Course Description: This course is a general introduction to a range of osteological topics including basic anatomy, mechanical properties of bone, histology, functional and comparative anatomy (including musculature), evolution of bipedalism, growth and development, age and sex determination, paleodemography, paleopathology, dietary reconstruction, assessment of biological relatedness, and forensic techniques. The course will be divided between lectures on the preceding topics and hands-on learning of skeletal anatomy using real specimens and casts from the Archaeology and Anthropology Collections.

Required readings:


Additional required readings listed on the syllabus are available as .pdf files on Moodle (full bibliography at the end of the syllabus).

Supplemental materials (refer to relevant anatomical sections):


- You might also find these websites useful for general reference (additional websites are listed in the back of *Human Osteology*):

  http://www.innerbody.com/htm/body.html
  http://ect.downstate.edu/courseware/haonline/index.htm

- PowerPoint presentations used in class will be available on Moodle.

Examinations and Assignments: The body is divided into four main regions: axial skeleton, upper limb, and lower limb, and skull. A practical examination will cover the anatomy of each region, for a total of four in-class exams (80% of grade). The final exam will be in short answer and essay format and will cover the readings from the entire semester (20% of grade). Lab exercises will not be graded, but are required.

Class Locations: On Wednesdays and Fridays, class meets in SCIE109, unless noted. On most Tuesdays and for exams and labs class meets in SCIE351. (Note exceptions Jan. 28th & May 2nd)
Course Outline

Jan.  24 F  Introduction; Ethics; Anatomical Terminology
       Readings:  Human Osteology: Chapters 2, 17 (particularly 17.2)

28 T  (Class meets in SCIE113) Biomechanics of Movement; Joints; Breathing
       Readings:  Standring, Gray’s Anatomy: “Anatomy of Breathing”
               Standring, Gray’s Anatomy: “Biomechanics”
               Standring, Gray’s Anatomy: “Joints”

29 W  The Postcranial Axial Skeleton: Hyoid, Vertebrae, Sacrum, Sternum, Ribs
       Readings:  Human Osteology: Chapters 6-7, pages 219-226

31 F  The Postcranial Axial Skeleton: Hyoid, Vertebrae, Sacrum, Sternum, Ribs
       Readings:  Human Osteology: Chapters 6-7, pages 219-226

Feb.  4 T  Lab (351): Axial Skeleton

5 W   EXAM (351): Axial Skeleton: Hyoid, Vertebrae, Sacrum, Sternum, Ribs

7 F   The Upper Limb: Shoulder Girdle, Arm, Hand
       Readings:  Human Osteology: Chapters 8-10, pages 300-307

11 T  Lab (351): Upper Limb

12 W  The Upper Limb: Shoulder Girdle, Arm, Hand
       Readings:  Human Osteology: Chapters 8-10, pages 300-307

14 F  The Upper Limb: Shoulder Girdle, Arm, Hand
       Readings:  Human Osteology: Chapters 8-10, pages 300-307

18 T  Lab (351): Upper Limb

19 W  EXAM (351): The Upper Limb: Shoulder Girdle, Arm, Hand

21 F  The Lower Limb: Pelvis, Leg, Foot
       Readings:  Human Osteology: Chapters 11-13, pages 308-315

25 T  Lab (351): Lower Limb

26 W  The Lower Limb: Pelvis, Leg, Foot
       Readings:  Human Osteology: Chapters 11-13, pages 308-315

28 F  The Lower Limb: Pelvis, Leg, Foot
       Readings:  Human Osteology: Chapters 11-13, pages 308-315
Mar.  4 T  Lab (351): Lower Limb

5 W  EXAM (351): The Lower Limb: Pelvis, Leg, Foot

7 F  Manipulation; Walking
Readings:  Shipman et al., *The Human Skeleton*: “Manipulation”
           Shipman et al., *The Human Skeleton*: “Walking”

**Spring Break**

Mar.  25 T  Lab (351): Teeth
Readings:  *Human Osteology*: Chapter 5, Appendix 2

26 W  The Skull: Cranium and Mandible
Readings:  *Human Osteology*: Chapter 4, pages 298-299

28 F  The Skull: Cranium and Mandible
Readings:  *Human Osteology*: Chapter 4, pages 298-299

Apr.  1 T  Lab (351): The Skull

2 W  The Skull: Cranium and Mandible
Readings:  *Human Osteology*: Chapter 4, pages 298-299

4 F  The Skull: Cranium and Mandible; Chewing
Readings:  *Human Osteology*: Chapter 4, pages 298-299
           Shipman et al., *The Human Skeleton*: “Chewing”

8 T  Lab (351): The Skull: Cranium and Mandible

9 W  Exam (351): The Skull: Cranium, Mandible, Teeth

11 F  Biology of Bone
Readings:  *Human Osteology*: Chapter 3
           Standring, *Gray’s Anatomy*: “Bone”

15 T  Lab (351): Hominin Evolution
Readings:  *Human Osteology*: Chapters 27-28
           Bramble and Lieberman: “Endurance running and the evolution of Homo”
           Lovejoy: “Evolution of human walking”
           Roach et al.: “Elastic energy storage in the shoulder and the evolution of high-speed throwing in Homo”

16 W  The 4 Ds: Diet, Disease, Distance and Demography
Readings:  *Human Osteology*: Chapters 19, 21
18 F  Ancestry, Sex, and Age-at-Death  
Readings: *Human Osteology*: Chapter 18  
Byers, *Introduction to Forensic Anthropology*: “Attribution of ancestry”

No classes the week of April 20th.

29 T  Lab (351): Ancestry, Sex, and Age-at-Death

30 W  Forensics  
Readings: *Human Osteology*: Chapters 15, 23, 24  

May  2 F  Video: “The Body Farm”

6 T  Lab (351): Forensics

7 W  Archaeology  
Readings: *Human Osteology*: Chapters 20, 25, 26

The final exam is Friday, May 16th, 9:00 a.m.

Disability Resources

Wesleyan University is committed to ensuring that all qualified students with disabilities are afforded an equal opportunity to participate in and benefit from its programs and services. To receive accommodations, a student must have a documented disability as defined by Section 504 of the Rehabilitation Act of 1973 and the ADA Amendments Act of 2008, and provide documentation of the disability. Since accommodations may require early planning and generally are not provided retroactively, please contact Disability Resources as soon as possible.

If you believe that you need accommodations for a disability, please contact Dean Patey in Disability Resources, located in North College, Room 021, or call 860-685-2332 for an appointment to discuss your needs and the process for requesting accommodations.
Bibliography for readings on Moodle:


