## ANTH 470 plus ANTH 570-DualList-2018-02-02

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Form Information

The page you originally access is the global template version. To access the template document that progresses through the workflow, please complete the following steps:

First Step: ONLY change the text in the [brackets] so it looks like this: CRIM 101 Intro to Criminology-CrsRvs-2015-08-10

If DUAL LISTED list BOTH courses in the page title

Second Step: Click "SAVE" on bottom right

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Third Step: Make sure the word **DRAFT** is in yellow at the top of the proposal

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\*Indicates a required field

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## **Dual Listed Section**

Undergraduate Course Prefix /Number	ANTH 470
Undergraduate Course Title	Environmental Archaeology
Undergraduate Course Catalog Description	Explores past human interactions with the natural environment, including plants, animals, climate, and geologic landscapes. Incorporates hands-on practice in the scientific techniques used to reconstruct ancient environments, including analysis of pollen, sediments and soils, and microfauna. Uses computer software to graph and interpret data sets. Illustrates archaeological case studies designed to illustrate both how environmental conditions and natural hazards (e.g., volcanoes, tsunamis) impacted past human populations, as well as how people have altered and modified their environment through time. Examines these interactions using a diachronic and comparative perspective, from the evolution of hominins millions of years ago to the recent phenomenon of the Anthropocene.
Graduate Course Prefix /Number	ANTH 570
Graduate Course Title	Environmental Archaeology
Graduate Course Catalog Description	Examines past human interactions with the natural environment, including plants, animals, climate, and geologic landscapes. In this class, students will 1) get hands-on practice in the scientific techniques used to reconstruct ancient environments, including analysis of pollen, sediments and soils, and microfauna; 2) use computer software to tabulate, graph and interpret data sets; and 3) evaluate select archaeological case studies designed to illustrate how changing environmental conditions and natural hazards (e. g., volcanoes, tsunamis) impacted past human populations, as well as how people have altered and modified their environment through time. Examination of these interactions using a diachronic and comparative perspective, from the evolution of hominins millions of years ago to the current Anthropocene EPOCH will be covered.

What is the Justification for Dual

Listing these particular two course?

The content of this course is at a high level of academic rigor; however, several of our advanced undergraduate students have expressed interest in the course content, particularly since environmental archaeology is rapidly gaining popularity within the disciple as scientists in general, and archaeologists in particular, recognize the potential for archaeology to help solve contemporary socio-environmental problems and inform public policy. Many graduate programs now encourage prospective students to take coursework in both archaeology and environmental science; this course ties these two disciplines together to give students a solid foundation in human-environmental relationships.

The content of this course is written for a graduate audience. It requires students to engage in primarily higher orders of intellectual thought (following Bloom's taxonomy) that move beyond comprehension to application, analysis, and synthesis. Moreover, within the Applied Archaeology sector, employers are increasingly seeking candidates with strong applied skills in environmental analyses, including soil and landscape analysis and paleoclimate reconstruction using flora, fauna, and geochemical proxies. Like our other dual-listed, specialized methods courses (i.e., ANTH 486/586, 487/587, 488/588, 489/589, 490/590, 491/591, and 492/592), this course will make grad students more job-ready and marketable than students from programs that focus on theory only, rather than field and laboratory skills.

The course is dual-listed so that motivated, advanced undergraduate students interested in going on to graduate school are able to expand their knowledge of environmental analysis and paleoclimate reconstruction.

As a result, a good deal of the lecture material, and some of the laboratory material, will be the same between the two courses. That said, the hands-on applications, discussions and projects vary significantly between the two courses. Graduate students will read and lead weekly discussions of case studies selected from the peer-reviewed literature; critique articles from the peer-reviewed literature; and develop a research or grant proposal tied to their thesis to address an archaeological research question of environmental significance and relevance, utilizing appropriate methods, environmental proxies, and publicly available databases.

How will the course be structured?

Briefly explain how the course will be structured so that it meets the needs and appropriate level expectations of students.

In other words, how are you specifically maintaining the quality of education for each classification (level) of student in the class?

## **Lower Level Class**

This course meets weekly, with the beginning of class dedicated to a succinct PowerPoint-based lecture of the week's topic (e.g., pollen). Lecture is followed by a class discussion of an article from an anthology of environmental archaeology case studies (also focused on the week's topic. Discussion will be led by a graduate student who will design a short (5 questions) quiz to assess undergraduate student comprehension of the article's main point. Grad students will additionally develop and lead discussion of 2-3 questions aimed at critiquing the study's methods, data, and conclusions. The final portion of the class is dedicated to assigning and beginning a problem set using real data sets from real archaeological sites. In some cases, students obtain the data themselves (e.g., pollen identification or sediment sieving); in other cases the students use data obtained from publicly-available scientific databases (e.g., oxygen isotopes from NOAA). Students are expected to finish these problems outside of class before reviewing them collectively the following week. Students will work in teams combining undergraduates and graduates, with the latter serving as "crew chiefs" (modeled after our professional standards) who will help undergraduates identify necessary resources and help guide them through more difficult portions of the exercises.

## **Upper Level Class**

This course meets weekly, with the beginning of class dedicated to a succinct PowerPoint lecture of the week's topic, followed by a class discussion of an article (from an anthology of environmental archaeology case studies) and focused on the week's topic (e.g., pollen). Discussion is student-led by a graduate student who designs a short (5 questions) quiz for undergraduates to assess student comprehension of the article's main point, as well as develop 2-3 questions aimed at assessing and critiquing the study's methods, data, and conclusions. The final portion of the class is dedicated to assigning and beginning a problem set using real data sets from real archaeological sites. In some cases, students obtain the data themselves (e.g., pollen identification or sediment sieving); in other cases the students use data obtained from publicly-available scientific databases (e.g., oxygen isotopes from NOAA). Students are expected to finish these problems outside of class before reviewing them collectively the following week. Unlike undergraduates, graduate students are additionally expected to 1) serve as lab "crew chiefs" (modeled after our professional standards) who will help undergraduates identify necessary resources and help guide them through more difficult portions of the exercises; 2) write an article review and present on oral presentation to the class on a journal article from the peer-reviewed literature; and 2) write a proposal to undertake a project which incorporates an element of environmental and/or landscape reconstruction into the research design. This should be the student's MA thesis if applicable, or a hypothetical National Geographic grant proposal for students less far along in the program.