LSC Use Only No:	LSC Action-Date:	UWUCC USE Only No.	UWUCC Action-Date:	Senate Action Date:
		04-48g	Appr 4/5/05	Appr 4/26/05

Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee

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Proposing Department/Unit Anthropology	Phone 357-2133

Check all appropriate lines and complete information as requested. Use a separate cover sheet for each course proposal and for each program proposal.

1. Course Proposals (check all that apply)

__XX__ New Course _____ Course Prefix Change _____ Course Deletion

_____ Course Revision _____ Course Number and/or Title Change _____ Catalog Description Change

	484 ~~422~~ Specialized Methods in Archaeology
***Current* Course prefix, number and full title**	***Proposed* course prefix, number and full title, if changing**

2. Additional Course Designations: check if appropriate

_____ This course is also proposed as a Liberal Studies Course.

_____ This course is also proposed as an Honors College Course.

_____ Other: (e.g., Women's Studies, Pan-African)

3. Program Proposals

_____ Catalog Description Change _____ Program Revision

_____ New Degree Program _____ Program Title Change _____ Other

_____ New Minor Program _____ New Track

***Current* program name**	***Proposed* program name, if changing**

4. Approvals		**Date**
Department Curriculum Committee Chair(s)	Sarah W. Neusius	1/25/05
Department Chair(s)	Mark D. Mann	1-25-05
College Curriculum Committee Chair	Gail Gehlert	2/2/05
College Dean	[illegible]	2/2/05
Director of Liberal Studies *		
Director of Honors College *		
Provost *		
Additional signatures as appropriate: (include title)		
UWUCC Co-Chairs	Gail Gehlert	4-5-05

* where applicable

FEB 7 2005

MAR 28 2005 LIBERAL STUDIES

1. Syllabus of Record

I. Catalog Description
ANTH 484 Specialized Methods in Archaeology **3c-01-3cr**

3 Class Hours
0 Lab Hours
3 Credit Hours

Prerequisites: None

Provides interested students with an opportunity to learn specialized techniques and approaches presently in use in archaeology. In any one semester, the course will concentrate on one of a range of possible themes, including lab methods, field methods, statistical methods, computer applications or text based approaches. The specific topic varies, but this course focuses on instructing students in the mechanics of the selected technique, its application to real archaeological problems, and the interpretation of the results. The course may appeal to students from other disciplines who wish to gain applied expertise in a topic that is relevant to their own field of study. Interested students should contact the instructor to find out which topic will be taught in any one semester.

II. Course Objectives
Students will be able to:

1. Recognize and critique a selected archaeological technique when used to solve archaeological problems.

2. Employ a specific methodological and analytical skill that will benefit their own future research, and that is presently in demand in archaeology (or relevant to fields of study outside archaeology).

3. Recognize the interdisciplinary nature of archaeology, in particular how it borrows techniques and approaches from other disciplines (such as biology, chemistry, geography, mathematics, information science, and history) to solve archaeological problems.

III. Course Outline
The content of the course will vary considerably depending on the theme selected for that semester's class, with classroom instruction combined with practice in the relevant setting: a laboratory, at a computer, outside in the open, or in the library. Whatever the theme, the course is designed to incorporate the following segments, all of which remain under the guidance of the instructor.

A. A **historical overview** of the technique or approach being taught, and of its application in archaeology, both in the past and presently. Examples of various research projects in which such methods played a role will be discussed. (9 hrs)

B. An instructor taught, **hands-on component** in which students learn to work with/use the relevant materials and methods. (27hrs)

C. Once the student is comfortable with the method, opportunities to more independently gain further experience through the **application** of this knowledge to available materials and archaeological problems.
(6hrs)

IV. Evaluation Methods
Although the variable nature of the course requires different evaluation methods, the following general approach will be followed:

Exams (50%): There is one hourly exam worth 25% of the final grade.
There is a final exam also worth 25% of the grade. This final exam serves as the final culminating activity for the course.

The exams test the student's understanding of – and proficiency in – the technique or approach being taught (e.g. identification and analysis of faunal remains or other materials, and proficiency in surveying methods, statistical analysis, or computer drawing techniques).

Assignments (30%): A series of short written and technical assignments test the student's ability to apply the techniques learned to archaeological problems. These may take the form of hands-on quizzes or exercises (e.g. bone identification quizzes in zooarchaeology or the completion of a mapping exercise designed by the instructor).

Attendance and Participation (20%): A significant portion of the final grade will be based on attendance, effort and level of participation.

V. Grading Scale
A:≥90% B:80-89% C:70-79% D:60-69% F:<60%

VI. Attendance Policy
Instruction in methods is hampered when individual students have missed the previous class and need to catch up, thus slowing down the entire class. As a result students generally are expected to attend and participate in this class. In conjunction with the University Attendance Policy individual instructors will establish the number of classes that can be missed before a student's Attendance and Participation grade (see evaluation methods) is reduced.

VII. Required Textbook(s), Supplemental Books and Readings

The required textbook will vary depending on the content of the course and the best available text at the time the course is taught. Supplementary readings may also be used. Examples of textbooks include the following:

Materials analysis:
Banning, E.B. 2000 *The Archaeologist's Laboratory: The Analysis of Archaeological Data.* New York: Kluwer Academic/Plenum Publishers.

Field Survey:
Banning, E.B. 2002 *Archaeological Survey.* New York: Kluwer Academic/Plenum Publishers.

Statistics:
Drennan, R.D. 1996 *Statistics for Archaeologists: A Commonsense Approach.* New York: Plenum Press.

Zooarchaeology:
O'Connor, Terry. 2000. *The Archaeology of Animal Bones.* College Station, Texas. Texas A+M University Press.

VIII. Special Resource Requirements
The resource needs of this course are not out of the ordinary for archaeology courses. Equipment and supplies for ANTH 484 may include various laboratory and field equipment (e.g. surveying instruments, microscopes, scales, calipers and computer software) that will be supplied by the Department of Anthropology. The Department's comparative collections of skeletal and artifactual material also may be used. The Department has ongoing resource needs which it seeks to meet yearly through its ESF allocation.

IX. Bibliography
The bibliography supporting this course will vary depending on the topic. The following is a sample bibliography supporting a zooarchaeology methods course, which we have taught as a Special Topics course.

Baker, John and Brothwell, Donald. 1980.Animal Diseases in Archaeology. New York: Academic Press.
Baker, B. W., B. S. Shaffer and D. G. Steele. 1997. Basic approaches in archaeological faunal analysis. In Field methods in archaeology (7th edition), edited by T. R. Hester, H. J. Shafer and K. L. Feder, pp. 298-318. Mayfield Publishing Company, Mountain View, California.

Binford, Louis. 1981. Bones. Orlando: Academic Press.
Bonnichsen, Robson and Marcella H. Sorg eds. 1989. Bone Modification. Orono, Maine: Center for the Study of the First Americans, Institute for Quaternary Studies, University of Maine.
Brown, C. L., and C. E. Gustafson. 1979. A key to postcranial skeletal remains of cattle/bison, elk, and horse. Laboratory of Anthropology, Washington State University Reports of Investigations 57.
Casteel, Richard W. 1976. Fish remains in archaeology and paleo-environmental studies. Academic Press, London, U.K.
Crabtree, PamJ. 1985 Historic Zooarchaeology: Some Methodological Considerations, Historical Archaeology 19(1):76-78.
Daniels, R. A. 1996. Guide to the identification of scales of fishes of northeastern North America. Biology Bulletin, New York State Museum 488.
Davis, Simon 1987. The Archaeology of Animals. New Haven:Yale University Press.
Ford, Pamela J. 1990. Antelope, deer, bighorn sheep and mountain goats: A guide to the carpals. Journal of Ethnobiology 10(2):169-181.
Gifford, Diane P. & Diana C. Crader 1977. A computer coding system for archaeological faunal remains. American Antiquity 42:225-238.
Gilbert, B. Miles. 1982. Mammalian Osteology. B. Miles Gilbert, Laramie, Wyoming.
Gilbert, B. M., L. D. Martin and H. Savage. 1981. Avian osteology. B. Miles Gilbert, Laramie, Wyoming
Grayson, Donald K. 1984. Quantitative Zooarchaeology. Orlando: Academic Press
Hargrave, L. L. and S. D. Emslie. (1979). Osteological identification of sandhill crane versus turkey. American Antiquity 44, 295-299.
Hesse, Brian and Paula A. Wapnish. 1985. Animal Bone Archaeology. Washington D.C.:Taraxacum Inc
Hillson, Simon. 1992. Mammal Bones and Teeth: An Introductory Guide to Methods of Identiifcation. London: Institute of Archaeology, University College of London.
----------. 1990. Teeth. Cambridge University Press, Cambridge, U. K.
Klein, Richard and Kathryn Cruz-Uribe.1984. The Analysis of Animal Bones from Archaeological Sites. Chicago: The University of Chicago Press.
Lyman, R. Lee. 1994. Vertebrate Taphonomy. Cambridge: Cambridge University Press.
Marshall, F. & T. Pilgram 1993 NISP vs. MNI in quantification of body-part representation. American Antiquity 58:261-269.
Meadow, Richard 1978 "Bonecode" a system of numberical coding for faunal data from Middle Eastern sites. In Approaches to Faunal Analysis in the Middle East. R.H. Meadow and M.A. Zeder, Eds. Cambridge: Peabody Museum Bulletin 2.
Moreno-García, Marta, Orton, Clive, and James Rackham 1996 A new statistical tool for comparing animal bone assemblages. Journal of Archaeological Science 23:437-453.
Munson, Patrick J. 2000. Age-correlated differential destruction of bones an its effect on archaeological mortality profiles of domestic sheep and coats. Journal of Archaeological Science 27:391-407.
Olsen, Stanley. 1964 Mammal Remains from Archaeological Sites. Part 1. Papers of the Peabody Museum, Volume 56, No. 1. Harvard, Cambridge. Pp. 27-67.
----------. 1967. Osteology of the macaw and thick-billed parrot. Kiva 32:57-72.
----------.1968. Fish, amphibian and reptile remains from archaeological sites, part 1: southeastern and southwestern United States. Papers of the Peabody Museum of Archaeology and Ethnology 57.
----------. 1979. Osteology for the archaeologist: the American mastodon and the woolly mammoth. Papers of the Peabody Museum of Archaeology and Ethnology 56(3-4):1-196.
Payne, S. 1985. Morphological distinctions between the mandibular teeth of young sheep, Ovis, and goats, Capra. Journal of Archaeological Science 12(2):139-147.
Rackham, D. James. 1994. Animal Bones (Interpreting the Past). University of California Press.
Reitz, Elizabeth and Elizabeth Wing. 1999. Zooarchaeology Cambridge: Cambridge University Press.
Rolett, B. V. and Min-yung Chiu. 1994. Age estimation of prehistoric pigs (Sus scrofa) by molar eruption and attrition. Journal of Archaeological Science 21:377-386.
Schmidt, E. 1972. Atlas of animal bones for prehistorians, archaeologists and quaternary geologists. Elsevier Publishing, Amsterdam.
Shaffer, Brian and Barry Baker. 1992. A Vertebrate Faunal Analysis Coding System. University of Michican Museum of Anthropology Technical Report 23.
Sutton, M. Q. and B. S. Arkush. 1996. Chapter 10: Analysis of faunal remains. In Archaeological laboratory methods, edited by M. Q. Sutton and B. S. Arkush, pp. 217-258. Kendall / Hunt Publishing Company, Dubuque, Iowa.

Von Den Driesch, Angela 1976 A Guide to the Measurement of Animal Bones from Archaeological Sites. Peabody Museum Bulletin 1. Harvard: Peabody Museum.
Wilson, Bob, Caroline Grigson & Sebastian Payne. 1982. Ageing and Sexing Animal Bones from Archaeological Sites. BAR Series 109. Oxford: BAR.
Zeder, Melinda A. 1988 Understanding urban process through the study of specialized subsistence conomy in the Near East. Journal of Anthropological Archaeology 7:1-55.

2.Course Analysis Questionnaire

A:Details of the Course

A1.This course will be one of the options for additional courses under Controlled Electives in the Anthropology/Archaeology Track. It provides an opportunity for students who are serious about pursuing archaeology to take advantage of the specialty skills of our archaeology faculty. Depending on the specific method being explored students from other majors may find the course attractive. For example, a student majoring in Biology might be interested in taking a zooarchaeology section of ANTH 484 or a student majoring in History might be interested in taking a section of ANTH 484 focusing on historic material analysis. At present the only way we can teach courses such as these is as a Special Topics course.

A2.No.

A3.Special Topics courses have been offered in Zooarchaeology and Human Osteology as recently as the Fall Semester 2001. Before this semester a Special Topics course called The Anthropology of Bone was offered in the Fall of 1999 which included both zooarchaeological and human osteological topics. Although these are the only topics we have offered, various faculty would like to offer specialized methods courses in other areas such as lithic analysis, archaeological survey, and archaeological statistics.

A4.No.

A5.This course will not be offered for variable credit.

A6. Courses in several of the specialized methods are offered at other institutions. For example, among IUP's peer institutions:

- Illinois State University offers Zooarchaeology and Historical Archaeology courses and an Advanced Topics in Physical Anthropology, which appears to be similar to our concept for Anth 484.
- Ball State offers Historical Archaeology, Human Osteology and Ethnohistory
- Northern Arizona University offers Geoarchaeology, Paleoethnobotany and Ceramics
- Memphis State offers Archaeological Site Reconnaissance and Historic Archaeology
- North Carolina at Greensboro (Archaeology Program) offers courses titled Human Identification, Ceramics, Cartography, and Plants and Civilization.

A7.There are no certification requirements for archaeologists but in keeping with the Seven Principles for Curricular Reform developed by the Society for American Archaeology's NSF funded curricular reform project, "Making Archaeology Teaching Relevant for the 21st Century" (MATRIX), this course does explicitly incorporate at least one principle:

- # 7 Develop fundamental disciplinary skills in fieldwork and laboratory analysis and promote effective learning via the incorporation of problem solving, ether through case studies or internships.

B:Interdisciplinary Implications

B1. This course will only be taught by instructors in the Anthropology Department.

B2. The content of this course does not overlap with the content of courses taught by other departments although some of the possible topics may draw on techniques used in other departments (e.g. zoological topics are a

component of zooarchaeology, and archaeological survey and mapping incorporates techniques that are also used by geographers).

B3. This course will not be cross-listed.

C: Implementation

C1. Faculty resources are adequate. Although a section of ANTH 484 will be offered every fourth semester each individual faculty member will not offer ANTH 484 often, and when offered this course would most likely simply become a third preparation for the semester in question.

C2. The resource needs of this course can be met by the Department of Anthropology's existing resources.

- The lab classroom space we have is adequate for this course.
- The Department of Anthropology has the basic collections, software and equipment needed to teach the topics that various sections of ANTH 484 would cover. Additional equipment, software and collections may be needed in the future depending on the topic covered as well as the development of archaeological techniques. ESF funding will be used to meet such needs.
- Consumables such as plastic bags, vials, acid free paper, labeling equipment, modeling clay, etc often will be required, but can be purchased out of ESF and Supply budgets for the Department.
- Some additional library resources may be sought, but students will be encouraged to use electronic databases, PALCI and Interlibrary Loan services as well. The Department's library allocation will be used to acquire any necessary books.
- The IUP motor pool should be able to provide any vehicles required by any of these courses. There are no other travel expenses anticipated.

C3. No.

C4. Our new course sequencing anticipates offering one section of ANTH 484 every fourth semester, probably during the fall semester.

C5. One section will be offered at a time.

C6. No more than 24 students can be accommodated in a section of this course. This number is determined in part by the number of seats in our dedicated lab classroom.

C7. No.

C8.There is no distance education component in ANTH 484.

D.Miscellaneous

There is no additional information to be provided.