Academic Program
Plan for Assessment of Student Learning Outcomes
The University of New Mexico

A. **College, Department and Date**

    1. College: *Arts and Sciences*
    2. Department: *Anthropology, Archaeology Subfield*
    3. Date: *March 4, 2014*

B. **Academic Program of Study***
    B.S. degree in Anthropology, Archaeology concentration

C. **Contact Person(s) for the Assessment Plan**
    James L. Boone (jboone@unm.edu)

D. **Broad Program Learning Goals for this Degree/Certificate Program**

1. Use an evidence-based approach to evaluate the theoretical debates within archaeology regarding the causes and consequences of major global transitions in human prehistory, including the advent of modern human behavior and technology, the origins of domestication of plants and animals, the emergence of sedentary village life, and the rise of civilization and urbanism

2. Describe the kinds of archaeological evidence and the techniques that are available for collecting archaeological data

3. Identify and evaluate credible vs. non credible sources of scientific information

4. Understand and be able to communicate the impacts of archaeological research on the archaeological record and on contemporary people and cultures

5. Acquire the analytical, writing and research skills necessary for entry level employment in Cultural Resource Management

6. Conduct and interpret statistical analyses of archaeological data, including artifact and trait frequency data and radiocarbon assay data.

7. Complete the Broad Goals and Student Learning Objectives from Evolutionary Anthropology and Ethnology listed for the General Anthropology concentration

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* Academic Program of Study is defined as an approved course of study leading to a certificate or degree reflected on a UNM transcript. A graduate-level program of study typically includes a capstone experience (e.g. thesis, dissertation, professional paper or project, comprehensive exam, etc.).

2. List of Student Learning Outcomes (SLOs) for this Degree/Certificate Program

1. Use an evidence-based approach to evaluate the theoretical debates within archaeology regarding the causes and consequences of major global transitions in human prehistory, including the advent of modern human behavior and technology, the origins of domestication of plants and animals, the emergence of sedentary village life, and the rise of civilization and urbanism
   a. Evaluate the theories and debates regarding the causes of major transitions
   b. Critically evaluate the evidence that has been used to generate and test hypotheses about the causes of the transitions
   c. Evaluate similarities and differences in the nature and timing of these transitions in different geographic areas of the world

2. Describe the kinds of archaeological evidence and the techniques that are available for collecting archaeological data
   a. Compare and contrast the categories of material evidence used by archaeologists
   b. Apply basic measurement and descriptive techniques to archaeological data

3. Identify and evaluate credible vs. non credible sources of scientific information
   a. Critically evaluate tests of hypotheses regarding the advent of modern human behavior and technology, the origins of domestication of plants and animals, the emergence of sedentary village life, human migration patterns or the emergence of social complexity
   b. Critically evaluate the evidence for the effects of environmental or climate change on major global transitions in human prehistory

4. Understand and be able to communicate the impacts of archaeological research on the archaeological record and on contemporary people and cultures
   a. Summarize current legal protections regarding the treatment of human remains and archaeological remains on public and private lands
   b. Evaluate the efficacy of these laws

5. Acquire the analytical, writing and research skills necessary for entry level employment in Cultural Resource Management
   a. Apply a set of field and laboratory skills to the collection and analysis of archaeological materials
   b. Summarize current legal protections regarding the treatment of human remains and archaeological remains on public and private lands

6. Conduct and interpret statistical analyses of archaeological data, including artifact and trait frequency data and radiocarbon assay data.
   a. Conduct simple contingency table analyses and t-tests on an archaeological data set
   b. Interpret calibrated radiocarbon dates collected from an online programs

7. Complete the Broad Goals and Student Learning Objectives from Evolutionary Anthropology and Ethnology listed for the General Anthropology concentration

E. Assessment of Student Learning Three-Year Plan

1. Student Learning Outcomes

Relationship to UNM Student Learning Goals (insert the program SLOs and check all that apply):

University of New Mexico Student Learning Goals				
Program SLOs	Knowledge	Skills	Responsibility	Program SLO is conceptually different from university goals.
Evaluate the theories and debates regarding the causes of major transitions	x	x		
Critically evaluate the evidence that has been used to generate and test hypotheses about the causes of the transitions	x	x		
Evaluate similarities and differences in the nature and timing of these transitions in different geographic areas of the world	x	x		

2. How will learning outcomes be assessed?
   A. <u>What</u>:

At the end of each term, the SLOs listed in section E1 above will be assessed with an examination consisting of short-answer and multiple choice questions. Each question will be tied to one SLO (see Appendix).

The course instructor will compute the average score across all students for each SLO. A successful outcome will consist of an average score for each SLO ≥ 70%. If all scores exceed 70%, we will concentrate our improvement efforts on the SLO that received the lowest score.

Additionally, at the end of each spring term, graduating seniors will be asked to complete an on-line survey assessing how well they have mastered each SLO. The survey will ask them to evaluate, on a scale of 1 – 5, their level of proficiency for each SLO. Faculty will concentrate their improvement efforts on the 2-5 SLOs that received the lowest scores.

B.   Who:
The SLOs will be evaluated for each student in Anthropology 320. This sampling strategy is appropriate because Anthropology 320 is required for all concentrators in Evolutionary Anthropology, and because it provides the background required for all upper-level course.

The sample for the on-line survey is appropriate because it will assess all graduating majors.

3. **When will learning outcomes be assessed? When and in what forum will the results of the assessment be discussed?**

We will begin assessment in Anthropology 320. At the end of the course, the instructor will submit the examination results to the undergraduate advisor for Evolutionary Anthropology. The advisor will also collect the tabulated score for the on-line survey. The advisor will present the results to subfield faculty at the beginning of the following term (usually the fall term).

Faculty will discuss the results and adjust course curricula as necessary.

4. **What is the unit's process to analyze/interpret assessment data and use results to improve student learning?**
See above.

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Plan for Assessment of Student Learning Outcomes
The University of New Mexico

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A. College, Department and Date

    1. College: *Arts and Sciences*
    2. Department: *Anthropology, Evolutionary Anthropology Subfield*
    3. Date: *May 9, 2014*

B. Academic Program of Study*
B.S degree in Anthropology, Evolutionary Anthropology concentration

C. Contact Person(s) for the Assessment Plan
Keith Hunley (khunley@unm.edu)

D. Broad Program Goals & Measurable Student Learning Outcomes
    1. Broad Program Learning Goals for this Degree/Certificate Program

1. Understand the scientific method, and articulate how scientific approaches to knowledge differ from non-scientific approaches
2. Investigate the position of humankind in the tree of life
3. Apply the principles of biological inheritance to diverse traits
4. Describe how ecological variation contributes to morphological, physiological, and behavioral diversity
5. Understand the human life course, from conception until senescence
6. Explain how the processes of evolution account for the long-term evolution of our species and the anatomical, physiological and behavioral diversity within and among contemporary populations
7. Apply the principles of ethical research to anthropological investigation
8. Use quantitative methods to test hypotheses about human evolution
9. Complete the Broad Goals and Student Learning Objectives from Archaeology and Ethnology listed for the General Anthropology concentration

    2. List of Student Learning Outcomes (SLOs) for this Degree/Certificate Program

1. Understand the scientific method, and articulate how scientific approaches to knowledge differ from non-scientific approaches

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Adapted from Kansas State University Office of Assessment

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    a. Explain the advances that application of the scientific method has made to our understanding of human diversity

2. Investigate the position of humankind in the tree of life
   a. Situate human anatomical, physiological and behavioral variation in the broader span of primate diversity
   b. Apply phylogenetic methods to molecular and morphological data to test hypotheses about human and non-human primate evolution

3. Apply the principles of biological inheritance to diverse traits
   a. Predict the kinds and proportions of offspring based on a given mode of inheritance and the traits seen in mating couples
   b. Use the mean, variance and standard deviation to describe the distribution of a quantitative trait
   c. Partition the variance of a trait into components due to the effect of genes and environments and their interactions

4. Describe how ecological variation contributes to morphological, physiological, and behavioral diversity
   a. Evaluate how morphological and behavioral diversity is shaped by habitat use and diet
   b. Critique the concept of the Environment of Evolutionary Adaptedness
   c. Generate and test hypotheses about changes in health and behavior during human transitions from foraging to agriculture and from agriculture to industrial modernization
   d. Describe how modern human social behavior, health, and sociopolitical institutions are affected by novel environments

5. Understand the human life course, from conception until senescence
   a. Evaluate evidence for the roles played by mortality risk and energy allocation in shaping the life course
   b. Analyze growth curves and developmental stages
   c. Assess the genetic and physiological mechanisms that produce variation in life history

6. Explain how the processes of evolution account for the long-term evolution of our species and the anatomical, physiological and behavioral diversity within and among contemporary populations
   a. Evaluate the evidence for competing theories of macro-evolution
   b. Apply Darwin's postulates for evolution via natural selection to real world examples
   c. Frame hypotheses for the existence of specific traits using Tinbergen's four levels of explanation
   d. Apply the principles of evolutionary theory to determine whether specific traits are adaptations
   e. Apply the comparative method to test hypotheses for the evolution of specific traits

7. Apply the principles of ethical research to anthropological investigation
   a. Determine if the principles of the Belmont report, and other established principles of ethical research, are met by current and past anthropological research

8. Use quantitative methods to test hypotheses about human evolution

Adapted from Kansas State University Office of Assessment

a. Collect anatomical, genetic or behavioral data

b. Apply appropriate statistical methods to data to test predictions of hypotheses

c. Write and present orally, at a professional-level, the results of research

9. Complete the Broad Goals and Student Learning Objectives from Archaeology and Ethnology listed for the General Anthropology concentration

E. **Assessment of Student Learning Three-Year Plan**

1. **Student Learning Outcomes**

University of New Mexico Student Learning Goals				
Program SLOs	Knowledge	Skills	Responsibility	Program SLO is conceptually different from university goals.
4b. Critique the concept of the Environment of Evolutionary Adaptedness				
5a. Evaluate evidence for the roles played by mortality risk and energy allocation in shaping the life course				
6c. Frame hypotheses for the existence of specific traits using Tinbergen's four levels of explanation				
6d. Apply the principles of evolutionary theory to determine whether specific traits are adaptations				
6e. Apply the comparative method to test hypotheses for the evolution of specific traits				

2. **How will learning outcomes be assessed?**
   A. <u>What</u>:

At the end of each term, the SLOs listed in section E1 above will be assessed with an examination consisting of short-answer and multiple choice questions. Each question will be tied to one SLO (see Appendix).

The course instructor will compute the average score across all students for each SLO. A successful outcome will consist of an average score for each SLO ≥ 70%. If all scores exceed 70%, we will concentrate our improvement efforts on the SLO that received the lowest score.

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B.   Who:
The SLOs will be evaluated for each student in Anthropology 350. This sampling strategy is appropriate because Anthropology 350 is required for all concentrators in Evolutionary Anthropology, and because it provides the background required for all upper-level course.

The sample for the on-line survey is appropriate because it will assess all graduating majors.

3. **When will learning outcomes be assessed? When and in what forum will the results of the assessment be discussed?**

We will begin assessment in Anthropology 360 in the spring term of 2014. At the end of the course, the instructor will submit the examination results to the undergraduate advisor for Evolutionary Anthropology. The advisor will also collect the tabulated score for the on-line survey. The advisor will present the results to subfield faculty at the beginning of the following term (usually the fall term).

Faculty will discuss the results and adjust course curricula as necessary.

4. **What is the unit's process to analyze/interpret assessment data and use results to improve student learning?**
See above.