

ANT 4930/ANG 6128  
Fall 2007  
Steven A. Brandt

***Lithic Technology:  
Stone Artifacts and Human Behavior***

**Course Objective:** This course is designed to introduce students to flaked stone technology and analysis. The overall goal is for students to learn how to make, identify, classify and analyze flaked stone artifacts to the extent that they feel comfortable working with stone artifact collections in research and CRM settings. We will also consider, albeit briefly, the behavioral interpretations of stone artifacts. Students are encouraged to work with their own data sets if they have one.

**Prerequisites**

You are expected to have taken a course equivalent to ANT 2000 (General Anthropology), and/or ANT 2140 (World Archaeology), and/or another Upper Division archaeology course. If you have not had at least one of these courses, you can still take the course. But I **strongly advise** you to read at least one introductory archaeology text in method and theory (e.g. Thomas, D.H. and R. Kelly 2007. *Archaeology: Down to Earth*. 3<sup>rd</sup> Edition. NY. Thomsen) as I will expect you to be familiar with the basics of archaeological method and theory and world prehistory.

**Class Meetings:**

Tuesdays, Periods 4-6, 10:40 am-1:40 pm, B357 Turlington Hall

**Office Hours and Communication**

- Office hours: B368 Turlington Hall, Tuesday and Wednesday, 3-4 pm (or by appointment).
- Telephone: Office: 392-2253, x234;
- E-mail: sbrandt@anthro.ufl.edu
- Web page: www.clas.ufl.edu/users/sbrandt

**Teaching Assistant: Micah Mones**

- Office hours: 9:00-10:30 am, B309 Turlington Hall
- Telephone: 392-2253 x254
- E-mail: mones@ufl.edu

**Required Readings**

- Whittaker, J.C. 1994. *Flintknapping: Making and Understanding Stone Tools*.: Austin: U. Texas Press.
- Holdaway, S. and N. Stern 2004. *A Record in Stone*. Canberra: Aboriginal Studies Press.
- The "Lithic Site" Web Page: <http://wings.buffalo.edu/anthropology/Lithics>

**Recommended Readings**

- Andrefsky, W. Jr. 2005. *Lithics: Macroscopic Approaches to Analysis*. Cambridge: Cambridge University Press.
- Keeley, L.H. 1980. *Experimental Determination of Stone Tool Uses: A Microwear Analysis*. Chicago: U. Chicago Press
- Kooyman, B.P. 2000. *Understanding Stone Tools and Archaeological Sites*. Calgary: University of Calgary Press.
- Odell, G. 2004. *Lithic Analysis*. New York: Plenum

**Equipment and Supplies: There will be a \$30 Lab Fee to be collected from the Undergraduates during the second week – Grad fees were already paid at registration)**

- Provided: raw materials, gloves, ground sheets, goggles, pads, billets, band aids, calipers, goniometers, magnifying glasses, plastic bags, marking pens and boxes to store everything in.

### Examinations and Grading

**Undergraduates:** Grades will be based on: 1) three non-cumulative exams (identification of artifacts and their characteristics, and half-page mini essays) each worth 100 points; 2) sorting assignments graded on an S/U basis and each worth ; and 3) a project (sorting, analyses and write-up of a lithic collection). Your grade will be based on the total accumulation of points, as follows:

First Exam	50
Second Exam	50
Third Exam	50
Sorting Assignments(S/U)	50
Project	100
<b>Total Points</b>	<b>300</b>

A	90-100%	(269-300 points)
B+	86-89%	(257-268 points)
B	80-85%	(239-256 points)
C+	76-79%	(227-238 points)
C	70-75%	(209-226 points)
D+	66-69%	(197-208 points)
D	60-65%	(179-196 points)
E	<60%	(<149 points)

**Graduates:** In addition to the Undergrad requirements, Grads will do a 10-20 page Research paper on any subject they choose as long as it relates to the class. An outline of the paper must be approved by me no later than 11/6. The paper will be due no later than 5:00 pm on 12/7, and is worth 100 points, for a total of 400 class points.

Grade percentages will be the same as above. Grads will also occas

### WEEKLY SCHEDULE OF LECTURES AND READINGS (Subject to Modification)

Undergraduates may be assigned an occasional extra article (pdf) during some weeks

Graduates will be assigned additional articles and meet at a pre-determined time to discuss them. This will essentially be for the last third of the class when we get into behavioral issues.

- 8/28 Introduction and Course Requirements; Why Study Stone Artifacts; Fracture Mechanics and Raw Materials; Direct Percussion: Hard Hammer and Bipolar Flaking; The World's First Artifacts: Oldowan technology and typology;
- 9/4 Practice Hard-Hammer Direct Percussion and Bipolar knapping.
- **Flintknapping: Ch 1-4 (up to pg. 118, "Example 3")**
  - **Record: Ch 1: 1-17 (up to "Box 1.3)**
- Assignment 1 (10 pts, S/U): Laboratory sorting of your own knapped lithics. Due by Monday, 9/9 @ 9 am.**
- 9/11 What is up, what is down, what is left and what is right? Describing and Classifying; Practice Bipolar Flaking
- **Record: Ch 3,5, 4, 6 in that order and carried over into next week**
  - **Leakey, M.D. 1971 *Olduvai Gorge*. Cambridge: Cambridge U. Press. Section on Oldowan Typology (to be available as a pdf).**
- 9/18 Lower Paleolithic/Early Stone Age-Acheulian and Middle Paleolithic/Middle Stone Age Technology - Practice knapping and producing Acheulian and Middle Paleolithic/Mousterian artifacts;
- **Flintknapping: Ch 8**

- Kliendienst, M.R. 1962 Components Of The East African Acheulian Assemblage: An Analytic Approach. *Proc. 4th Pan-African Congress On Prehistory*. pp. 81-105 (pdf)
- Bordes, F. 1961. *Typologie du Paleolithique Ancien et Moyen*. Bordeaux. Selected translations and illustrations (pdf)

**Assignment 2 (15 pts, S/U): Sorting, describing and measuring your knapped Acheulian and Middle Paleolithic artifacts. Due 9 am, Monday, 9/23.**

**9/25 FIRST EXAM**

10/2 Upper Paleolithic/Later Stone Age/Paleoindian Technology: Indirect Percussion; Punch Technique; Backed Blade/Microlithic Technology

- **Flintknapping: Ch 9**
- **Upper Paleolithic/Later Stone Age Typology pdfs**

10/9 Practice knapping and producing Upper Paleolithic/Later Stone Age artifacts.

10/16 Upper Paleolithic/Later Stone Age/Paleoindian Technology, Part 2: 1) Thermal Alteration, Pressure Flaking and Hafting. "Field Trip" to Dr. Brandt's house.

- **Flintknapping: Ch 7**
- **Paleoindian Typology pdfs**

**Assignment 3 (15 pts, S/U): Sorting, describing and measuring your knapped Upper Paleolithic/Later Stone Age/Paleoindian artifacts. Due by 9 am, Monday, 10/21.**

10/23 Mesolithic/Neolithic, Archaic/Woodland/Mississippian Technology; Groundstone Technology; Discussion and Assignment of Projects; Putting together a lithics report.; Artifact Illustration, Imaging and Documentation; Statistical Analysis

- **Readings to be assigned.**

**10/30 SECOND EXAM**

11/6 Determination of Stone Artifact Function- Natural vs. Human Modification; Analogy, Experimentation; Edge-Damage; Use-Wear; Microwear; Residue/Chemical Analysis

- **Flintknapping: Ch 10, 11**
- **Record: Ch 1: 1-17 (up to "Box 1.3)**

11/13 Squeezing Blood From Stones: Behavioral Interpretations of Stone Artifacts (Part 1) Artifact Life Cycles, Reduction Sequences and *Chaine Operatoire*. Work on Projects

- **Record: Ch 2**

11/20 Squeezing Blood From Stones: Behavioral Interpretations of Stone Artifacts (Part 2) Settlement and Subsistence Patterns. Work on Projects

- **Record: Ch 7**

11/27 Squeezing Blood From Stones: Behavioral Interpretations of Stone Artifacts (Part 3): The Ethnoarchaeology and Ethnohistory of Contemporary and Recent Stone-Tool Using Peoples. Work on Projects.

**Readings to be assigned**

**12/4 THIRD EXAM**

**12/12 Projects Due by 5:00 pm.**