

Biology 607 A&B – Human Anatomy Lecture & Laboratory – Spring 2008

Lecture: TTh from 12:00 to 12:50 in 304 Albertson Hall
Lab: MW from 2:30 to 5:20 in 345/347 Albertson Hall
Instructor: S. Christopher Bennett, PhD
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Office Hours: 1:00-2:20 MW and by appointment.

Description: Advanced detailed examination of the structure of the human body. This course meets concurrently with Biol 345&345L.

Lecture Text: *Essential Clinical Anatomy*, 2nd ed., Moore and Agur; supplemented by my *Anatomy Handbook*, available on my website.

Recommended: One of: *Grant's Atlas of Anatomy*, Agur and Lee; *McMinn's Color Atlas of Human Anatomy*, Abrahams, Marks, and Hutchings; *Color Atlas of Anatomy*, Rohen, Yokochi, and Lütjen-Drecoll; *Anatomy: A Regional Atlas of the Human Body*, Clemente; and *Atlas of Human Anatomy*, Netter and Hansen.

Optional: *Essential Anatomy Dissector*, 2nd ed., Hansen.

Objectives: Upon successful completion of the course, you will be able to:

- Describe the structure of the skeletal system including its joints.
- Identify muscles of the skull, trunk, and extremities.
- Describe the structure of the heart and the pattern of blood vessels.
- Describe the pattern of nerves and perform successful brain surgery.
- Describe the structure of the respiratory system.
- Describe the structure of the digestive system.
- Describe the structure of the urinary and reproductive systems.

and will have demonstrated advanced knowledge by writing a term paper.

Grading: Lecture: There will be three exams more or less evenly spaced through the semester plus a fourth exam during final exam week. The fourth exam will not be comprehensive. Each exam is worth 100 points. The term paper is worth 200 points, and your final grade will be total points earned divided by 600.

Laboratory: There will be four practical examinations spaced more or less evenly through the semester, each on covering a major region of the body. Each practical exam is worth 100 points. There may be additional quizzes. Your final grade will be total points earned divided by the sum of 400 + any possible quiz points. The grading scale is: A ≥ 90 > B ≥ 80 > C ≥ 70 > D ≥ 60 > U.

Attendance: Students should attend class and be on time; however, I understand that there may be illnesses or personal emergencies that may prevent you from attending class. In the event that a significant illness or emergency will cause you to miss an exam notify me before the missed exam or you may not be allowed to make up the exam. Make up exams, if allowed, must be taken promptly.

There will be an optional open lab for review in the evening shortly before each lab practical.

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Cheating: Cheating is not allowed. If I find convincing evidence that a student cheated, I will deal with the incident appropriately (i.e., sanctions may include verbal or written warning; lowering of grade for assignment/activity; failure of class assignment; lowering of term grade; and a written report to the Provost). For more info see: <http://web.fhsu.edu/universitycatalog/gen/academichonesty.asp>.

Disabilities: Any student in this class who has a disability that may prevent them from fully demonstrating their abilities should contact me personally as soon as possible so we can discuss accommodations.

Human Anatomy Lab Rules

1. Professional conduct is expected at all times when working in the Anatomy Lab; drinking and eating are not allowed. Treat the cadavers with respect at all times.
2. Gloves (either latex or vinyl) and lab coats, "scrubs", or similar protective clothes must be worn at all times when working with the cadavers. Do not wear sandals or open-toed shoes.
3. Keep the identifying ear and toe tags with the cadaver at all times.
4. Do not turn over the cadavers in the body bags. Doing so damages both the bags and the cadavers. To turn a cadaver, you should open the body bag and carefully manipulate the body. Take special care to move dissected upper extremities so that the brachial plexus and other structures are not damaged.
5. Cadavers and human bones are not allowed outside the laboratory rooms. Removal of any parts of the cadavers from the Anatomy Lab is against the law. Any student caught doing so will be dealt with appropriately.
6. Handle human bones very carefully; they are fragile and irreplaceable. Do not write on bones or models with pens or pencils, and do not touch bones or models with soiled gloves.
7. No unapproved visitors are allowed in the Anatomy Lab at any time.
8. No pictures may be taken of cadavers or anatomical specimens.
9. Clean up—at the end of each lab class:
 - Ensure that the cadavers are thoroughly sprayed with wetting solution and wrapped in moistened towels and plastic sheeting, and that the body bags are completely closed.
 - Ensure that all anatomical waste is placed in the container at the dissecting table.
 - Clean and return all instruments.
 - Place all personal belongings in your lockers or take them with you when you leave—FHSU accepts no responsibility for personal belongings left in the Human Anatomy Lab.
10. Used scalpel blades must be disposed of in the red hazardous waste (i.e., sharps) container. Never put scalpel blades in the trash.
11. There is a first aid kit, eye wash station, fire extinguisher, and fire blanket at the sink near the door to Rm. 345. All accidents must be reported to the instructor immediately.
12. Do not touch or move any part of the cadavers, models, bones, etc. and their tags during lab practical examinations. Anyone doing so will be warned (e.g., "Do not touch anything!") and will lose (N-1) x 5 pts. for each touching incident.
13. Enjoy the music!

Biology 607A - Human Anatomy Lecture - Spring 2008 Tentative Schedule

Date	Topic	Pp. in <i>Ess. Clin. Anatomy</i>
Jan 17	Introduction; histology; osteology of hip and thigh	1-5; 314-320
22	Anterior & medial thigh; pelvic ligaments; lateral rotators	333-345
24	Gluteal Mm.; hamstrings; NAV of thigh; gluteal NAV	345-354
29	Osteology of leg and foot; plantarflexors; NAV of leg and foot	320-324; 354-371
31	Sole of foot; dorsum of foot; retinacula; cutaneous Vv	371-379
Feb 5	Osteology; arthrology; hip; knee; ankle;	10-20; 379-402
7	Osteology of shoulder and arm; superficial back; rotator cuff	406-410; 425-430
12	Deltoid region; Mm of pectoral region, Mm of arm	422-424; 431-436; 442-444
14	Exam 1	
19	Brachial plexus; NAV of arm	436-442; 444-449
21	Osteology of forearm and hand; flexors of forearm	410-414; 450-453
26	Extensors of forearm; NAV of forearm; hand	454-475
28	Carpal tunnel; joints and ligg of upper extremity	475-493
Mar 4	Integumentary system; mammary gland	5-10; 60-63
6	Exam 2	
11	Muscular system; osteology of vertebral column; ribs, sternum	20-26; 276-292; 52-55
13	Deep back; suboccipital region	294-301
17-21	Spring Break – <i>Don't go anywhere, stay at home and hit the books hard!</i>	
25	Posterior triangle; spinal Nn of head and neck; skull osteology	593-604; 499-505
27	Anterior triangle; NAV of head and neck; facial Mm	605-616; 506-512
Apr 1	Orbit; tongue; temporal and masseteric regions	530-566
3	Nervous system; spinal cord	32-47; 301-310
8	Brain	524-530
10	Cranial Nn; Aa and Vv of brain; nose; ear	644-699; 572-588
15	Exam 3	
17	Thoracic & abdominal walls; cavities, and contents	64-70; 119-145
22	Respiratory system; heart	70-103
24	Great vessels of the heart; NAV of thorax	103-117
29	Lymphatic systems; NAV of abdomen	192-203
May 1	Digestive system; Urinary and endocrine systems	145-185
6	Pelvis and perineum	209-234
8	Reproductive systems	234-274
15	Final Exam - 12:00 -1:40	

Biology 607B – Advanced Human Anatomy Laboratory – Spring 2008 Tentative Schedule

Date	Topic	Pp. in <i>Ess. Anat. Dissector</i>
Jan 16	Introduction; anterior & medial thigh	xiii-xv; 91-97
21	Martin Luther King Jr. Day - no class	
23	Gluteal region	98-101
28	Back of thigh, popliteal fossa; posterior leg	102-104; 108-110
30	Anterior & lateral leg; dorsum of foot	104-108
Feb 4	Sole of foot; knee	111-119
6	Review Lower Extremity	
11	Lower Extremity Soft Structure Exam	
13	Superficial back; shoulder; posterior arm	79-84; 121-127; 131-132
18	Pectoral region; axilla	1-6; 128-131
20	Anterior arm; cubital fossa; flexors of forearm	132-137
25	Extensors of forearm & dorsum of hand	142-147
27	Palm of hand	138-142
Mar 3	Review Upper Extremity	
5	Upper Extremity Soft Structure Exam	
10	Intermediate and deep back; suboccipital region	85-87; 89-90
12	Posterior triangle of neck	151-156
17-21	Spring Break – <i>go to Florida and hang out at the beach all day; forget about school!</i>	
24	Anterior triangle of neck; root of neck	157-163
26	Face; orbit; parotid region	163-168; 175-183
31	Spinal cord; mouth & tongue; larynx	87-89; 202-208
Apr 2	Temporal region	183-188
7	Review Head and Neck	
9	Head and Neck Soft Structure Exam	
14	Intercostals; pleural cavity & lung; anterior abdominal wall	6-11; 23-31
16	Mediastinum & heart; peritoneum; celiac trunk & portal V.	12-22; 32-41
21	Sup. & Inf. mesenteric vessels; complete thorax	41-43
23	Posterior abdominal structures; iliac vessels	49-57
28	Pelvis & perineum	59-78
30	Complete previous dissections	
May 5	Review Thorax & Abdomen	
7	Thorax and Abdomen Soft Structure Exam	

Biology 607A – Advanced Human Anatomy – Term Paper – Spring 2008

- Purpose:** To demonstrate advanced understanding of some aspect of human anatomy. Spend a bunch of quality time in the Library, really learn something, and write a clear, concise term paper about the topic. Topics should be approved by Dr. Bennett, but you have considerable latitude as long as the topic is related to human anatomy. Whatever you do, pick a topic that you find interesting and have some fun with this!
- Sources:** You should not rely on texts, but rather consult the technical literature. You can start with the bibliography in the text or I can probably get you started into the literature, and then Google Scholar and Interlibrary Loan should provide you with all you need.
- Length:** Minimum 10 pages text, plus Literature Cited, illustrations, etc.
- Format:** 1 inch margins all around
Double-spaced 12 point Times Roman
Page numbers centered at the bottom of the page
Illustrations, if any, numbered, at the end of the paper
- Quotations:** It is usually not necessary to quote a passage, but if you feel it is essential place it in quotation marks, indent it 0.5" right and left, single space, and follow with a citation in parentheses formatted as author, year, and page number(s); for example:
- "Quotation text quotation text quotation text quotation text quote
text quotation text quotation text quotation text quotation text text
quotation text quotation text" (Kevorkian, 1959: p. 23)
- Citations:** Within the text, sources can either be cited with author and date (Vesalius, 1553), in which case the sources in the Literature Cited section should be listed in alphabetical order, or cited by number in parentheses (1), in which case the sources in the Literature Cited section should be numbered and listed in order of appearance in the text.
- Journal articles: Vesalius, A. 1553. I am the best anatomist since Galen. *Journal of Anatomy*, 25:123-127.
- Books: da Vinci, L. 1507. Why I am a better anatomist than Vesalius will be. University of Padua Press, Padua, Italy, 345 pp.
- Book Chapters: Berengario da Carpi, J. 1487. Galen did not know what he was talking about. Pp. 45-78 in Tolstoy, L., ed. *War and Anatomical Dissection*. University of Oklahoma Press, Norman.
- Paper due:** Friday, **May 9, 2008**.

Possible term paper topics: Any topic dealing with human anatomy or morphology is okay. This can include development, functional anatomy, using anatomical characters, theory, fossils, etc.

- Cleft lip and cleft palate in humans.
- Scoliosis: causes and treatments.
- Anatomical consequences of hyperpituitarism.
- Lateral epicondylitis (“Tennis elbow”): causes and treatment.
- Carpal tunnel syndrome: causes and treatment.
- Artificial hip/knee replacements and replacement surgery.
- Organ transplants and transplant surgeries.
- Laryngeal structure in relation to phonation in primates and humans.
- Evolution of structure of the pelvis and femur in relation to the evolution of bipedal locomotion in hominids.