

**Core Curriculum Course Submission
Criteria: Science**

1. General Information

a. Originating Person	b. Contact Person's E-mail	c. Contact Phone	d. Date
Krista Lewis	kxlewis@ualr.edu	(501)569-3173	3/27/14
e. College/School	f. Department/Program		
College of Social Sciences & Communications	Sociology & Anthropology		

Submission Statement
 By submitting this form, we acknowledge our understanding that the Core Council has the authority to review approved courses to ensure they continue to meet the established goals and outcomes of that category of the core; that the Council has authority to develop a core assessment program; and that the Council will be developing review and assessment policies by the end of 2014. Further, we agree that if this course is approved, we will participate in the university-wide assessment of the core.

Chair and Dean Awareness
 Your department chairperson and college dean must be made aware of your submission for core. By submitting this form, you are acknowledging that this has occurred.

2. Course Information

a. Course ID	b. Current Title
ANTH 1415	Physical Anthropology

c. Catalog Description
 A hands-on examination of the study of past and present human and nonhuman primates as biological organisms. Topics include human genetics, variation and osteology, nonhuman primate taxonomy and behavior, forensic anthropology and the human fossil record. Three hours lecture, two hours laboratory per week. Four credit hours.

d. How will your department ensure a level of consistency among sections of this course? Who will be responsible for this?
 Before the beginning of each semester the full time-faculty member(s) responsible for this course will hold a meeting with all adjuncts who are also teaching this course to compare syllabi, laboratory exercises, assignments, and overall content to be covered to insure that all sections are equally academically rigorous.

Educational Goals	Learning Outcomes students will...	Learning Objectives: At the end of the course students will be able to...	Assignments	Explanation
<p>Knowledge 1 – Concepts, methodologies, findings, and applications of mathematics and the social and natural sciences, engineering and technology.</p>	<p>1. understand the theoretical perspective used in one or more science discipline;</p>	<p>Learning Objectives 1.1</p> <p>understand modern human biological diversity and the evolutionary history of humans, hominins, and nonhuman primates.</p>	<p>Assignments 1.1</p> <p>All lectures, exams, and laboratory exercises in this course address this goal: topics to be addressed include human genetics and inheritance; natural selection, mutation, gene flow, and genetic drift; biological adaptation in humans and the fallacy of biological race; nonhuman primate taxonomy and behavior; and interpreting the hominin fossil record.</p>	<p>Explanation 1.1</p>
	<p>2. understand observational and experimental methods used in one or more of the sciences;</p>	<p>Learning Objectives 1.2</p> <p>recognize how physical anthropologists use various scientific methods to examine human biology, the hominin fossil record, and nonhuman primate biology and behavior.</p>	<p>Assignments 1.2</p> <p>Laboratory exercises and exams that apply to this section will cover topics such as traditional experimental design, how to use preexisting scenarios to test hypotheses that are impossible or unethical to test experimentally ("natural experiments"), designing a primate behavior observational project to be conducted at the Little Rock Zoo, and using comparative anatomy to evaluate unknown modern organisms and fossils.</p>	<p>Explanation 1.2</p>

	<p>3. understand applications and limitations of the sciences;</p>	<p>Learning Objectives 1.3</p> <p>understand the "real world" applications of physical anthropology in areas such as forensic anthropology, anthropological demography, medical anthropology, and anthropological epidemiology.</p> <p>understand the strengths and limitations of the various types of scientific methods used in physical anthropology.</p>	<p>Assignments 1.3</p> <p>Laboratory exercises and exams will measure student success in this learning objective. Several lecture topics and laboratory exercises address "real world" applications of physical anthropology in areas such as forensic anthropology, anthropological demography, medical anthropology, and anthropological epidemiology. Other exercises described above (designing "natural experiments" and comparative anatomy projects) demonstrate how physical anthropologists study phenomena that cannot be examined directly because they occurred in the past, are the product of evolutionary processes acting over long spans of time, or an experiment would be unethical to conduct on humans.</p>	<p>Explanation 1.3</p>
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Educational Goals	Learning Outcomes students will...	Learning Objectives: At the end of the course students will be able to...	Assignments	Explanation
<p>Skills 1 – Communication</p>	<p>1. develop an understanding of how to communicate scientific procedures, results from the inquiry and conclusions resulting from applying the scientific method;</p>	<p>Learning Objectives 1.1</p> <p>produce written reports based on laboratory exercises utilizing various methods of inquiry used by physical anthropologists.</p> <p>write clear essays addressing ethical and controversial issues related to topics in physical anthropology. These essays will require an understanding of scientific method, findings, and ability to properly cite scholarly sources.</p>	<p>Assignments 1.1</p> <p>This learning objective is assessed by laboratory reports and essays:</p> <p>Several laboratory exercises require the students to design experiments from research question to conclusion. Students will design projects, evaluate data, and write scientific reports for several exercises including traditional experimental designs, "natural experiments" which use preexisting scenarios to test hypotheses that are impossible or unethical to test experimentally, nonhuman primate behavioral studies, and various exercises in comparative anatomy using nonhuman primate skeletal materials, hominin and human fossils, and modern human skeletal materials.</p> <p>In addition, students are assigned essays in which they must evaluate a controversy within physical anthropology such as the fate of the Neanderthals, the use of nonhuman primates as research subjects, and the ethics of documenting an individual's genome. They will be required to work</p>	<p>Explanation 1.1</p>

			individually and cite the sources they use appropriately.	
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Educational Goals	Learning Outcomes students will...	Learning Objectives: At the end of the course students will be able to...	Assignments	Explanation
Skills 2 – Critical Thinking, Quantitative Reasoning, and Solving Problems Individually and Collaboratively	1. develop basic skills from the scientific method including inquiry, data collection, analysis, and interpretation in order to explore a scientific problem from hypothesis testing to formulating a conclusion based on the inquiry;	Learning Objectives 2.1 have a basic understanding of scientific methods, research design, and data interpretation in physical anthropology.	Assignments 2.1 This learning objective is assessed by laboratory exercises: The first topics addressed in the course are the steps of the scientific method, what makes an explanation scientific, and how to formulate, test, and evaluate a hypothesis. Later work throughout the course builds upon this knowledge and asks students to perform increasingly more complex tasks such as developing a research question, designing a method for testing a hypothesis, analyzing quantitative data they collect, and drawing conclusions from this data.	Explanation 2.1
	2. learn about the world through observation and experimentation, through modeling and interpretation, and through analysis and evaluation;	Learning Objectives 2.2 explore and use various methods of observation, experimentation, and modeling employed by physical anthropologists. have a basic understanding of how to evaluate, interpret, and analyze data in physical anthropology.	Assignments 2.2 This learning objective is assessed via laboratory exercises: Laboratory work throughout the course asks students to perform tasks such as developing a research question, designing a method for testing a hypothesis, analyzing quantitative data they collect, and drawing conclusions from this data. Sample projects include	Explanation 2.2

			collecting and analyzing data about the frequencies of genetic-based traits in the class; collecting and analyzing anthropometric (body measurement) data for the class and using it to understand that much human variation isn't binary, but follows a normal distribution; and simulating natural selection and genetic drift under various conditions to demonstrate mathematically the biological changes that can occur in populations over time.	
Educational Goals	Learning Outcomes students will...	Learning Objectives: At the end of the course students will be able to...	Assignments	Explanation
Skills 3 – Information Technology	1. develop and apply technological tools for inquiry, analysis, and presentation of scientific information and data;	Learning Objectives 3.1 explore and use various technological and scientific tools used by physical anthropologists to gather, analyze, and present data.	Assignments 3.1 This learning objective is assessed in laboratory exercises and exams: Laboratory work throughout the course asks students to perform tasks such as developing a research question, designing a method for testing a hypothesis, analyzing quantitative data they collect, and drawing conclusions from this data. In order to complete these assignments students are required to use computer software such as Microsoft Excel to analyze data. Additionally they must use software to generate graphs and charts to explain patterns in the data. Students also gain	Explanation 3.1

			<p>experience using some of the tools used by practicing physical anthropologists such as osteometric boards, von Luschan tiles, and various types of measurement devices to collect this data.</p>	
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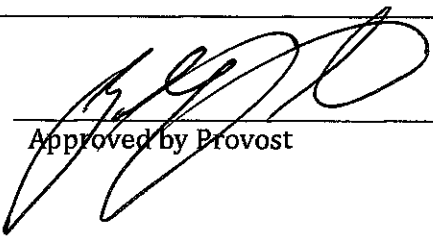
Educational Goals	Learning Outcomes students will...	Learning Objectives: At the end of the course students will be able to...	Assignments	Explanation
Values 1 - Personal Responsibility and Ethical Behavior	1. take responsibility for completing assignments in an ethical manner, working on one's own when required and acknowledging resources when used;	Learning Objectives 1.1 complete assignments in an ethical manner both working in groups and individually. They will also learn how to properly and ethically cite scholarly sources.	Assignments 1.1 This learning objective is assessed by laboratory exercises, essays, and exams: While laboratory exercises may be conducted in groups, all homework derived from these exercises will be completed individually. Students will be made aware of the penalties for unapproved collaboration on homework and exams. All essays and papers require proper citation of sources as appropriate.	Explanation 1.1
	2. develop an understanding of the ethical obligations in conducting research, and of being precise and accurate with data, including how this obligation applies to communication of information;	Learning Objectives 1.2 be aware of the potential ethical issues involved when conducting research using humans and nonhuman primate subjects, including issues regarding the accuracy of data collection and reporting and communication of findings.	Assignments 1.2 This learning objective is assessed by laboratory exercises, essays, and exams: This course will address several topics that deal with the ethics of conducting research on humans. Examples include the "natural experiment" lab and several labs dealing with the fallacy of biological race. In addition, students will be assigned essays in which they must evaluate a controversy within physical anthropology such as the fate of the Neanderthals, the use of nonhuman primates as	Explanation 1.2

			research subjects, and the ethics of documenting an individual's genome. They will be required to work individually and cite the sources they use appropriately.	
Educational Goals	Learning Outcomes students will	Learning Objectives: At the end of the course students will be able to	Assignments	Explanation
Values 2 – Civic Responsibility	1. develop an understanding of the ethical issues that may result when applying scientific knowledge that is incomplete.	Learning Objectives 2.1 be aware of the potential ethical issues resulting from incomplete knowledge of research using humans and nonhuman primate subjects.	Assignments 2.1 This learning objective is assessed in laboratory exercises and exams: This course will address several topics that deal with the ethics of conducting research on humans. Examples include the concept of the "natural experiment" and several lectures and laboratory exercises dealing with the fallacy of biological race. Many of the laboratory exercises involve analyzing numerical data. Data analysis issues such as correlations versus causation, sample size, distributions and outliers, and the repeatability of results will be addressed.	Explanation 2.1

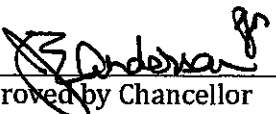
Additional Comments:

Balinda Blevins-Knabe
Approved by Core Curriculum Committee

4-15-14
Date


Approved by Provost

4/17/2014
Date


Approved by Chancellor

4/22/14
Date