

COMMON COURSE OUTLINE FOR: ANTH 1231: Archaeology Lab – Ancient Technologies

A. COURSE DESCRIPTION:

1. Number of credits: 1
2. Lecture hours per week: 0
3. Lab hours per week: 2
4. Prerequisites: ANTH 1230/1126 (Prerequisite or concurrent enrollment)
5. MnTC Goals: N/A

Catalog Description:

Archaeology Lab – Ancient Technologies - This laboratory course introduces archaeology students to the ancient technologies that enabled the rise of complex societies. Using hands-on activities and instructor demonstrations, students will learn how materials like stone, ceramic, and metals and innovations like projectiles, watercraft and artificial environments led to modern complex societies. Fall, Spring

B. DATE LAST REVISED: February, 2017

C. OUTLINE OF MAJOR CONTENT AREAS:

1. How the fundamental framework of material technology determines how a society addresses the basic issues of defense, food supply, shelter, and transportation.
2. The concepts and techniques of lithic tool production, the importance of the quality of the rock substrate, and the ways such materials combine with materials like wood or bamboo to produce usable objects.
3. How weapons, an important requirement for both hunting and defense, progressed from simple direct tools to projectile systems that enable action at a distance.
4. The invention of clay-based ceramics and how the design and fabrication of pottery grew more sophisticated over time. The interaction of materials with fire ultimately led to the smelting of metals and the development of metallurgy.
5. How metals were discovered and how increasingly sophisticated thermal processing led to ever-improving metals. Beginning with native copper, bronze, brass, iron, steel and more became determining capabilities for many cultures.
6. How materials for construction progressed from wood and thatch to stone, brick and monumental architecture.
7. How the fundamental challenges addressed by architecture, e.g., enclosure,

span, vertical height, defense, etc., came to be solved by innovations in design and materials.

8. How the need to transport material and people led to innovations like watercraft and wheeled vehicles.
9. The critical role technology and natural resources play in the rise and fall of cultures.

D. COURSE LEARNING OUTCOMES:

Upon completion of this course students will:

1. Understand how the fundamental framework of material technology determines how a society addresses the basic issues of defense, food supply, shelter, and transportation.
2. Understand the concepts and techniques of producing lithic tools, weapons, ceramics, metals, and construction materials that were critical in emergent societies.
3. Learn how the fundamental challenges addressed by architecture, e.g., enclosure, span, vertical height, defense, etc., came to be solved by innovations in design and materials.
4. Understand how the need to transport both material and people led to innovations like watercraft and wheeled vehicles.
5. Understand the geographical distribution of resources and why this enables some cultures better than others.
6. Understand how technology emerges through observation and conscious attempts to improve and optimize capabilities.
7. Understand how both resources and know-how are transferred between societies. Diffusion, trade, war and conquest are critical facets of information exchange.
8. Understand the critical role technology plays in the rise and fall of cultures.

E. ASSESSMENT:

This is an active learning course in which students will be evaluated with objective tests of their knowledge, the quality and extent of their participation, and an evaluation of their experimental outcomes. Grading will be based as follows:

Test scores: (two at 25 points each)	50
points Classroom Projects	25
points	
Class participation and written assignments	<u>25</u>
points Total:	100
points	

Grade will be based upon the following point scale:

90-100 points	A
80-89 points	B
70-79 points	C
60-69 points	D
0-59 points	Fail