

General Education Core Curriculum course: ANTH 1013/1011L, Introduction to Biological Anthropology

WHAT UNIVERSITY GENERAL EDUCATION OUTCOMES GUIDE STUDENT LEARNING IN COURSES THAT CARRY NATURAL SCIENCES CREDIT?

A primary goal of these courses is to develop an appreciation of the basic principles that govern natural phenomena and the role of experiment and observation in revealing these principles. Students should acquire an understanding of the relationship between hypothesis, experiment, and theory, and develop the skills common to scientific inquiry, including the ability to frame hypotheses and defend conclusions based on the analysis of data. This course is designed to prepare a student for informed citizenship by illustrating the importance of science and technology to the present and future quality of life and the ethical questions raised by scientific and technological advances.

Upon completion of eight hours of science courses, students will:

- NSLO1a - Understand how scientific inquiry is performed.
- NSLO2a - Understand the boundaries of scientific data.
- NSLO3a - Have a basic working knowledge of a few areas of science.
- NSLO4a - Be able to make better-informed decisions regarding potential government policies that involve science.
- NSLO5a - Have improved problem solving skills.
- NSLO6a - Be able to identify challenges created by society's increasing reliance upon technology.

HOW DOES THE DEPARTMENT OF ANTHROPOLOGY INTEND TO ASSESS STUDENT LEARNING OF THESE OUTCOMES IN ANTH 1013/1011L?

ANTH 1013: Core Information and Goals

The Department of Anthropology offers four sections of ANTH 1013 per semester: two large lecture classes with enrollment currently capped at 228 students per session, a section for honors students capped at 60 students, and an online class capped at 30 students per semester. Each student enrolled in ANTH 1013 must also enroll in a two-hour weekly laboratory class, ANTH 1011L. Enrollment in ANTH 1011L is capped at 22 students per section. Each large section of ANTH 1013 is taught by a tenured or tenure-track professor; the smaller honors section is taught by a PhD candidate; and the online course is taught by an adjunct faculty with a PhD. All sections of ANTH 1011L are taught by graduate teaching assistants whom the tenure-track faculty teaching the large lecture sections supervise. The curriculum for ANTH 1013 and ANTH 1011L have been designed to work in concert with each other to achieve the learning outcomes iterated above.

Course content is broadly divided into three modules. Module one addresses the history of biological thought, cell biology, genetics, and evolutionary theory. Module two focuses on organismal biology and emphasizes comparative anatomy, organismal diversity, ecology, socioecology, and conservation. Module three is devoted to understanding the natural history of life, including human origins. In module three, we teach geology, geochronology, paleontology, paleogenetics, and review the human fossil record. The class is tied together in the last lecture by discussing modern human biological diversity in relation to social concepts of race. Thus, students are able to identify and/or describe some of the challenges (e.g., ecological change, habitat loss, racism) that we face as a global society today.

Core Assessment Goals: For years, we have given identical twenty-question pre- and post-course assessment surveys to all students enrolled in ANTH 1013. Assessment surveys included questions composed and agreed upon by the faculty teaching ANTH 1013. The questions were designed to be overarching and related to broad thematic components of each of the courses. **The questions are keyed to the University's core natural science learning outcomes and enable the course instructor and/or department to gauge how students entering and exiting the course understand these concepts. Along with the graded assessments (e.g., lecture exams, online quizzes, laboratory reports, student presentations) these assessment surveys are designed to help students achieve the University's natural science core goals and enable the instructor to gain data from students about their initial assumptions.**

As we have given the same assessment survey for multiple semesters, we have accumulated a large sample of baseline data from thousands of students. Based upon these results we have modified our lesson plans in ANTH 1013 and ANTH 1011L. For example, in ANTH 1013 students are presented with questions in lecture period that specifically address topics that are frequently misunderstood, which enables the professors to provide immediate feedback. We have made several large purchases of laboratory materials in the last five years and moved into more up-to-date teaching laboratories to improve the quality of the ANTH 1011L labs. Labs are updated periodically to make them more hands on, kinetic, tactile, and inquiry based.

HOW IS THE ASSESSMENT INSTRUMENT KEYED TO THE UNIVERSITY GENERAL EDUCATION CORE CURRICULUM LEARNING OUTCOMES FOR THE NATURAL SCIENCES?

Below is a sample of 10 of the questions that have been included on the pre- and post-course survey and tied to student learning outcomes.

1. The Hardy Weinberg genetic equilibrium has demonstrated that evolution is no longer occurring within contemporary human populations.

True

False

NSL01a; NSLO2a; NSLO3a; NSL05a

2. A primary reason that many living primate populations are threatened or endangered is the bushmeat trade.

True

False

NSLO4a; NSLO5a; NSL06a

3. Modern humans are members of the order Primates

True

False

NSLO1a; NSL02a; NSL03a; NSL05a

4. A theory is a scientific concept that has been highly tested and is in all likelihood true.

True

False

NSL01a; NSL02a; NSO4a; NSO5a

5. The development of antibiotics and other advances in “western” medicine mean that humans are no longer evolving in response to disease pressure.

True

False

NSLO1a; NSLO2a; NSL03a; NSL04a; NSL05a; NSL06a

6. Race is a biological reality.

True

False

NSLO1a; NSLO2a; NSLO3a; NSL04a; NSL05a

7. Taphonomy is the study of how bones come to be buried in the earth and preserved as fossils.

True

False

NSLO1a; NSLO2a; NSLO3a; NSLO5a

8. All maladaptive genetic disorders in humans are inherited as recessive traits

True

False

NSLO1a; NSLO2a; NSLO3a; NSL05a

9. Biological evolution is a theory.

True

Fale

NSLO1a; NSLO2a; NSLO3a; NSLO4a; NSLO5a

10. A “theory” is equivalent to a guess or a hunch.

True

Fale

NSLO1a; NSLO2a; NSLO3a; NSLO4a; NSLO5a

HOW WILL THE DEPARTMENT OF ANTHROPOLOGY USE THE DATA GENERATED BY THIS INSTRUMENT TO PLAN CURRICULAR AND PEDAGOGICAL CHANGES THAT MIGHT BE NECESSARY IN ANTH 1013/1011L?

The Biological Anthropology faculty has, for years, reviewed the results of the course assessment surveys annually. Going forward, the core assessment survey will be modified to include more questions that better respond to the Natural Science Learning Outcomes. Further, lesson plans will be modified so that the Natural Science Learning Outcomes are directly addressed and that more weight is given to learning outcomes, like NSLO6a, that have not been heavily emphasized in previous semesters. As this course is team taught by a rotating series of faculty and graduate students, the entire biological anthropology faculty will meet to identify problem areas in the course that can be addressed through implemented curricular modification including changes to course content or structure, and delivery mechanisms necessary to meet the needs of the target audience and fully address the Natural Science Learning Outcomes.