

# Human Osteology and Osteometry

## ANT 4525/5525 – Spring 2011

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**Instructor:** David Daegling

**Office:** Turlington B376

**Office Hours:** M 3-4 PM; W 1-3 PM

**Class Times:** MWF (3<sup>rd</sup> period), TUR 1208J

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### COURSE DESCRIPTION

This course provides an introduction to the concepts and methods used in the analysis of human skeletal remains from forensic and archaeological contexts. The skills gained in this course will provide a basis for more advanced studies in forensic anthropology, bioarchaeology, paleopathology, and paleoanthropology. Through class lectures and independent lab time, students will learn: 1) how to identify whole and fragmentary skeletal elements, 2) how to determine human from non-human skeletal remains, and 3) how to determine age, sex, stature and ancestry of an individual. **Please note – Although the reading load for this class is light, successful students usually require between 20 and 30 hours per week of independent laboratory study time to prepare for the lab practical quizzes. Your performance on quizzes will reflect the amount of time you put into independent study. As such, it is critical to spend as much time as possible in the laboratory to do well in this course.**

### TEXTS

Required – *The Human Bone Manual*. By: Tim D. White & Pieter Arend Folkens (2005) Academic Press.

Suggested – *Human Osteology: A Laboratory and Field Manual*. By: William Bass (1987). Special publication No. 2 of the Missouri Archaeological Society, Inc.

Additional materials (handouts, readings, etc.) will be provided by the instructor and posted on WebCT/E-Learning/Sakai (<http://lss.at.ufl.edu>).

### COURSE REQUIREMENTS

- There will be 10 cumulative practical quizzes (120 points each) and 1 larger final exam (240 points) administered for this course. The quizzes and exams will primarily involve the identification of anatomical features and fragmentary skeletal remains. The format of the quizzes will be explained in more detail during the first class meeting. No make-up quizzes will be given, but **you will be able to drop your lowest quiz score at the end of the semester**. The final exam grade, however, may **not** be dropped.
- In addition to the practical quizzes/exam, there will be a take-home essay exam (240 points), to be posted on **March 25<sup>th</sup>**, and due **April 18<sup>th</sup>**. The exam format will be discussed on the first day of class. **Note:** You will need to invest some time in completing the take home exam in order to do well (i.e., it is not something that can be accomplished two days before it is due).

## **GRADING**

- Point total will be calculated by adding up the raw scores on all quizzes (120 points each), the final exam (240 points), and the take home exam (240 points), for a total of 1680 points.
- The following grading scale will be used:

<b>A</b>	93% - 100%	<b>C</b>	73% - 76%
<b>A-</b>	90% - 92%	<b>C-</b>	70% - 72%
<b>B+</b>	87% - 89%	<b>D+</b>	67% - 69%
<b>B</b>	83% - 86%	<b>D</b>	63% - 66%
<b>B-</b>	80% - 82%	<b>D-</b>	60% - 62%
<b>C+</b>	77% - 79%	<b>E</b>	59% or less

## **GENERAL CLASSROOM POLICIES**

- SILENCE OR TURN OFF CELL PHONES
- The instructor will **NOT** distribute lecture notes/copies of the Power Point slides outside of class.
- Cheating or plagiarism in any form is subject to university policy as outlined by the Dean of Students (<http://www.dso.ufl.edu/sccr/honorcodes/honorcode.php>).
- Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

## **RULES FOR THE FORENSIC RESEARCH & TRAINING LAB (1208J Turlington)**

- The room is to remain secure at all times. If you leave, even for a few minutes, **be sure the door is closed and locked**. Access to the classroom and lab is controlled by a key-pad entry lock; students in this course will be granted access via their UFID number (first 6 digits, then push the star button). Students not enrolled in this course are not permitted to enter the lab.
- Permission for visitors to the laboratory must be received from the instructor, or another Anthropology faculty member. **NO EXCEPTIONS!**
- No specimens are to leave 1208J Turlington Hall.
- All skeletal remains, laboratory equipment, and other teaching materials are to be treated with the utmost respect.
- The teaching laboratory is not a social center. Please be respectful of other students' study time.
- Osteology students are restricted to specimens in the plastic boxes on the back wall of the room, and to any additional materials provided by the instructor.
- ***Any transgressions of these rules will lead to point loss and/or dismissal from the course.***

### **ADDITIONAL RESOURCES**

Throughout the semester, you may also be interested in consulting some of the references listed below.

- [www.eskeletons.org](http://www.eskeletons.org) (good online study guide for human osteology & comparative anatomy)
- <http://library.med.utah.edu/kw/osteo/osteology/bonemand.html> (good study guide and diagrams)
- [http://www.meddean.luc.edu/lumen/meded/grossanatomy/learnem/bones/main\\_bone.htm](http://www.meddean.luc.edu/lumen/meded/grossanatomy/learnem/bones/main_bone.htm) (test yourself!)
- Larsen, Clark Spender (1997). *Bioarchaeology: Interpreting Behavior from the Human Skeleton*. Cambridge, MA: Cambridge University Press.
- Katzenberg, M. Anne and Shelley R. Saunders (Eds.) (2000). *Biological Anthropology of the Human Skeleton*. New York: John Wiley and Sons.
- Baker, Brenda J., Tosha L. Dupras, and Matthew W. Tocheri (2005). *The Osteology of Infants and Children*. College Station, TX: Texas A&M University Press.
- Donald J. Ortner (1981). *Identification of pathological conditions in human skeletal remains*. Washington: Smithsonian Institution Press.

## **COURSE SCHEDULE**

**\*\* Note:** The assigned readings are from White and Folkens (2005) *The Human Bone Manual*. Please note that exact dates for lecture topics are subject to change due to potential availability of guest speakers. However, no substantial changes will be made to quiz and exam dates.

DAY	DATE	LECTURE TOPIC	REQUIRED READINGS**
W	Jan 5	Course outline and expectations	Ch. 3
F	Jan 7	Bone biology & development	Ch. 4
M	Jan 10	Anatomical terms, joints, and muscles	Ch. 6
W	Jan 12	Bones of the skull	Ch. 7
F	Jan 14	Bones of the skull (cont.)	Ch. 7
<b>M</b>	<b>Jan 17</b>	<b>NO CLASS – MARTIN LUTHER KING DAY!</b>	
W	Jan 19	Skull – foramina and soft tissue	In class handouts
<b>F</b>	<b>Jan 21</b>	<b>QUIZ #1</b>	
M	Jan 24	Dentition	Ch. 8; Ch. 19 (364-369)
W	Jan 26	Dentition (cont.)	Ch. 8; Ch. 17 (328-331)
<b>F</b>	<b>Jan 28</b>	<b>QUIZ #2</b>	
M	Jan 31	Skull – Nonmetric assessment of sex /ancestry	Ch. 19 (359-364, 369-371, 385-391, 400-404)
W	Feb 2	Skull – Metrics and age assessment	Ch. 19 (359-364, 369-371, 385-391, 400-404)
<b>F</b>	<b>Feb 4</b>	<b>QUIZ #3</b>	
M	Feb 7	Vertebral column	Ch. 9; Ch. 14 (241-245)
W	Feb 9	Vertebral column (cont.)	Ch. 9; Ch. 14 (241-245)
<b>F</b>	<b>Feb 11</b>	<b>QUIZ #4</b>	
M	Feb 14	Ribs and sternum	Ch. 10
W	Feb 16	Clavicle and scapula	Ch. 11
<b>F</b>	<b>Feb 18</b>	<b>QUIZ #5</b>	
M	Feb 21	Upper limb – humerus, radius, ulna	Ch. 12
W	Feb 23	<i>Open lab</i>	
F	Feb 25	<i>Open lab</i>	
M	Feb 28	Hand – carpals, metacarpals, phalanges	Ch. 13
W	Mar 2	Hand – carpals, metacarpals, phalanges (cont.)	Ch. 13
<b>F</b>	<b>Mar 4</b>	<b>QUIZ #6</b>	

<b>M</b>	<b>Mar 7</b>	<b>NO CLASS – SPRING BREAK!</b>	
<b>W</b>	<b>Mar 9</b>	<b>NO CLASS – SPRING BREAK!</b>	
<b>F</b>	<b>Mar 11</b>	<b>NO CLASS – SPRING BREAK!</b>	
M	Mar 14	Os Coxae	Ch. 14 (246-253); Ch. 19 (374-383, 387-398)
W	Mar 16	Os Coxae (cont.)	Ch. 14 (246-253); Ch. 19 (374-383, 387-398)
<b>F</b>	<b>Mar 18</b>	<b>QUIZ #7</b>	
M	Mar 21	Lower limb – femur, tibia, fibula, patella	Ch. 15
W	Mar 23	Lower limb – femur, tibia, fibula, patella (cont.)	Ch. 15
<b>F</b>	<b>Mar 25</b>	<b>QUIZ #8; TAKE HOME EXAM POSTED</b>	
M	Mar 28	Foot – tarsals, metatarsals, phalanges	Ch. 16
W	Mar 30	Foot – tarsals, metatarsals, phalanges (cont.)	Ch. 16
<b>F</b>	<b>Apr 1</b>	<b>QUIZ #9</b>	
M	Apr 4	Estimation of stature	Ch. 19 (398-400)
W	Apr 6	Pathology	Ch. 17
<b>F</b>	<b>Apr 8</b>	<b>QUIZ #10</b>	
M	Apr 11	Trauma	Ch. 17
W	Apr 13	Taphonomy	Ch. 5
F	Apr 15	<i>Open lab</i>	
<b>M</b>	<b>Apr 18</b>	<b>TAKE HOME EXAM DUE</b>	
<b>W</b>	<b>Apr 20</b>	<b>CUMULATIVE FINAL PRACTICAL</b>	