AY 202: HUMAN EVOLUTION

COURSE DESCRIPTION
Course title: AY 202 Human Evolution
Duration: September-November 2011
Class time: September 5-26, 2011
Instructor: Dr. Pastory Magayane Bushozi

Why study the human evolution?
Humans are highly social animals with relatively large brains. These inherited traits from our primate ancestors have taken humans to new extremes through the development of complex technology including an ability to master and control both abstract and material culture. This course is designed to explore the trend of human biological and cultural changes over time and space based on genetic, fossil remains, and archaeological records with special emphasis of East Africa Rift Valley System, a region that has contributed significantly to our current understanding of human origins.

Course description
This course describes the evolutionary development of humans, both physically and culturally. Major topics include the concept of evolution, biological relationships between humans and their closest relatives. Emphasis will be placed on guiding students to facts, concepts and help student recognize physical, biological and cultural signals left by our early ancestors. Associated with this will be assist students view the existing link between contemporary human distribution and cultural diversity.

A variety of approaches will be used in course delivery including lectures, readings, group discussion, tests and field trip. Students will be fully engaged in learning processes inside and outside classroom. Regular attendance in the classroom and field is essential for successful team performance. Emphasis will be on developing skills of critical thinking, problem solving, and the understanding of data left by prehistoric hominins. A field trip to Laetoli, Olduvai and Lake Eyasi will introduce students to important Palaeontological and Archaeological sites. Knowledge acquired during class lectures and
field trips intends to help student improve their understanding of human evolutionary history.

**Intended goals**
As a result of taking this course, student will have a new perceptions and understanding of the human origin and the mechanism involved at different stages of biocultural development. This scientific perspective of human evolution will enable students throughout their personal recognition of their evolutionary trend. The specific learning goals for the course are:

1. To enable student understand the mechanism of evolution and place of nature to human biological and cultural changes
2. To enable student recognize the human fossil record from Australopithecines through *Homo sapiens*
3. To enable student understand the significance and development of tool manufacture and use in human evolutionary history
4. To enable student link theories and concepts to actual situations during the field trip for the better understand of the human evolution.

**Evaluation plan**
There will be one class test in the mid of the third week, one assignments, a field report and a final exam in the last week of the course. Based on the University of Dar es Salaam regulations and guidelines students should posses not less than a minimum of 16 marks out of 40 before sitting for final exam.

**Grading summary**
1 test 10%
1 assignment 15%
1 field report 15%
Final exam 60%
Total 100%

The letter grades will be assigned points as follows: A (70 and above); B+(60-69); B (50-59); C (40-49); D (30-39); and E (below 30). The pass classification range from A to C grades, below C is failure. Students should carefully read and understand the university of Dar es Salaam prospectus.

**Main Textbook:**


**Other Readings:**
Course Outline

1.0 General Introduction

1.1. Evolutionary Theory
   - meaning and process of evolution
   - the modern synthesis
   - evolution in action
   - lines of evidence: comparative and fossils

1.2. Is human evolution different?


2.0 Who Are We and What’s Our Place in Nature?

2.1 Humanity defined ((bipedalism, large brain size, reduction of anterior teeth and enlargement of cheek teeth, culture)

2.2 Classification of humankind


3.0 Plio-Pleistocene Hominids (7-1.0 million years ago)

3.1. Climate and hominid evolution
3.2. Genus Sahelanthropus
3.3 Genus Orrorin
3.4 Genus Ardipithecus
3.5. Genus Australopithecus: adaptive radiation
3.6.Genus Kenyanthropus


Leakey, M.D. 1971 Olduvai Gorge III. Cambridge: Cambridge Univeristy Press


3.7. Genus Homo: adaptive radiation of early and late Homo


4.0 Early Tool Use and Manufacture (2.5 million-500K years ago)
   4.1. Culture-history: terminology and nomenclature
   4.2. Stone tool industrial complexes: Oldowan and Acheulian
   4.3. Which hominid species made the early stone tools?
   4.4. Raw material procurement and utilization
   4.5. Techno-typological continuity and change


5.0 Inferred Early Hominid Behaviors and Activities
   5.1. Osteodontokeratic culture
   5.2. Home base/central place or what?
   5.3. Meat eating: hunting versus scavenging
   5.4. Food sharing and division of labor;
   5.5. Use and control of fire
   5.6. Language capabilities?


6.0 Archaic Homo and the Peopling of the World (500,000-45,000 years ago)
   6.1. Origins and dispersal of anatomically modern humans
   6.2. Subsistence and symbolic behavior, and land-use patterns
   6.3. Evolution of artistic capabilities
   6.4. Language capabilities?
   6.5. Symbolic behaviors: stylized burials, rock art, bodily adornment


7.0 Middle and Later Stone Age Tool Use and Manufacture
   7.1. Culture-history: terminology and nomenclature
   7.2. Stone tool industrial complexes: Middle and Later Stone Age
   7.3. Raw material procurement and utilization
   7.4. Techno-typological continuity and change


8.0 Field Instruction at Olduvai Gorge, Laetoli, and Eyasi Basin
   8.1. Visiting the site museums at Letoli and Olduvai Gorge
   8.2. Lecture from guest speakers
   8.3. General stratigraphy at Laetoli and Olduvai Gorge
   8.4. Visiting hominid trackway at Laetoli
   8.5. Walk-about: classic localities where hominids and evidence for their activities were found
   8.6. Visiting rock art, MSA, LSA and PN sites in the Eyasi