Course Description: This course is a detailed study of skeletal anatomy and 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 SCIE113, unless noted. On most Tuesdays and for exams and labs class meets in SCIE351. (Note exceptions on Jan. 27th and Apr. 21st)

**Course Outline**

**Jan. 23 F** Introduction; Ethics; Anatomical Terminology  
Readings: *Human Osteology*: Chapters 2, 17 (particularly 17.2)

**27 T** (Class meets in SCIE113) Biomechanics of Movement; Joints; Breathing  
Readings:  
Standring, “Anatomy of Breathing”  
Standring, “Biomechanics”  
Standring, “Joints”

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

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

**Feb. 3 T** Lab (351): Axial Skeleton

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

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

**10 T** Lab (351): Upper Limb

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

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

**17 T** Lab (351): Upper Limb

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

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

**24 T** Lab (351): Lower Limb

**25 W** The Lower Limb: Pelvis, Leg, Foot  
Readings: *Human Osteology*: Chapters 11-13, pages 308-315
ANTH349 The Human Skeleton

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

Mar.  3 T  Lab (351): Lower Limb

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

6 F   Manipulation; Walking
       Readings:  Shipman et al., “Manipulation”
                Shipman et al., “Walking”

**Spring Break**

Mar.  24 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

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

31 T  Lab (351): The Skull

Apr.  1 W  The Skull: Cranium and Mandible
         Readings:  *Human Osteology*: Chapter 4, pages 298-299

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

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

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

10 F  Biology of Bone
         Readings:  *Human Osteology*: Chapter 3
                Standring, “Bone”

No classes the week of April 12th.
21 T  (Class meets in SCIE113) 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”

22 W  The 4 Ds: Diet, Disease, Distance and Demography
   Readings: Human Osteology: Chapters 19, 21

24 F  Ancestry, Sex, and Age-at-Death
   Readings: Human Osteology: Chapter 18
   Byers, “Attribution of ancestry”

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

29 W  Forensics
   Readings: Human Osteology: Chapters 15, 23, 24
   Smith, et al., “Look until you see: Identification of trauma
   in skeletal material”

May  1 F  Video: “The Body Farm”

5 T  Lab (351): Forensics

6 W  Archaeology
   Readings: Human Osteology: Chapters 20, 25, 26

The final exam is Friday, May 15th, 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:


