

Archaeological Field Methods (in the Turkana Basin)

This course focuses on archaeological survey, excavation, artifact recovery and analysis. Students are trained in excavation, recording, artifact retrieval, surveying, field sorting techniques, and interpretation. Hands-on examination of prehistoric artifacts from Plio-Pleistocene or Holocene sites around Lake Turkana will teach students how human ancestors adapt culturally and technologically to the environments around them. Experts from TBI, Stony Brook, and other institutions provide instruction in lectures, labs, and within the context of on-going field projects.

This field course is one of three that constitutes the Turkana Basin Institute (TBI) Origins Summer Field School, which is dedicated to hands-on introductory training in all of the major disciplines within human evolutionary studies. This program is a unique opportunity for undergraduate and graduate students to learn the basic principles of archaeology “hands on” in a region with one of the world’s most productive and spectacular records of early hominin evolution - the Turkana Basin. Field school students participate in ongoing paleoanthropology research focusing on the last 4 million years.

Instructor: Dr. Sonia Harmand sonia.harmand@stonybrook.edu
Office & Phone: Soc. Behav. Sci. N-517 631-632-5806
Will be generally available to students for office hours during the module.

Teaching Assistants: There will be at least one graduate student TA available at the facility for the duration of the program.

Text: There is no assigned textbook for this course; assigned readings will be given digitally to the students at the beginning of the course. The readings will be useful for clarifying concepts discussed in class and for supplying additional examples from those presented in lecture. Students will find that reading the material before attending lecture will make the lecture easier to follow. Other documents, review sheets, class announcements, etc, will be downloadable from the class Blackboard site (<https://blackboard.stonybrook.edu>).

Class Meetings: Monday - Saturday, 8:00 am - 12:00 pm, and 2:30 - 5:30 pm

Note: for Contact Hour calculation ‘Lab’ is considered as requiring outside preparation time and given a 2/1 ratio, while ‘Field’ is considered as not requiring outside preparation time and given a 3/1 ratio.

Week	Day	Lecture	Seminar	Recitation	Lab	Field	Other	Total
1	1	8						8
1	2	8						8
1	3	4			4			8
1	4	3						3
1	5				8			8
1	6				8			8

Week	Day	Lecture	Seminar	Recitation	Lab	Field	Other	Total
2	8					8		8
2	9					8		8
2	10					8		8
2	11					8		8
2	12				8			3
2	13						3 exm	6
Total Hours		23			28	32	N/A	76
Contact Hours		23			14	10.66		47.66

COURSE LEARNING OBJECTIVES

The objectives of this course are to teach you:

- what** archaeologists do.
- the **methods** of archaeological reasoning.
- the **methods** of archaeological prospection, excavation, and analysis.
- how** to interpret the archaeological data that informs the current state of research.
- how the **applications** of new interdisciplinary and scientific techniques are helping to illuminate the early societies of Africa.

This course satisfies the following requirements of the **DEC**:

Category F: Social and Behavioral Sciences

This course satisfies the following requirements of the **SBC**:

Pursue Deeper Understanding in Social and Behavioral Sciences (SBS+):

1. Students must use the skills expected from their Versatility courses to study and practice them in greater depth, with further study applied to the area in which they are certified.

Standards

1. Certified courses must expect students to practice the skills they learned in their Versatility courses in greater depth. These courses must have prerequisites from among the Versatility categories and will typically be at the 200-400 level.

-The structure and content of this course aims to build on the previous 2 TBI Summer FS courses (by definition prerequisites) by practicing the skills learned in the daily labs and developing critical thinking skills in the daily seminars. Students move to a higher level of class format (labs, advanced fieldwork) and critical approaches (hands-on practical final exam, etc).

PREREQUISITES

This course is part of a 3-course themed cluster (field school) and there are no prerequisites except permission from the instructor and/or study abroad office. Lectures will cover the basic concepts that are required to understand the material. A science background is not necessary for the successful completion of the course.

COURSE REQUIREMENTS

- Participation (20%) – students are expected to actively participate in the data collection in the field and in class discussion and debates.
- Lab/Practical exercises (40%) – lab or practical exercises must be completed and handed in prior to the following exercise.
- Final exam (40%) – the exam consists of multiple choice, matching, and short answer questions covering topics from the course.

COURSE POLICES

Classroom etiquette:

While students are in class, they are expected to give their full attention to the lecture. Reading, talking, eating, texting or browsing on cell phones, leaving or packing up to leave before the professor has dismissed the class are inappropriate classroom behaviors and disruptive to other students. Also, please make sure that your watch alarms, pagers, and cell phones do not go off during class.

Attendance and preparation of assignments:

Students are expected to attend all classes; if you expect to miss one or two classes, please email your TA, who will inform to me. Unexcused absences will lower your grade. Computer glitches (such as computers that die, hard disks that crash, flash drives that are lost, etc) will not be accepted as excuses for failure to do assignments on time, to study for exams, etc.

Policy Regarding Missed Exams:

Generally, makeup examinations are not given (and the score for the missed exam is entered as zero “0”). If you would like to be considered for a makeup examination, the following conditions must be met: 1. You should have a legitimate excuse for having missed the original exam, e.g., illness, family emergency. 2. You must inform me within 48 hrs before or after the scheduled exam date that you cannot take the exam. If the above conditions apply, then you will be allowed to do a makeup exam.

Americans with Disabilities Act:

If you have a physical, psychiatric/emotional, medical or learning disability that may impact on your ability to carry out assigned course work, please contact the Disability Support Services office in the Educational Communications Center (ECC) Building, room 128 (632-6748). DSS will review your concerns and determine, with you, what accommodations are necessary and appropriate. All information and documentation of disability is confidential.

Academic Integrity:

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at <http://www.stonybrook.edu/uaa/academicjudiciary/>

Critical Incident Management:

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures.

Syllabus

Day 1- (at TBI-Ileret) Field Survival Guide

Morning: Lecture- Finding potable water, keeping cool, orienting

Afternoon: Lecture- making fire, keeping warm, first aid

Day 2 (at camp)- Introduction & Cultural Beginnings

Morning: Lecture- The Oldowan and Acheulean

Afternoon: Lecture- Terminology, methods & techniques in lithic analysis

Day 3 (at camp)- Cultural Beginnings II

Morning: Lecture- Middle Stone Age to Neolithic, terminology, methods & techniques

Afternoon: *Lab*- Practical class on artifact reference material

Day 4-

Morning: Lecture- Welcome and background to Nachukui Formation Research

Afternoon: Lecture- Learning how to use the Total Station

Day 5-

Morning: *Lab*- Survey at [surface concentration eroding from a previously known site]

Afternoon: *Lab*- total station plotting and surface collection

Day 6-

Morning: *Lab*- lithic washing, labeling, and preliminary description

Afternoon: *Lab*- lithic raw material identification and sourcing

Day 7-Rest Day

Day 8-

Morning: *Field*- Excavation at [previously known site]

Afternoon: *Field*- Excavation at [previously known site]

Day 9-

Morning: *Field*- Excavation at [previously known site]

Afternoon: *Field*- Excavation at [previously known site]

Day 10-

Morning: *Field*- Excavation at [previously known site]

Afternoon: *Field*- Excavation at [previously known site]

Day 11-

Morning: *Field*- Excavation at [previously known site]

Afternoon: *Field*- Closing site

Day 12-

Morning: *Lab*- lithic washing, labeling, and preliminary description / documentation

Afternoon: *Lab*- lithic washing, labeling, and preliminary description / documentation

Day 13-

Morning: Final Exam

Class Over- Prepare to Go Home

Readings

Readings for individual lectures will be distributed as PDFs/photocopies before or at the beginning of the module. Students are expected to have read the papers before the day that topic is covered and come prepared with questions for discussion sessions.

Day 1-

Lundin, C. (2003) *98.6 Degrees: The Art of Keeping Alive*. Santa Fe: Gibbs Smith, pp. 216.

Day 2-

Harmand, S., Lewis, J.E., Feibel, C.S. et al. (2015). 3.3 Million-Year-Old Stone Tools from Lomekwi 3, West Turkana, Kenya. *Nature*, 521(7552): 310-315.

Potts, R. (1994) Variables versus models of early Pleistocene hominid land use. *Journal of Human Evolution*, 27, 7-24.

Roche, H. (2005) From simple flaking to shaping: stone-knapping evolution among early hominids. In: *Stone Knapping: the Necessary Conditions for a Uniquely Hominin Behavior* (Eds. V. Roux & B. Bril). McDonald Institute for Archaeological Research, Cambridge.

Roche, H., Delagnes, A., Brugal, J.-P., Feibel, C., Kibunjia, M., Mourre, V. & Texier, P.-J. (1999) Early hominid stone tool production and technical skill 2.34 Myr ago in West Turkana, Kenya. *Nature*, 399, 57-60.

Day 3-

Inizan, M.-L., Reduron-Ballinger, M., Roche, H., Tixier, J., 1999. Technology and Terminology of Knapped Stone. CREP, Nanterre.

Day 4-

Harris, J.M., Leakey, M., Brown, F. (1988) Stratigraphy and paleontology of Pliocene and Pleistocene localities west of Lake Turkana, Kenya. *Contr. Sci. Nat. Mus. Los Angeles* 399, 1–128.

Day 5-

Total Station Use Guide.