COURSE INFORMATION

20 May - 25 June 2015

Instructors:

Jackson Njau
Email
Office: GY 513, Geology Bldg.
Phone: 856-3170

Jim Brophy
Email
Office: GY 309, Geology Bldg.
Phone: 855-6417

Course Material

Relevant reading material and handouts will be provided throughout the course. Students will be expected to read materials upon assignment so they can best benefit from field instructions, lectures, discussions, exercises and field journals. Readings may include the following.

Archaeology and hominin evolution


Geology


**Lithic analysis and identification**


**Faunal analysis and taphonomy**


**Course Structure**

The course is designed around numerous multiple-day modules that alternate back and forth between geology and paleoanthropology. Within each discipline, and often between disciplines, successive modules built on prior ones. Some modules emphasize laboratory-based study at the field station while others emphasized field-based study in the outcrops and away from the station. The laboratory-based modules included basic rock identification (geology), faunal analysis and fossil identification (physical anthropology), basic techniques of stone knapping (archaeology) and butchering experiments by stone tools (zooarchaeology). Geology field-based modules included an introduction to Olduvai stratigraphy, principles of stratigraphic analysis and interpretation, principles of sedimentary facies and facies correlation, principles of contemporaneous faulting and sedimentation, pre-Cambrian crystalline geology, and Tertiary to recent volcanism. Paleoanthropology field-based modules include survey, archaeological excavations and fossil hunting techniques and students will learn how to document, curate and present archaeological and fossil data. During the field trips to Serengeti and Ngorongoro Crater students will be introduced to fundamentals of
wildlife and bone ecology and how wildlife behaviors such as hunting and scavenging behaviors by large carnivores and crocodiles can be related to human history at Olduvai.

All of these culminate in a final module in which the geologic and evolutionary history of Olduvai Gorge is synthesized. See schedule of topics for complete list of course modules Syllabus.

**Field sites excursions**
The course includes two multiple-day field trips and two single-day field trips to spectacular geological and archaeological destinations that serve the purpose of providing important instruction in localities near Olduvai, for example:
- Volcano & faults: Ol Doinyo Lengai, Lemagrut, Ngorongoro, Natron rift escarpment.
- Geological structures e.g., evidence of Precambrian-Quaternary unconformity in Olduvai and Serengeti plains.
- Characteristics of hunting and scavenging behavior in bone assemblages: Lake Masek, Serengeti ecosystem.
- Rift lakes, springs, streams: Lake Natron, Lake Manyara, Ngorongoro Crater.
- Archaeological sites: Peninj acheulean site (Lake Natron).
- Pliocene sites: Laetoli hominin footprint site.
- Sources of raw material for hominin stone tool making: Naibor Soit & Kelogi (metamorphic), Engalosin & Ngorongoro streambeds (basalts).