Anthropology 209: Forensic Anthropology  

course:  Fall 2010

Instructor: Adam Van Arsdale  
Office Hours: Tuesday: 4-5,  
Friday: 10-11, and by appointment
Lecture: PNE 239, Tu/Fr 11:10-12:20  
Lab: SC 314, W 9:00-11:00 (1 hour)  
Office: PNE 348  
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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. The course will include a regular weekly lab session  
in order to provide a hands-on opportunity to learn, study and analyze human skeletal  
material. Weekly online quizzes will be administered to assure proficiency in identifying  
human skeletal remains. Two of these quizzes will take the form of an in-lab practical quiz,  
the first one focusing on the head and dentition, the second one focusing on the post-cranial  
skeleton. A mid-term exam will be administered in class focusing more on the forensic  
content of the course. Students have an option of completing a take-home final exam or a  
critical literature review paper on a specific topic of the student’s choice in consultation with  
Prof. Van Arsdale (choice of paper vs. final exam must be made by Nov. 12th).

Texts:

- Forensic Anthropology, (2008)  
  Debra A. Kumar & Jane E. Buikstra, Oxford University Press  
  Tim D. White & Peter A. Folkens, Academic Press  
- To Know Where He Lies, (2008)  
  Sarah E. Wagner, University of California Press  
- Primary literature (.PDFs available via Sakai)

Course Goals:

- Thoroughly learn the details of human skeletal anatomy, including hands on  
analysis of skeletal material  
- 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  
- Appreciate the complex ethical issues surrounding research with human remains  
- Recognize the placement of forensic anthropology within the broader field of  
anthropology
Grading:

• 20% Weekly Quizzes (10)
  - No quizzes weeks 1, 7, 8, 14
• 10% Practical quizzes (2), in lab (10/20 and 12/8)
• 20% Mid-term exam, in class (10/22)
• 20% Final exam OR Final Paper (critical literature review topic)
  - Must choose which option by 11/12, due 12/19 5pm
• 20% Lab/course assignments (6)
  - short, osteology focused practical assignments
• 10% Participation (in class, lab, and on Sakai)

Sakai:

The course will utilize the new Sakai platform for facilitating the distribution of class resources and discussion outside of the classroom (https://sakai.wellesley.edu/portal/). The site will provide access to readings, lectures, course assignments and additional class discussion. Questions regarding the site can be directed to Prof. Van Arsdale or IS staff.

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. Much of the material for this class is cumulative in nature – please contact me early if you feel yourself falling behind!

SYLLABUS (subject to change)

Week 1: (Sept. 6-10) Introduction/What is Forensic Anthropology?
  Tuesday, September 7 – First day of class, Introduction to Forensic Anthropology
  Friday, September 10 – Ethics of working with human skeletal material

Readings:
• Ch. 1 K&B (1-22)
• Ch. 1 W&F (1-6)
• Introduction, Wagner (1-20)

Week 2: (Sept. 13-17): Bones and Biological Variation
  Tuesday, September 14 – Bone biology
  Wednesday, September 15 – First Lab Session, Introduction to bones, bones of the skull
  Friday, September 17 – Film, Anastasia: Dead or Alive? (in class)
**Week 2 (continued)**

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 (skeletal terminology), to be completed online by Friday 5pm**
**Measurement assignment, due Friday 9/24**

**Week 3 (Sept. 20-24): Estimating Age**

Tuesday, September 21 – Statistics and biological variation

Wednesday, September 22 – Bones of the skull, part 2

Friday, September 24 – Developing a forensic profile, part I: estimating age

Readings:
- Ch. 19.1-19.3 W&F (359-385)

Bones: Cranium

*Temporalis, Occipital, Sphenoid, Auditory Ossicles (7.8-7.10, 7.19)*

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

**Week 4 (Sept. 27-Oct. 1): Estimating Sex and Stature**

Tuesday, September 28 – Developing a forensic profile, part II: estimating sex and stature

Wednesday, September 29 – Lab Session, Estimations of sex and age from cranial remains

Friday, October 1 – Case studies, group investigations

Readings:
- Ch. 19.4-19.5 W&F (385-400)

Bones: Cranium

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

**Osteology quiz, to be completed online by Friday 5pm**
**Age and sex lab assignment, due Tuesday 10/5**

**Week 5 (Oct. 4-8): Pathology and Trauma**

Tuesday, October 5 – Developing a forensic profile, part III: pathology and trauma

Wednesday, October 6 – Lab Session, crime scene investigation* (meet by boathouse)

Friday, October 8 – Trauma, physics, and the body

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. 11-15): Taphonomy & Crime Scene Investigation (part I)
Tuesday, October 12 – NO CLASS, Monday schedule (Fall Break)
Wednesday, October 13 – Lab session, dental anthropology
Friday, October 15 – Taphonomy

Readings:
• Ch. 7 K&B (189-207), Ch. 4 K&B (90-107)
• 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**
**Crime scene report, due Tuesday 10/19**

Week 7 (Oct. 18-22): Developing a profile, review
Tuesday, October 19 – Osteology and Forensic Profile Review w/case studies
Wednesday, October 20 – Lab Practical #1 (skull + teeth)
Friday, October 22 – Mid-term, in class

No Readings
No Quiz

Week 8 (Oct. 25-29): Personal Identification, Part I
Tuesday, October 26 – Developing a forensic match, part I
Wednesday, October 27 – Tanner Conference, NO LAB
Friday, October 29 – The ethics and usage of identity (debate)

Readings:
• Ch. 8 K&B (208-238)
• Ch. 19.6-19.9 W&F (400-411)
• Ch. 1 Wagner (21-57)

Bones: Upper Postcranial Skeleton
  Hyoid, Vertebrae, Sternum, Ribs (Ch. 9-10)

Week 9 (Nov. 1-5): Personal Identification, Part II
Tuesday, November 2 – Developing a forensic match, part II
Wednesday, November 3 – Bones of the thorax
Friday, November 5 – What does race mean in forensics?

Readings:
• Ch. 2-3 Wagner (58-122)

Bones: Upper Postcranial Skeleton
  Clavicle, Scapula, Humerus, Radius, Ulna (Ch. 11-12)

**Osteology quiz, to be completed online by Friday 5pm**
**Axial skeleton lab assignment, due Tuesday 11/9**
**Week 10 (Nov. 8-12): The Medico-Legal System**
Tuesday, November 9 – Introduction to the medico-legal system
*Wednesday, November 10 – Bones of the upper limb*
Friday, November 12 – Interaction between scientific and legal spheres

Readings:
- Ch. 2 K&B (23-43)
- Ch. 3 W&F (21-30)
- Ch. 4-5, Wagner (123-184)

Bones: Pelvis
*Sacrum, Coccyx, Os Coxa (Ch. 14)*

**Osteology quiz, to be completed online by Friday 5pm**
**Final decision on Final Paper/Final Exam must be made by Friday, 11/12**

**Week 11 (Nov. 15-19): Evidence & The Judicial System**
Tuesday, November 16 – Developing a forensic match, part I
*Wednesday, November 17 – Sexing and aging the pelvis*
Friday, November 19 – The "expert" witness

Readings:
- Ch. 3 K&B (44-64)
- Ch. 6 Wagner (185-212)

Bones: Lower Limb
*Femora, Patellae, Tibiae, Fibulae (Ch. 15)*

**Osteology quiz, to be completed online by Friday 5pm**
**Pelvis age and sex assignment, turned in (hard-copy) by Friday 5pm**

**Week 12 (Nov. 22-26): Crime Scene Investigation (part II)**
Tuesday, November 23 – Developing a forensic match, part II
*Wednesday, November 24 – Lab makeup session (contact Prof. Van Arsdale)*
Friday, November 26 – NO CLASS, THANKSGIVING HOLIDAY

Readings:
- Ch. 4 K&B (65-114)
- Ch. 7 Wagner (213-244)

Bones: Hands
*Carpals, Metacarpals, Phalanges (Ch. 13)*

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

**Week 13 (Nov. 29-Dec. 3): Mass Death and Human Rights**
Tuesday, November 29 – Developing a forensic match, part I
*Wednesday, December 30 – Bones of the lower limb*
Friday, December 2 – Discussion of Discovering Dominga (in library, on reserve), genocide

Readings:
- Ch. 9 K&B (239-257)
Week 13 (continued)

- Ch. 8 + Epilogue Wagner (245-270)

Bones: Feet

*Tarsals, Metatarsals, Phalanges (Ch. 16)*

**Osteology quiz, to be completed online by Friday 5pm**
**Upper and lower limb assignment, due Tuesday 12/7**

Week 14 (Dec. 6-10): Biohistories

Tuesday, December 7 – Biohistorical reconstruction

*Wednesday, December 8 – Lab Practical #2*

Friday, December 10 – Public forensics, final class

Readings:

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

**Final Exam or Final Paper, due by 12/19, 5pm**