackboard website. Discussion questions must be submitted on the website by noon Tuesday each week.

Course Requirements
The course content will be presented in lectures, readings, presentations, lab assignments, and discussions. There will be no exams, instead students will be graded on lab assignments, in-class presentations, and participation. Graduate students will also be graded on a final research project due at the end of the semester.

The course assumes some familiarity with anthropology and archaeology. Lectures will introduce key concepts and will complement the assigned readings. Readings must be completed before class and will be discussed in class. Attendance is expected. If you are unable to attend a class you must make arrangements with the instructor.

Class Time and Organization
The class meets for three hours and twenty minutes on Wednesday afternoons (and yes, we will have a break). This time will be divided into lecture, student presentations and discussion, and laboratory assignments. In general, class will begin with a lecture and introduction of that week’s subject. Following the lecture, there will be student presentations and a formal discussion based on the readings assigned for that week. Each student will present two reading summaries during the semester, and all students will participate in discussions. Each week’s readings must be completed prior to class.

Reading summaries will be assigned during the first week of class, and presentations and discussion will begin in the second week of the semester. Each reading summary will consist of a 1 page typed handout provided to all class members, and a fifteen minute presentation. The presentation will include a discussion of the background of each author, a summary of key points in the article, a discussion of how it applies to the analysis of archaeological materials, and a critique. After the fifteen minute presentation, the student
will then lead a discussion of the article and all students will participate. Each reading summary is worth 25 points for a maximum available total of 50 points.

Those students who are not presenting an article summary will submit two discussion questions no later than noon on the Tuesday prior to class. Questions should focus on theoretical or methodological issues of the articles, issues related to the author’s interpretations of the results, or points of clarification. These questions are worth 5 points per discussion session, or a maximum available total of 70 points.

Following the student presentations and class discussion, the week’s lab assignment will be introduced. There will be fourteen lab assignments (each worth 20 points for a maximum total of 280 points), and time will be provided in class to begin that assignment, but additional time outside of class will likely be required. Lab assignments will take place in the Applied Archaeology Laboratory facilities in 314 Burkhardt Building. The lab will remain open during normal business hours and students can work on the assignment at anytime during the day. Lab assignments will be due at the start of class on the following Tuesday.

**Graduate Student Research Papers and Undergraduate Extra Credit**

Graduate students will also be expected to complete a final research project. By Wednesday, September 14, graduate students must submit a research proposal (worth 15 points) to the instructor that outlines the question to be addressed, proposes methods, presents a brief relevant literature review, and identifies collections that will be used in the study. The instructor will review each proposal and provide recommendations for consideration in the final study. After the instructor’s approval, graduate students will present a brief synopsis of their research proposal to the class on September 28th, and afterwards may begin working on their final research project. Graduate students are encouraged to recruit undergraduate class members as members of their research team. Undergraduates who assist with a graduate student research project will receive up to 20 extra credit points based upon the recommendation of their graduate student supervisor. This final research paper is worth 85 points and will be due on the scheduled final exam date. Combined with the 15 points for the proposal, this project is worth a total of 100 points, or 20% of your grade. The final week of class will be reserved for work on this project.

**Late Assignments**

Since the course must cover a wide range of issues and topics in a short period, students are STRONGLY encouraged to turn in assignments on time. If you know that an assignment will be late due to circumstances beyond your control, notify the instructor as early as possible. Without such notification and approval, late assignments may not be accepted.

**Grading**

A maximum of 500 points will be possible for graduate students, 400 points for undergraduates (14 labs at 20 points each, 2 reading summaries at 25 points each, 14 discussion questions at 5 points each, and a final project for graduate students at 100 points). Grading will not be done on the curve, but will be based upon a percentage of the total available points. Grades will be assigned as follows:
Graduate Students:
A  ≥465 (93%)  B+ 435-449½ (87%)  C+ 385-399½ (77%)  D+ 335-349½ (67%)
A- 450-464½ (90%)  B+ 415-434½ (87%)  C+ 365-384½ (73%)  D 300-334½ (60%)
   B- 400-414½ (80%)  C- 350-364½ (70%)  Fail <300 (<60%)

Undergraduate Students:
A  ≥372 (93%)  B+ 348-359½ (87%)  C+ 308-319½ (77%)  D+ 268-279½ (67%)
A- 360-371½ (90%)  B+ 332-347½ (83%)  C 292-307½ (73%)  D 240-267½ (60%)
   B- 320-331½ (80%)  C- 280-291½ (70%)  Fail <240 (<60%)

Academic Honesty
Students are expected to uphold the Ball State University standard for conduct relating to academic integrity. Students assume full responsibility for the content and integrity of the academic work they submit. The guiding principle of academic integrity shall be that their submitted work, examinations, reports, and projects MUST BE THEIR OWN WORK. Make sure to cite all sources. Plagiarism of any sort, whether of the “word for word” variety, paraphrasing, or “mosaic” plagiarism, is unacceptable and unethical. Any student found plagiarizing will FAIL the course. IGNORANCE IS NO EXCUSE.

Guidelines for how and when to cite will be made available to students. Citations in this course will follow the Society for American Archaeology style, and more can be learned about that citation format at the SAA website (www.saa.org).

All occurrences of academic misconduct will be dealt with in accordance with the Student Academic Ethics Policy guidelines and procedures outlined at http://cms.bsu.edu/About/AdministrativeOffices/StudentRights/PoliciesandProcedures/StudentCode/VIIEthicsPolicy.aspx

Access and Opportunity for Students with Disabilities
If you need course adaptations or accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible. My office location and hours are shown on the first page of this syllabus.
COURSE SCHEDULE

Week 1, August 24: Introduction and “Thinking from Things”
   Textbook: Chapters 1 and 2
   Assignment: Garbage

Week 2, August 31: Data and Classification in Archaeology
   Textbook: Chapters 2 and 3
   Lab: Records and Cataloging

Week 3, September 7: Lithic Raw Materials
   Textbook: Chapter 4
   Lab: Lithic Raw Material Identification

Week 4, September 14: Lithic Debitage
   Textbook: None
   Lab: Lithic Debitage Attributes

Week 5, September 21: Lithic Tools
   Textbook: None
   Lab: Lithic Tools and Mobility

Week 6, September 28: Groundstone
   Textbook: Chapter 5
   Lab: Groundstone

Week 7, October 5: Prehistoric Ceramics
   Textbook: Chapter 6
   Lab: Prehistoric Ceramics I

Week 8, October 12: Prehistoric Ceramics
   Textbook: None
   Lab: Prehistoric Ceramics II

Week 9, October 19: Faunal Analysis; Identification and Quantification
   Textbook: Chapter 10
   Lab: The Mammal Skeleton: Appendicular

Week 10, October 26: Faunal Analysis; Identification continued and Interpretation
   Textbook: None
   Lab: The Mammal Skeleton: Axial

Week 11, November 2: Textiles and Perishables
   Textbook: Chapter 8
   Lab: Textiles
Week 12, November 9: Macrobotanicals and Pollen
Textbook: Chapter 11
Lab: Plant recovery and identification

Week 13, November 16: Archaeochemistry and archaeometry
Textbook: Chapter 13
Lab: Archaeometry

Week 14, NO CLASS -----THANKSGIVING-----

Week 15, November 30: Historic Materials
Textbook: Chapter 9
Lab: Historic Artifacts

Week 16, December 7: Final Projects.
No Class, students to work on final lab projects and papers.
Reading Assignments

Week 1 Thinking from Things
Binford, Lewis R.
Wylie, Allison

Starting with Week 2, each of you needs to select TWO articles from the following list, and present it in class.

Week 2 Data and Classification in Archaeology
Brew, John O.
1971 The Use and Abuse of Taxonomy. In Man’s Imprint on the Past, edited by J. Deetz, pp. 73-107. Little Brown, Boston
Ford, James A.
1954 The Type Concept Revisited. American Anthropologist 56:42-53
Spaulding, Albert C.

Week 3 Lithic Raw Materials
Andrefsky, William Jr.
Kooyman, Brian P.
Tykot, Robert H.

Week 4 Lithic Debitage
Amick, Daniel S. and Raymond P. Mauldin
Andrefsky, William Jr.
Andrefsky, William Jr.
Sullivan, Alan P. and Kenneth C. Rosen
Week 5 Lithic Tools
Andrefsky, William Jr.
Bamforth, Douglas B.
1986 Technological Efficiency and Tool Curation. American Antiquity 51:38-50
Binford, Lewis R.

Week 6 Groundstone
Adams, Jenny L.
Hard, Robert J., Raymond P. Mauldin, and Gerry R. Raymond
Zarillo, Sonia, and Brian Kooyman

Week 7, Prehistoric Ceramics
Lesure, Richard G.
Rice, Prudence

Week 8 Prehistoric Ceramics Lab – No Readings this week

Week 9 Faunal Analysis; Identification and Quantification
Grayson, Donald K.
Meltzer, David, Robert Leonard, and S. Stratton
Schaffer, Brian

Week 10 Faunal Analysis; Identification cont., and Interpretation
Byers, D., and J. Broughton
Broughton, J
Jackson, H.E., and S. Scott

**Week 11 Textiles and Perishables**
Croes, Dale R.
Baldia, Christel M., and Kathryn A. Jakes

**Week 12 Macrobotanicals and Pollen**
Bryant, Vaughn M. Jr., and Richard G. Holloway
1983  The Role of Palynology in Archaeology.  *Advances in Archaeological Method and Theory* 6:191-224
Miller, Naomi F.

**Week 13 Archaeochemistry and Archaeometry**
Hill, Mark A.
Lizee, Jonathan M., Hector Neff, and Michael D. Glascock

**Week 14. Thanksgiving Break –NO CLASS—**

**Week 15. Historic Materials**
South, Stanley

Additional Article to be Announced

**Week 16. Final Projects –NO READINGS—**
How to Give Credit When Credit is Due

The following gives several examples of citations. Different disciplines use different styles of citations. One usually uses the citation style of their particular discipline. However, to make things simple, I would like you to use the following citation style for your assignments. This handout does not contain every citation scenario. However, it should offer you examples of most of the citations you will need to use. If it does not cover something, please ask me. If it is a quote or if you are paraphrasing, you should include the following information: (Author’s last name year of publication: page number(s)).

For Example: (Smith 1992:54)
For multiple authored papers (3 or more authors) you do not need to list every name. Please put (Smith et al. 1992:54).

IN-TEXT CITATIONS:
You are required to cite the sources of any and all information you obtain for any of your writing assignments. What that means is if you use someone else’s idea and do not give them credit, it is plagiarism. The best piece of advice I can give you is if you are not sure whether you should cite something, you probably need to cite it.

For example, you write the following sentence ….

The development of human creatures from their earliest origins has become one of the most controversial of modern sciences.

This is actually a direct quote from a book. If you write this, you must put it in quotes and have an in-text citation following the sentence.

“The development of human creatures from their earliest origins has become one of the most controversial of modern sciences” (Adler and Pouwels 2006:4).

Now, let say you did not want to use a direct quote, but you still wanted to use that idea in your paper. Maybe you write……

In modern science, the evolution of humans from early to later forms has become a very controversial issue.

While this sentence might seem like a silly example, I am trying to stress the necessity of citations. If it is not your idea, it needs to be cited. Since it is not a direct quote, there is no need for quotation marks, but you still need an in-text citation.

In modern science, the evolution of humans from early to later forms has become a very controversial issue (Adler and Pouwels 2006:4).

Special note on in-text web citations: If the website you are using has an author, put the author’s name and date of the article in parentheses as shown above for books and articles. If there is not an author listed, put the URL in parentheses.
REFERENCES CITED PAGE:
At the end of your written work, you will need to include a reference cited page. On that page, you will list every source that you got information from. Therefore, for every in-text citation that is in the body of your essay or paper, there will be a full citation on the references cited page. The following are examples of different types of sources that you will be getting information from. Follow these examples when writing your reference cited page. Your references cited page should be in alphabetical order by the primary author’s name. All of the information listed under each category is necessary. So, make sure that you get all of the information from your references before you turn a journal or book back into the library.

A Book
Hewlett, B. S.

A Chapter in an Edited Volume (Edited Book)
Hawkes, Kristen, J. F. O’Connell, N. G. Blurton Jones, H. Alvarex, and E. L. Charnov

An Article in an Academic Journal (for electronic as well)
Adler, Michael A.

A Dissertation or a Thesis
Harro, Douglas R.

A Web Site (for E-Journals)
Williams, G. S.

Audiovisual Material
BBC-TV Production