**ANTH/ENST 3133 Environmental Archaeology**  
**Fall 2017, Lecture/Lab 2/2**

<table>
<thead>
<tr>
<th>Instructors</th>
<th>Dr. Scott Hamilton</th>
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<td>Lab: BB007</td>
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**Lecture:**  
BB2002 Friday 12:30 to 2:30 pm  
**Lab:**  
AT 3--- Monday 11:30 to 2:30 pm

**Evaluation:**  
Zooarchaeology: 3 lab Quizzes (3x10%), 1 midterm test (20%)  
Paleoecology: Lab assignments (20%), paleoecology project (30%)

This class introduces osteological and paleo-ecological studies in archaeology. The first module focuses on zooarchaeology (Dr. Hamilton), while the second module addresses aspects of paleoecology and archaeobotany (Dr. Boyd). The class consists of 2 hours of lectures and 3 hours of lab.

No text book is assigned for the Zooarchaeology module, but a lab manual and Lecture materials are available through myCourseLink.

The suggested text for the paleoecology/archaeobotany component is:


**Tentative Course Schedule:**

**Week 1 (Sept 5-8, 2017)**

**Lecture:**  
- History of Zooarchaeology  
- Biological, Folk and Zooarchaeological Taxonomies  
- Describing Bone surfaces and orientation  
- Bone and tooth anatomy

**Lab:**  
- Bone microstructure  
- Axial versus appendicular skeleton  
- Locomotion and lifestyle  
- Dentition, and dental formulae

**Week 2 (Sept 11-15, 2017)**

**Lecture**  
- Taphonomy in Zooarchaeology  
- Inferring past environments  
- Inferring domestication

**Lab**  
- Comparative mammalian osteology

**Week 3 (Sept 18- Sept 22, 2017)**

**Lecture**  
- Describing individual bones  
- Variation within species  
- Interpreting past environments  
- Inferring seasonality
**Sexing and Aging Techniques**

**Lab**  
**lab Quiz 1** (10%)  
Fish and Bird Osteology

**Week 4 (Oct 2-6, 2017)**

**Lecture**  
Assessing relative abundance of individual Taxa  
MNI, NISP, Utility indices

**Lab**  
**lab Quiz 2** (10%)  
Identification of fragmentary bones

**Week 5 (Oct 9-13, 2017)**

**Lecture**  
Element representation, bone processing and butchering  
Evaluating Human predator, processing behaviour

**Lab**  
**Lab Quiz 3** (10%)  
Identification of fragmentary bones

**Week 6 (Oct 16-20, 2017)**

**Lecture**  
Case study: Fur Trade ‘over-hunting’ (Peace River)  
Case study: Integrating NISP, MNI, and historic records (Brandon House)

**Lab**  
**Midterm Quiz** (20%)

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**Week 7 (Oct 24-25) Paleocology begins**

**Lecture**  
Introduction

**Lab**  
Scavenger hunt

**Week 8 (Oct 31-Nov 1)**

**Lecture**  
Bryophytes and vascular plants

**Lab**  
Plant macrofossil identification (10%)

**Week 9 (Nov 7-8)**

**Lecture**  
Plant microfossils: pollen, phytoliths and starch

**Lab**  
Plant microfossil identification (10%)

**Week 10 (Nov 14-15)**

**Lecture**  
Arthropods and other invertebrates

**Lab**  
Macrofossil sample processing & project description

**Week 11 (Nov 21-22)**

**Lecture**  
Molluscs and echinoderms

**Lab**  
Paleoecology project

**Week 12 (Nov 28-29)**

**Lecture**  
Viruses, bacteria, fungi, and stable Isotopes

**Lab**  
Paleoecology project

Paleoecology project due: **December 2** (Monday)
References (zooarchaeology)


1964 *Mammal remains from archaeological sites, Part I, Southeastern and Southwestern United States*, Papers of the Peabody Museum of Archaeology and Ethnology, Harvard University 56(1).

1968 *Fish, amphibian, and reptile remains from archaeological sites, Part I, Southeastern and Southwestern United States*, Papers of the Peabody Museum of Archaeology and Ethnology, Harvard University 56(2).

1972 *Osteology for the archaeologist, 3, the American mastodon and woolly mammoth*, Papers of the Peabody Museum of Archaeology and Ethnology, Harvard University 56(3).


