

Anthropology 209: Forensic Anthropology

Fall 2008

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Course Description:

This course will simultaneously address two goals: developing a detailed understanding of human skeletal anatomy and providing a basic overview of the theory and practice of forensic anthropology. The first half of the semester will have a heavy emphasis on understanding and analyzing biological variation through human skeletal remains. This will include the estimation of age, sex, stature and ancestry which form the basis of forensic identification of remains. The second half of the course will have a greater emphasis on the criminal and legal aspects of forensics. Weekly quizzes will be administered to assure proficiency in identifying human skeletal remains. Take home mid-term and final examinations will be administered focusing more on the forensic content of the course. Additionally, a critical literature review paper on a specific topic of the student's choice must be completed by the end of the semester.

Texts:

- Forensic Anthropology, 2008
Debra A. Kumar & Jane E. Buikstra, Oxford University Press
- The Human Bone Manual, (2005)
Tim D. White & Peter A. Folkens, Academic Press
- Primary literature (pdfs available via FirstClass)

Grading:

- 25% Weekly Quizzes (10), emphasis on Osteology
 - No quizzes Weeks 1, 7, 13 or 15. Lowest quiz score dropped.
- 25% Mid-term exam
 - Handed out Thursday, October 16, due Monday, October 20
- 25% Final exam **OR** Final Paper – critical literature review on specific topic
 - Must choose which option by November 7
- 15% Course assignments (5)
 - short, osteology focused practical assignments
- 10% Participation (in class and on First Class)

Course Goals:

- Thoroughly learn the details of human skeletal anatomy, including hands on analysis of skeletal material

Course Goals: (continued)

- Develop an understanding of how the practice of forensic anthropology is conducted, from identification and analysis of remains, through potential criminal and academic implications of the findings
- An appreciation of the ethical issues surrounding research with human remains

First Class:

The First Class site for this course will serve as the primary means of out-of-class communication as well as a storage location for course resources. An introduction to the site and its resources can be found on the main page of the conference.

Concerns:

If you have any concerns regarding your ability to complete the assignments of the course or trouble understanding specific concepts, I am always available for consultation. In addition to my office hours I can be reached with regularity via e-mail (please only call my cell phone in case of emergency). Assistance is also available for students through the PForzheimer Learning and Teaching Center. All work in this class is subject to the Wellesley Honor Code. While students are encouraged to discuss the course materials and assignments both in and out of class, all of your work must reflect your own independent efforts. All assignments must be turned in on time. Unless approval is granted from Prof. Van Arsdale, no late assignments will be accepted. No extra credit will be available for this course.

SYLLABUS (subject to change)***Week 1: Introduction/What is Forensic Anthropology?***

Thursday, September 4 – First day of class

Readings:

- Ch. 1 K&B (1-22)
- Ch. 1 W&F (1-6)
- Walker (2000), "Bioarchaeological ethics". From Biological Anthropology of the Human Skeleton, Wiley Liss 3-39.

Week 2 (Sept. 8-12): Bones and Biological Variation

Lab session, Introduction to the bones (Thursday Sept. 11, SC314)

Readings:

- Ch. 5 K&B (115-153)
- Ch. 4 W&F (31-48)

Bones: Anatomical Terminology/ Cranium

General bone terminology, Frontal, Parietals (Ch. 6, Ch. 7.1-7.6)

****First Osteology quiz, to be completed online by Friday 5pm****

Week 3 (Sept. 15-19): Estimating Age

Readings:

- Ch. 19.1-19.3 W&F (359-385)
- Lovejoy et al. (1985), "Multifactorial determination of skeletal age at death". *American Journal of Physical Anthropology* 68:1-14

Bones: Cranium

Temporals, Occipital, Sphenoid, Auditory Ossicles (7.8-7.10, 7.19)

****Osteology quiz, to be completed online by Friday 5pm****

Week 4 (Sept. 22-26): Estimating Sex and Stature

Lab Session, Sexing skeletal remains (Thursday Sept. 25, SC314)

Readings:

- Ch. 19.4-19.5 W&F (385-400)
- Trotter & Gleser (1952), "Estimation of stature from long bones of American whites and negroes". *American Journal of Physical Anthropology* 10:463-514.
- Phenice (1969), "A newly developed visual method of sexing the Os Pubis". *American Journal of Physical Anthropology* 30:297-302.

Bones: Cranium

Maxillae, Palatines, Lacrimals, Nasals, Ethmoid, Vomer, Nasal Conchae (Ch. 7.11-7.18)

****Osteology quiz, to be completed online by Friday 5pm****

Week 5 (Sept. 29-Oct. 3): Pathology and Trauma

Readings:

- Ch. 6 K&B (154-188)
- Ch. 17 W&F (309-332)

Bones: Mandible, cranium review

Mandible (Ch. 7.20)

****Osteology quiz, to be completed online by Friday 5pm****

Week 6 (Oct. 6-10): Taphonomy

Lab session, bones of the skull and teeth (Thursday Oct. 9, SC314)

Readings:

- Ch. 7 K&B (189-207)
- Ch. 2 W&F (7-20)

Bones: Teeth

Incisors, Canines, Premolars (Ch. 8)

Molars, Deciduous teeth (Ch. 8)

****Osteology quiz, to be completed online by Friday 5pm****

Week 7 (Oct. 13-17): Osteology Review

Monday October 13 (NO CLASS – FALL BREAK)

****MID-TERM passed out Thursday, due Monday Oct. 20 (in class)**

Week 8 (Oct. 20-24): Personal Identification, Part I

Lab session, bones of the upper body (Thursday Oct. 23, SC314)

Readings:

- Ch. 8 K&B (208-238)
- Ch. 19.6-19.9 W&F (400-411)

Bones: Upper Postcranial Skeleton

Hyoid, Vertebrae, Sternum, Ribs (Ch. 9-10)

****Osteology quiz, to be completed online by Friday 5pm****

Week 9 (Oct. 27-31): Personal Identification, Part II

Readings:

- Sun et al. (2003) "Global genetic variation at nine short tandem repeat loci and implications on forensic genetics". *European Journal of Human Genetics* 11:39-49.
- Shriver & Kittles (2004) "Genetic ancestry and the search for personalized genetic histories". *Nature Reviews Genetics* 5:610-617.

Bones: Upper Postcranial Skeleton

Clavicle, Scapula, Humerus, Radius, Ulna (Ch. 11-12)

****Osteology quiz, to be completed online by Friday 5pm****

Week 10 (Nov. 3-7): The Medico-Legal System

Readings:

- Ch. 2 K&B (23-43)
- Ch. 3 W&F (21-30)

Bones: Pelvis

Sacrum, Coccyx, Os Coxae (Ch. 14)

****Osteology quiz, to be completed online by Friday 5pm****

****Final decision on Final Paper/Final Exam must be made by Friday, 11/7****

Week 11 (Nov. 10-14): Evidence & The Judicial System

Readings:

- Ch. 3 K&B (44-64)

Bones: Lower Limb

Femora, Patellae, Tibiae, Fibulae (Ch. 15)

****Osteology quiz, to be completed online by Friday 5pm****

Week 12 (Nov. 17-21): Crime Scene Investigation, part I

Lab session, Sexing and assessing age with the pelvis (Thursday Nov. 20, SC314)

Readings:

- Ch. 4 K&B (65-99)

Bones: Hands

Carpals, Metacarpals, Phalanges (Ch. 13)
Osteology quiz, to be completed online by Friday 5pm
Week 13 (Nov. 24-28): Crime Scene Investigation, part II
Thursday, November 27 (NO CLASS – THANKSGIVING)

Readings:

- Ch. 4 K&B (99-114)

Bones: Feet

Tarsals, Metatarsals, Phalanges (Ch. 16)

Week 14 (Dec. 1-5): Mass Death and Human Rights

Lab session, Bones of the lower body (Thursday, Dec. 4, SC 314)

Readings:

- Ch. 9 K&B (239-257)
- Juhl & Olsen (2006), "Societal safety, archaeology and the investigation of contemporary mass graves". *Journal of Genocidal Research* 8:411-435.

Final Osteology quiz, to be completed online by Friday 5pm

Week 15: Developing Biohistories

Monday, December 8 (FINAL CLASS)

Readings:

- Ch. 10 K&B (258-281)
- Ch. 19.10-19.11 W&F (411-418)