ANTH 280
B1

California State University, San Marcos General Education Program
GENERAL EDUCATION NEW COURSE CERTIFICATION REQUEST
• AREA B1: Physical Science – No Lab Component
See GE Handbook for information on each section of this form

ABSTRACT

Course Abbreviation and Number: ANTH280 **Number of Units:** 3	**Course Title:** Of Trowels and Trenches: An Introduction to Archaeology	
College or Program: ☒CHABSS ☐CSM ☐CEHHS ☐COBA ☐Other_____	**Desired term of implementation:** ☐Fall ☒Spring ☐Summer Year: 2017	**Mode of Delivery:** ☒ face to face ☐ hybrid ☐ fully on-line
Course Proposer (please print): Jon Spenard	**Email:**jspenard@csusm.edu	**Submission Date:**

1. Course Catalog Description: A general introduction to the aims, methods, and history of the science of anthropological archaeology, one of the four main subfields of general Anthropology. Topics covered include site formation and research design, survey methods, data collection, laboratory analysis, site and artifact dating techniques, reconstructing and interpreting the past, history of the discipline, contemporary theoretical approaches, contemporary archaeological practice, and the ethics of archaeology. Case studies will be used to reveal these topics.

2. GE Syllabus Checklist: The syllabi for all courses certified for GE credit must contain the following:

☒	Course description, course title and course number
☒	Student learning outcomes for General Education Area and student learning objectives specific to your course, linked to how students will meet these objectives through course activities/experiences
☒	Topics or subjects covered in the course
☒	Registration conditions
☒	Specifics relating to how assignments meet the writing requirement
☒	Tentative course schedule including readings
☒	Grading components including relative weight of assignments

SIGNATURES

Course Proposer _____ Date 10/6/16

Department Chair _____ date 10-6-16

Please note that the department will be required to report assessment data to the GEC annually. _____ *DC Initial*

		Support	Do not support*
Library Faculty	Date	☐	☐

		Support	Do not support*
Impacted Discipline Chair	Date	☐	☐

		Support	Do not Support*
Impacted Discipline Chair	Date	☐	☐

		Approve	Do not Approve
GEC Chair	Date	☐	☐

*** If the proposal is not supported, a memo describing the nature of the objection must be provided.**

Course Coordinator: Phone Email:

RECEIVED
OCT 19 2016
BY:

California State University, San Marcos General Education Program
GENERAL EDUCATION NEW COURSE CERTIFICATION REQUEST
• AREA B1: Physical Science – No Lab Component
See GE Handbook for information on each section of this form

Part A: B/B3 Physical Science with Lab General Education Learning Outcomes (GELOs) related to course content. [Please type responses into the tables.]

Physical Science GELOs this course will address:	**Course content that addresses each GELO.**	**How will these GELOs be assessed?**
B1.1 Students will explain accepted modern physical or chemical principles and theories, their areas of application, and their limitations.	This course introduces basic archaeological principles and concepts to understand and interpret the past. Topics will include: 1) Hypothesis creation and testing by means of archaeological excavations 2) Radiometric dating methods for dating sites and artifacts 3) Taphonomy (study of archaeological site formation processes) 4) Stratigraphy, and the Law of Superposition 5) Environmental and diet reconstruction using lake sediment cores, botanical and biological analyses, and isotopic studies on human skeletons 6) Understanding trade and exchange through trace elemental analysis and geologic studies 7) Understanding stone tool production and use through experimental reconstruction and microscopic analyses 8) The bioarchaeology of people and migrations, using isotopic studies, genetic analysis, and skeletal analysis 9) Archaeological survey techniques using technology and statistical sampling	Students are assigned readings that introduce these concepts. Class and lab time will be spent reviewing and practicing them. Exams will be given periodically throughout the semester, and a laboratory portion of the course will require students to turn in write-ups. A final paper on an archaeology-related topic will require the students to participate in library research, becoming familiar with archaeological literature beyond the course materials.
B1.2 Students will apply the discipline's customary methods to solve problems through data collection, critical evaluation of evidence, the application of quantitatively rich models, and /or employment of mathematical and computer analysis.	Students will perform an archaeological tasks during lab meetings aimed at recreating aspects of each stage of an archaeological investigation, starting with the discovery of a site through systematic surveying strategies, to designing research questions based on	In the lab portion of class, students will participate in a series of archaeological labs designed to teach what archaeological data are, how they are analyzed, and how those data are used to make archaeological

	site discovery, establishing systematic excavation grids, and performing archaeological laboratory analyses on actual artifacts. Students will participate in labs such as seriation, which is the sorting of archaeological materials into categories based on their class (ceramic, stone, glass, metal, animal remains, human remains, etc.) and then shared physical attributes within that class (determined by any number of physical characteristics, including composition, weight, color, form, etc.). These divisions are then used to create a relative chronology useful for understanding change over time. Another lab will introduce students to stone tool production. For this lab, students will experiment with the various techniques people in the past used to make stone tools. This lab, held early in the semester, will result in two off-shoot labs. The first off-shoot lab will have the students map much of the waste they leave behind, returning to it each remaining week of the semester to understand how sites change overtime. The second off-shoot lab will have them use their created tools for a variety of tasks likely performed by people of the past. These tools will then be studied under the microscope to record the type of damage each activity did to the tool. These data will then be compared to archaeologically recovered stone tools to determine how those tools were used in the past.	interpretations. Each lab will incorporate a write-up discussing their findings. Exams given throughout the quarter will include case studies for which the student will have to explain the best approach to studying sites, and the kinds of archaeological methods for analyzing the kinds of data recovered from there.
B1. 3 Students will be able to articulate what makes a good scientific theory, incorporating values of parsimony,	Aspects of the course will introduce students to the scientific method, hypothesis making and testing and their	Students ability to understand good scientific theory will be assessed exams,

agreement with experimental or observational evidence, and coherence with other mathematical or physical theories.	application in archaeological practice. Furthermore, they will learn about the history of archaeological practice and theory. Laboratories in the course will focus on experimental and observational evidence and how those data are used to make interpretations	laboratory assignments, and class discussion of famous cases of archaeological forgeries being falsified through science. For example, the famous case of the "Piltdown Man" of England, was a forgery designed to demonstrate England was the cradle of human evolution, not Africa. This forgery turned out to be a modern cranium associated with an orangutan jaw and chimpanzee teeth, confirmed a fake through comparative biology, microscopic examination of the teeth showing filing marks, DNA analysis, and chemical testing of "aged" bone and dentist's putty holding in the teeth.
B1.4 Students will be able to identify areas in which ethics either (1) directs or limits physical science research or (2) is informed by the products of this research	Ethical issues will be interwoven throughout the course curriculum in class lecture, group discussions, and various lab activities. These issues stem from archaeology being the scientific study of the human past, and, as such investigates the ancestors of living people today. Questions related to who owns the past, who should interpret the past, what parts of the past should be preserved, can archaeological data negatively impact descendant communities are frequently encountered. Moreover, archaeology is a destructive science; investigating a site destroys it; therefore, archaeologists must ask whether a site should even be investigated, if so, how much is necessary to address research questions? If sites are on public land, should they be reconstructed, advertised, developed into tourist sites, or left unmarked; which publics must be consulted for research	Some lab assignments will ask students to explore particular archaeological ethical issues. Guest speakers and field trips to nearby archaeological sites will speak to these concerns. These opportunities will be followed up with discussions and written reflection assignments.

	to take place?	

Part B: General Education Learning Outcomes required of all GE courses related to course content:

GE Outcomes required of all Courses	Course content that addresses each GE outcome?	How will these GELOs be assessed?
Students will communicate effectively in writing to various audiences. (writing)	Students are required to complete write-ups of their labs, produce a final research paper, and exams will have written components.	Students will be assessed in their ability to write clearly, produce academic research, and apply concepts learned in the class.
Students will think critically and analytically about an issue, idea or problem. (critical thinking)	For the final paper, students will be researching an archeological topic of their choice. Class discussions related to the ethics of archaeological practice. Lastly, the laboratory assignments will reinforce how archaeological data are collected and used for creating archaeological interpretations.	Students will be assessed in their ability to write clearly, produce academic research, and apply concepts learned in the class.
Students will find, evaluate and use information appropriate to the course and discipline. (Faculty are strongly encouraged to collaborate with their library faculty.)	Students will write a research paper of an archaeological topic. A library workshop on finding archaeological references will be coordinated with the anthropology librarian.	Students will be assessed in their selection and proper use of academic archaeological sources in their final paper. An additional assignment tied to the library is locating potential academic sources for the final paper and condense write one-paragraph summaries of them in their own words.

Part C: GE Programmatic Goals: The GE program aligns with CSUSM specific and LEAP Goals. All B1/B3 courses must meet at least one of the LEAP Goals.

GE Programmatic Goals	*Course addresses this LEAP Goal:*
LEAP 1: Knowledge of Human Cultures and the Physical and Natural World.	☐ *No* ☒ ***Yes***
LEAP 2: Intellectual and Practical Skills	☐ *No* ☒ ***Yes***
LEAP 3: Personal and Social Responsibility	☐ *No* ☒ ***Yes***
LEAP 4: Integrative Learning	☐ *No* ☒ ***Yes***
CSUSM Specific Programmatic Goals	**Course content that addresses the following CSUSM goals. Please explain, *if applicable.***
CSUSM 1: Exposure to and critical thinking about issues of diversity.	☐ *No* ☒ ***Yes (please describe):*** By its nature, archaeology is the study of the human past, and how human societies came to be the way they are today. Through the study of archaeology, students are exposed to the variety of ways people lived their lives. Thus, the content of the entire course exposes students to issues of diversity and critical thinking about it.
CSUSM 2: Exposure to and critical thinking about the interrelatedness of peoples in local, national, and global contexts.	☐ *No* ☒ ***Yes (please describe):*** Archaeology is the study of the human past, including how they were interconnected in various contexts. Aspects of the course will investigate trade and exchange, migrations, internal and external human forces of social change and cohesion. Moreover, aspects of class will reinforce that archaeologists investigate, and work with the ancestors of descendent communities, demonstrating the

	interrelatedness of peoples through time.

Part D: Course requirements to be met by the instructor.

Course Requirements:	**How will this requirement be met by the instructor?**
Course meets the All-University Writing requirement: A minimum of 2500 words of writing shall be required in 3+ unit courses.	The All-University Writing requirement will be met through a final paper project, laboratory write-ups, and exams.
Courses shall include an evaluation of written work which assesses both content and writing proficiency, using a writing style and use of language that is appropriate for the sciences.	Instructors evaluate final paper, laboratories, and exam questions for content, writing proficiency, and correctness of course and subject content.
Courses should demonstrate to students that the applications of physical science principles and theories can lead to lifelong learning in science and to productive and satisfying life choices.	Aspects of the class will include discussions of contemporary archaeological practice in academia, and in the public and private sectors, visits to museums and other archaeology-related institutions, and guest lectures from practicing archaeologists, all demonstrating the avenues of opportunity for continuing with archaeology as a productive and satisfying life choice.
Courses should demonstrate to students the ways in which science influences and is influenced by societies in both the past and the present.	Archaeology is the study of past societies and, in many cases, archaeologists investigate and work with the ancestors of descendent communities. Thus, the data archaeologists recover help give a voice to all, particularly underserved groups. This aspect of archaeology will be interwoven into class discussions, lecture, and reinforced through guest speakers.
Courses should empower students to communicate effectively to others about scientific principles and their application to real-world problems.	Course will address issues including societal collapse, agricultural practices, violence, climate change, religion, and resource management in the past, problems that continue to plague the world today on a global scale.
Courses shall build the students' information literacy in a way that is appropriate to the field and level of the course.	The final research paper project addresses this requirement. Students will learn how to locate, evaluate, and interpret archaeological resources through self-guided research.
Courses shall require students to think critically so that they are able to distinguish scientific arguments from pseudo-scientific myths or opinions.	Aspects of class will include discussions and debunking of archaeological frauds and myths, such as Piltdown Man (see B1.3 answer above), and ancient aliens.