

# ANT4525/ANG5525 - Human Osteology

**Classroom Location:** Turlington Hall, 1208J (Osteology Laboratory)

**Class Meeting Time:** Tuesday, Period 6-7 (12:50-2:45)

Thursday, Period 7 (1:55-2:45)

**Instructor:** Dr. Valerie Burke DeLeon

**Email:** vdeleon@ufl.edu

**Lab Office Hours:** TBD (held in Osteology Lab) and by appointment

**Office Location:** Turlington B374

**TA:** Samantha McCrane

**Email:** stickey@ufl.edu

**Lab Office Hours:** TBD (held in Osteology Lab)

## Course Description:

This course introduces the concepts and methods used in the analysis of human skeletal remains from forensic and archaeological contexts. The skills learned and practiced in this course provide a strong foundation for more advanced studies in comparative anatomy, bioarchaeology, forensic anthropology, paleoanthropology, and paleopathology. This course includes lectures, online resources, class workshops, and significant independent laboratory study time.

## Student Learning Objectives:

Upon successful completion of this course, students will be able to:

- 1) identify whole and fragmentary human skeletal elements;
- 2) distinguish between human and non-human bone;
- 3) estimate age, sex, ancestry, and stature of an individual;
- 4) estimate MNI (minimum number of individuals);
- 5) discuss and evaluate osteological applications in fields such as comparative anatomy, bioarchaeology, forensic anthropology, paleoanthropology, and paleopathology.

**Success in this course usually requires at least 10 hours per week of independent study time in the laboratory in preparation for the quizzes. Performance on the lab practical quizzes and final exam is directly related to the amount and quality of your independent study. YOU SHOULD DROP THIS CLASS IF YOU CANNOT COMMIT THIS TIME!**

## Texts:

### Required:

White TD, Folkens PA (2005) *The Human Bone Manual*. Academic Press.

### Recommended:

White TD, Black MT, Folkens PA (2011) *Human Osteology*, 3<sup>rd</sup> ed. Academic Press.  
(This is a recommended but more expensive *alternative* to *The Human Bone Manual*.)

Bass WM (1995 or 2005) *Human Osteology: A Laboratory and Field Manual*. Missouri Archaeological Society.

Buikstra JE, and Ubelaker D (1994) *Standards for the Data Collection from Human Skeletal Remains*. Fayetteville, AR: Arkansas Archeological Survey.

Additional materials will be posted online (Canvas). The course website contains all pertinent information for the course, including the syllabus, handouts, and grades.

### **Course Requirements:**

- 1) Twelve (12) cumulative practical quizzes (100 points each; lowest grade is dropped, totaling 1100 points)
- 2) One (1) cumulative final practical exam (200 points; The grade for the final practical exam **cannot** be dropped.)
- 3) Eight (8) Lab Workshops (25 points each, totaling 200 points)
- 4) Seven (7) Online Quizzes (50 points each, totaling 350 points)
- 5) Osteology Notebook (100 points; due Nov 20; guidelines below)
- 6) Application Article Presentation (50 points; Nov 20-29; guidelines below)

### **Practical Quizzes and Final Exam**

Quizzes and exams will involve the identification of fragmentary skeletal remains and anatomical features as well as short-answer questions. The format for quizzes and the final exam will be discussed the first day of class. Quizzes may not be retaken, but the **lowest quiz score will be dropped at the end of the term**. The grade for the final practical exam **cannot** be dropped.

### **Lab Workshops**

Students will complete lab workshops on craniometrics, dental analyses, sex, age, ancestry, and stature estimations, and MNI estimation. During class time, the instructor will demonstrate proper techniques. Students will complete a series of measurement and/or non-metric assessment stations in the osteology lab outside of class time. The majority of stations will be devoted to the above-mentioned osteological analyses; however, certain stations will cover musculature and observation of bony muscle attachment sites so that students develop a soft tissue context for human bones. Workshop due dates are listed in the schedule below. Please note that while students may work together, each student must complete each station's activities and submit their own answer sheet for each workshop.

### **Online Quizzes**

In preparation for upcoming lectures, students should review the assigned readings for the following week and the study material presented in Canvas. Competency will be demonstrated through seven Online Quizzes available in Canvas. The quizzes will be due on the dates listed in schedule below, and the purpose is to ensure that you are prepared to discuss the material in upcoming classes. Quizzes should be completed without referencing any study materials, unless otherwise directed.

## **Osteology Notebook Guidelines**

Each student in this course is responsible for compiling a notebook of their own labeled drawings of skeletal elements and notes. Required notebook items are listed below and will be discussed in class.

- 1) Drawings
  - a. Complete articulated human skeleton (Anterior View)
  - b. Two (2) views of each bone (and tooth) with landmarks and features labeled
  - c. Five (5) skull views (Anterior, Posterior, Lateral, Inferior, and Endocranial Views) with landmarks and features labeled
  - d. Anterior view of orbit with bones labeled
  - e. Drawings or schematics showing hand and foot articulations with bones labeled
- 2) Lists, flow charts, tables, and/or annotated drawings that record your process for identifying human skeletal fragments
- 3) Lab Quizzes (12); for each incorrect answer, provide an annotation highlighting the reasoning process for correct identification.
- 4) Lab Workshops (8); for each incorrect answer, provide an annotation highlighting the reasoning process.
- 5) Class notes

## **Application Article Presentation Guidelines**

Each student in this course is responsible for selecting an article (problem-oriented study as opposed to a review article) that highlights human osteological applications from a peer reviewed journal such as *American Journal of Physical Anthropology*, *International Journal of Osteoarchaeology*, *Journal of Forensic Sciences*, etc. You will create a PowerPoint to present in class that highlights the following aspects of the study:

- 1) Bony element(s) analyzed (include a figure depicting the element(s), features, and landmarks)
- 2) Materials
- 3) Methods
- 4) Results
- 5) Importance/broader impacts
- 6) Article Citation

Each student will create 3 discussion questions to pose to the class regarding their article. Students must email their selected article to the instructor for approval by the deadline listed in the schedule below (Oct 16). The instructor is available to discuss article selections and presentations over email or by appointment. Time allotments for presentations will be discussed in class.

## **Grading:**

The following points are possible (2000 total):

- |      |   |
|------|---|
| 1100 | lab practical quizzes (lowest of 12 scores dropped) |
| 200  | lab practical final                                 |
| 350  | online quizzes                                      |
| 200  | workshops   |
| 100  | notebook  |
| 50   | article presentation                                |

Points earned will be divided by the total points possible, and final grades will be distributed according to the following scale:

A	≥ 92.50%	C	72.50% - 76.49%
A-	89.50% - 92.49%	C-	69.50% - 72.49%
B+	86.50% - 89.49%	D+	66.50% - 69.49%
B	82.50% - 86.49%	D	62.50% - 66.49%
B-	79.50% - 82.49%	D-	59.50% - 62.49%
C+	76.50% - 79.49%	E	≤ 59.49%

### Other Policies:

**Cell phones, iPods, and all other mobile device must be silenced during class.** The use of recording devices is prohibited except with prior Instructor permission.

Students are expected to attend all lectures with assigned readings completed. **No lecture notes or PowerPoint slides will be distributed, under any circumstance.** If a student is unable to attend class, it is **the student's responsibility** to get the notes from a classmate.

Plagiarism or cheating in any form is subject to university policy as outlined by the Dean of Students (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>).

Students requesting classroom accommodation must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. This documentation must be presented to the instructor by the end of the second week of classes, in order for accommodations to be made within a timely manner.

Quizzes and exams missed due to a documented illness or emergency may be rescheduled; however, **48 hours prior notice** should be given to the Instructor, and documentation must be supplied. In the case of unexpected emergencies, the Instructor must be notified in advance, or as soon as possible thereafter, and the student should provide documentation immediately following the absence.

**The following rules constitute a contract between student and Instructor. Your signature below represents your commitment to upholding this contract, and your understanding that failure to do so will lead to point loss and/or dismissal from the course.**

**Please print, read and sign this page. Turn it in to the Instructor by the date noted on the schedule. Failure to turn in a signed form will result in loss of Osteology Lab privileges.**

**Rules for the Osteology Laboratory (Turlington Hall 1208J):**

- Students must sign in and out of the lab on every visit outside of scheduled class time.
- The room is to remain secure at all times. Access is controlled by a keypad entry lock; students in this course will be granted access (first 6 digits of UF ID, then press the star key). Lock the room if you are the last to leave – even if you only leave briefly. **If the room is found unlocked, the last group listed on the sign in sheet will be penalized.**
- Visitors are not allowed in the lab at any time. **NO EXCEPTIONS!**
- No specimens are to leave 1208J Turlington Hall (Osteology Laboratory).
- Food and drink are prohibited in the laboratory.
- Photography of course materials or skeletal remains is strictly prohibited.
- The teaching laboratory is not a social center. Be respectful of other students' study time.
- Be respectful of all Anthropology Department staff and other Turlington Hall staff.
- Osteology students are restricted to specimens in the plastic boxes on the back wall of the teaching laboratory, and to additional materials only as provided by the Instructor.
- Above all, please remember that all skeletal remains, laboratory equipment, and other teaching materials are to be treated with the utmost respect.

***Transgression of these rules will lead to point loss and/or dismissal from the class.***

**I \_\_\_\_\_ (print name) certify that I have read the above rules and understand that failure to comply will lead to point loss and/or dismissal from the course.**

**Signed: \_\_\_\_\_ UFID: \_\_\_\_\_**

**Date: \_\_\_\_\_**

<b>Month</b>	<b>Date</b>	<b>Day</b>	<b>Topic</b>	<b>Required Reading (White &amp; Folkens 2005)</b>
Aug	23	Th	Course outline and expectations; Anatomical terms; Bone biology and joints; <b>Drop/Add</b>	Ch. 1, 3, 4, 6 (skim)
Aug	27	M	<b>Online Quiz #1 DUE</b>	<b>See Canvas</b>
Aug	28	T	Bones of the skull	<b>Signed Form Due</b> Ch. 7; Ch. 9 (155-156)
Aug	30	Th	Bones of the skull (cont'd)	Ch. 7; Ch. 9 (155-156)
Sep	3	M	<b>Online Quiz #2 DUE</b>	<b>See Canvas</b>
Sep	4	T	<b>QUIZ #1</b> Skull: foramina and nerves	Ch. 7
Sep	6	Th	Bone development; Craniometrics	review Ch. 4 Online handouts
Sep	11	T	<b>QUIZ #2</b> Dentition	Ch. 8
Sep	13	Th	Human vs. Non-human remains Workshop 1 available (due 9/19)	Online handouts
Sep	17	M	<b>Online Quiz #3 DUE</b>	<b>See Canvas</b>
Sep	18	T	<b>QUIZ #3</b> Vertebral Column	Ch. 9; Ch. 14 (241-245)
Sep	20	Th	Ribs and sternum Workshop 2 available (due 9/26)	Ch. 10
Sep	24	M	<b>Online Quiz #4 DUE</b>	<b>See Canvas</b>
Sep	25	T	<b>QUIZ #4</b> Shoulder Girdle: Clavicle and Scapula	Ch. 11
Sep	27	Th	Upper Limb: Humerus, Radius, Ulna Workshop 3 available (due 10/3)	Ch.12; Online handouts
Oct	1	M	<b>Online Quiz #5 DUE</b>	<b>See Canvas</b>
Oct	2	T	<b>QUIZ #5</b> Upper Limb: Humerus, Radius, Ulna (cont'd)	Ch.12; Online handouts
Oct	4	Th	Hand: Carpals, Metacarpals, Phalanges	Ch. 13
Oct	8	M	<b>Online Quiz #6 DUE</b>	<b>See Canvas</b>
Oct	9	T	<b>QUIZ #6</b> Os coxae	Ch. 14
Oct	11	Th	Os coxae (cont'd) Workshop 4 available (due 10/16)	Ch. 14

Oct	15	M	<b>Online Quiz #7 DUE</b>	<b>See Canvas</b>
Oct	16	T	<b>QUIZ #7</b> Lower Limb: Femur, Tibia, Fibula, Patella	<b>Application Article Selection Due</b> Ch. 15; Online handouts
Oct	18	Th	Lower Limb: Femur, Tibia, Fibula, Patella (cont'd); Workshop 5 available (due 10/24)	Ch. 15; Online handouts
Oct	22	M	<b>Online Quiz #8 DUE</b>	<b>See Canvas</b>
Oct	23	T	<b>QUIZ #8</b> Foot: Tarsals, Metatarsals, Phalanges	Ch. 16
Oct	25	Th	Foot: Tarsals, Metatarsals, Phalanges (cont'd)	Ch. 16
Oct	30	T	<b>QUIZ #9</b> Biological Profile: Sex	Ch. 19; Online handouts
Nov	1	Th	Biological Profile: Age Workshop 6 available (due 11/7)	Ch. 19; Online handouts
Nov	6	T	<b>QUIZ #10</b> Biological Profile: Ancestry and Stature	Ch. 19; Online handouts
Nov	8	Th	Biological Profile: Ancestry and Stature (cont'd) Workshop 7 available (due 11/14)	Ch. 19; Online handouts
Nov	13	T	<b>QUIZ #11</b> Trauma, Pathology, and Taphonomy	Ch. 5, 17
Nov	15	Th	MNI and commingling Workshop 8 available (due 11/26)	Ch. 2, 18
Nov	20	T	<b>QUIZ #12</b> <b>Application Article Presentations (5)</b>	<b>Osteo Notebook Due</b> Articles on Canvas
Nov	22	Th	<b>Thanksgiving (NO CLASS)</b>	
Nov	27	T	<b>Application Article Presentations (7)</b>	Articles on Canvas
Nov	29	Th	<b>Application Article Presentations (4)</b>	Articles on Canvas
Dec	4	T	Review	
Dec	12	W	<b>Cumulative Final Practical Examination</b>	<b>5:30-7:30pm</b> <b>in Osteology Lab</b>