###### Preliminary Course Syllabus

01-070- 152

Bones and Stones Laboratory

This is a laboratory based half-semester course about elementary analysis of past hominin bone and stone tool record. Scarce as they are, hominin fossil remains are an extraordinary source of information about human biological and evolutionary trajectories, while stone artifacts are of prime importance for inferences about past hominin technological and economic strategies. Due to recent advancements in paleoanthropological research, such synergy of these two categories of finds, together with other lines of evidences, is today more than ever informative in reconstructing past human adaptations and lifeways in diverse environments. This course offers hands-on experience with osteological material and stone tools, and counts for 1.5 credit hours.

*This course in conjunction with 3-credit transfer credit of an introductory course in physical anthropology fills the same Evolutionary Anthropology requirements as 070:102 Introduction to Human Evolution.*

Class hours: TBA

Classroom: TBA

**Instructor:**

Zeljko Rezek

[zeljko.rezek@rutgers.edu](mailto:zeljko.rezek@rutgers.edu)

Office: Biological Sciences 204 B

Office hours: TBA

###### Pre/Co-requisites

None

###### Required text

There is no required textbook for this course. Required readings consists of selected publications which will be posted on Sakai.

###### Learning objectives

• Learn the basics of human bone and lithic material analysis.

• Develop basic knowledge about human paleoanthropological fossil record.

• Develop basic knowledge about different lithic technologies through time.

###### Exam and assignments structure

The requirements for this course include two short exams and the course paper in the following evaluation scheme:

Bones Exam 25%

Stones Exam 25%

Course Term Paper 40% (specifications TBA)

Course participation 10%

If you require additional time or alternative accommodations on exams please contact the Office of Disability Services for Students at <http://disabilityservices.rutgers.edu/> to obtain the Letter of Accommodation. Please, present the letter either to the TA or to the instructor at least two weeks prior the exam.

**Course Policies**

Attendance: Students are expected to attend all classes and laboratory sessions. If you expect to miss up to two laboratory sessions, please use the University absence reporting website <https://sims.rutgers.edu/ssra/> to indicate the date and reason for your absence (an automatic email notification will be sent to the course instructor). Thereafter, an absence note from the Dean (of the student’s School or College) is required for each following absence.

Makeup exam: Students will be allowed to take the makeup exam only if they provide a letter from the Dean (of their School or College) verifying that the reason for missing the scheduled exam was justifiable.

Academic integrity: There will be no tolerance of academic dishonesty of any kind. All students must strictly follow the Rutgers University Academic Integrity Policy. Please refer to <http://academicintegrity.rutgers.edu/academic-integrity-at-rutgers> .

**Course Schedule**

|  |  |
| --- | --- |
| Week | Lab Topics |
| 1 | Introduction to the course; Bones and stones in the context of evolutionary anthropology  Basics of human osteology |
| 2 | Plio-Pleistocene fossil record: From primates to bipedalism; Dentition  Early and Middle Pleistocene precursors to human anatomical modernity; Cranial morphometrics |
| 3 | Anatomically modern humans; Axial and limb skeleton; Bioarchaeology 1: sex and age  Bioarchaeology 2: health and stature; *Summary and review* |
| 4 | ***Bone Exam***  Basics of stone tools |
| 5 | The earlier record made in stone; Procurement and selection; Stone fracture mechanics  Flintknapping |
| 6 | Classifying stone tools; Lithic analysis 1  The later record made in stone; Transport, use, maintenance and discard |
| 7 | Lithic analysis 2  Lithic analysis completion; *Summary and review* |

**Course Term Paper,** due before the last class session.

***Stone Exam,*** a week after the last class session.

**Sample readings:**

Bones

Selected readings from ‘Human Osteology’, by White, T. D., M. T. Black, and P. A. Folkens, 2012 (3rd edition), Academic Press.

Stones

Ambrose, S. A. 2001. Paleolithic technology and human evolution. *Science* 291: 1748-1753.

Lin S. C., Z. Rezek, D. Braun, H. L. Dibble, 2013. On the utility and economization of unretouched flakes: the effects of exterior platform angle and platform depth. *American Antiquity* 78: 724-745.

Shea, J. J. (*In press)* Sink the Mousterian? Named stone tool industries (NASTIES) as obstacles to investigating hominin evolutionary relationships in the Later Middle Paleolithic Levant. *Quaternary International.*