General Education Annual Course Assessment Form

Course Number/Title ANTH 160 Reconstructing Lost Civilizations  GE Area R

Results reported for AY 2015-2016  # of sections: 7  # of instructors: 3

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Department Chair: Roberto Gonzalez  College: Social Sciences

Instructions: Each year, the department will prepare a brief (two page maximum) report that documents the assessment of the course during the year. This report will be electronically submitted, by the department chair, to the Office of Undergraduate Studies, with an electronic copy to the home college by September 1 of the following academic year.

Part 1

To be completed by the course coordinator:

(1) What GELO(s) were assessed for the course during the AY?

Student Learning Objective GELO #1: Within the particular scientific content of the course, a student should be able to demonstrate an understanding of the methods and limits of scientific investigation, and GELO #2: Within the particular scientific content of the course, a student should be able to distinguish science from pseudoscience.

As with our previous assessment we elected to assess two Learning Outcomes simultaneously during the 2015-2016 cycle. Our reasoning was that the two GELO are integrated through instruction and difficult to accurately assess independently. Further, one GELO directly impacts the performance of students in the next GELO.

Previous assessments had shown that students lacked adequate scientific backgrounds to apply scientific reasoning to the problems associated with GELO#2. Based on the 2014-2015 assessment we determined to strengthen content and assignments addressing scientific methods, to increase content reflecting quantitative reasoning, and to provide greater focus on the meaning of pseudoscience.

(2) What were the results of the assessment of this course? What were the lessons learned from the assessment?

Instructors were satisfied that during this cycle, students exhibited a greater understanding of scientific reasoning and were able to recognize and answer questions related to pseudoscience with greater proficiency than the previous cycle.

GELO#1 was reassessed for a second cycle to determine whether the emphasis on scientific methods was an effective remedy for shortcomings in GELO#2. Assessment last cycle sought to find the intersections of course content with Learning Outcomes. This cycle sought to assess a correlation indicating effectiveness of our interventions.

GELO #2 was judged to have been problematic in the past. Instructors emphasized scientific method (GELO#1) in course content in greater depth with more examples as a means of addressing various misunderstandings exhibited by students. While most students who enroll in ANTH160 have a limited background in scientific-based courses or scientific majors, most were able to grasp the basic concepts as assessed through written assignments and exam questions. It was our expectation that an increased focus on GELO#1 would have an impact on GELO#2. This was in fact the case.
The instructors conducted different forms of content delivery, using lectures, readings, select videos, and simulation exercises. Simulation exercises also serve as a platform to introduce quantitative methods. Critical discussions were increased in at least three sections, and writing assignments stressed scientific methods along with critical thinking. The class discussions addressed the concept of hypothesis formulation and testing in the context of pseudoscience, especially pseudoarchaeology. Written assignments and term papers were structured to specifically address these learning outcomes. For example, in one section of 45 students, 22 wrote specifically about pseudoscience, 10 wrote about scientific methods using current examples, and 13 wrote about a combination of the two concepts.

Students were given assignments requiring a critical assessment of the scientific evidence used to support varied hypotheses. Examples include: Group discussion concerning the nature of “humanness” and the place Neanderthals hold in the human lineage; simulated burial excavation a site mapping. This activity gives students an opportunity to work with a range of data and to develop statistical skills, such as significance, variable counts, percentages, and Chi-Squared analysis.

Assessment of content knowledge and conceptual understanding in all sections followed a three point evaluation strategy: 1. objective exams, 2. written essays, synthesis papers averaging four pages in length and term papers of at least eight pages. 3. Objective questions and three essays on the Final Exams that required students to analyze the scientific methods presented in the films shown in class or from readings. These are unchanged from past instruction. Additionally, in two sections, students participated in a simulated excavation which required synthesis of material data along with critical thinking and application of scientific methods; including questions about means of determining social status, gender inequalities, and craft specialization from the burial population. In another activity students participated in an internet game seeking out pseudoscientific websites and scoring their content.

Overall, instructors judged that the emphasis on scientific methods and discussions, improved student comprehension as related to pseudoscience. This finding held even though instructors used different approaches to content delivery. Instructors felt that by the end of the semesters students could effectively communicate the process of scientific method. The simulations are particularly effective. However, just as reported last cycle, statistical reasoning remains problematic. Students did demonstrate a better understanding of the contrast between science and pseudoscience as evidenced in term papers and exam question responses.

(3) What modifications to the course, or its assessment activities or schedule, are planned for the upcoming year? (If no modifications are planned, the course coordinator should indicate this.)

Based on assessment over two cycles the sustained focus on the character of scientific method has brought noticeable improvements across all sections. We will continue to emphasize content relevant to GELO#1 as it appears to be the linchpin for the other GELO. We will implement simulation activities in all sections to support quantitative reasoning skills in tandem with critical thinking. A new exercise will initiated next cycle that requires students to debate pseudoscientific claims. We will continue to use the core text, Frauds Myths and Mysteries by Kenneth Feder, and will reevaluate our second text, which delivers the archaeological content. We will return to assessment of a single GELO in the next cycle.

Part 2

To be completed by the department chair (with input from course coordinator as appropriate):

(4) Are all sections of the course still aligned with the area Goals, GE Learning Objectives (GELOs), Content, Support, and Assessment? If they are not, what actions are planned?

Yes.

(5) If this course is in a GE Area with a stated enrollment limit (Areas A1, A2, A3, C2, D1, R, S, V, & Z), please indicate how oral presentations will be evaluated with larger sections (Area A1), or how practice and revisions in writing will be addressed with larger sections, particularly how students are receiving thorough feedback on the writing which accounts for the minimum word count in
this GE category (Areas A2, A3, C2, D1, R, S, V, & Z) and, for the writing intensive courses (A2, A3, and Z), documentation that the students are meeting the GE GEOs for writing.

Out of 7 sections of ANTH 160 offered during AY 15-16, 5 had enrollments exceeding the recommended maximum enrollment by more than 10%. The anthropology department is addressing practice and revisions in writing with these larger sections of ANTH 160 in the following ways: (1) by employing a mutually supportive teaching team that includes a stable group of experienced instructors; (2) by coordinating construction of assignments that facilitate efficient assessment of student work, including assessment of student writing; and (3) by developing increasingly streamlined procedures for providing feedback to students in a timely fashion. If provided with adequate resources (which do not currently exist), the anthropology department would welcome the opportunity to hire graduate assistants to help support assessment of student writing. Finally, the department chair will be limiting enrollment caps to 10% of the recommended maximum enrollment during AY 16-17 in order to ensure that students receive adequate