

BIOLOGY 310: Mammalian Anatomy  
Office: Hall of Science 321  
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Instructor: Dr. James Mitchell  
Fall, 2006

Office Hours: T Th 8-10 a.m. If these times are inconvenient, call for an appointment. If I am not in my office, check room 324 or Lab 303.

Lecture: M W F 10:20-11:10 a.m. (3<sup>rd</sup> period)-Room to be announced  
Laboratory: M W F 12:45-3:45 p.m.- CHS 303

Required text: McKinley and O'Loughlin, Human Anatomy, McGraw-Hill  
Science/Engineering/Math, 2005

Required items: A good dissection kit, a large loose-leaf notebook for handouts, and goggles. Bring lecture text to lab.

Course description: In this course you will study the structural aspects of the body, including adaptive characteristics (functional anatomy). It is a one-semester course; obviously, I will not be able to cover all the systems. If you use your laboratory time wisely, you will learn additional material. The science of anatomy has changed greatly in the last 15 years-morphology, function, and development are all considered as a unit.

Course objectives: Upon completion of Biology 310, the student will be able:

- A. to comprehend the functional anatomy of the integumentary system, skeleton, joints, muscles, and selected parts of the central nervous system (brain).
- B. to understand the main relationships associated with the different types of cells and tissues that form the organs.

Attendance: I expect you to be present in lecture and lab. Please arrive promptly; it is disruptive to the instructor and your peers if you are tardy. Because of logistical difficulties, students are not allowed to switch laboratory sections.

Grading policy: There will be three hourly exams covering the class notes, text, and handouts. Exams may be objective and subjective in nature. I expect you to use good English in your answers.

Spelling: Why is it important? Confusion may arise from imprecision. Many biological or medical terms are similar-they may have the same Latin or Greek roots. Would you like your pharmacist to misread your prescription?

Also, in ALL jobs, written communication is important in making a good first impression. Would you hire someone whose application had spelling and/or grammatical errors?

The lecture will count as two-thirds (2/3) of the grade, and the laboratory one-third (1/3)-prior to the end-of-the-term exam. The average obtained from these scores will represent 2/3 of your course grade and the final exam 1/3. When assigning a final course grade, I will consider such intangibles as attendance, interest, industry, and cooperation. The final exam is not cumulative.

Extra Credit Option:

Every Friday (7 to 8 a.m.) there will be a discussion-meeting on some aspect of Human Biology at Coordinated Health Care System, 2775 Schoenersville Road. I will give you a list of topics when it becomes available. Pick topics that interest you. Although some of the material may be difficult to comprehend at this stage of your studies, it will give you an appreciation of the complexities associated with health care.

If you have a first-period class and must leave early, feel free to do so. If you need a ride, please let me know and we can arrange a carpool.

**In order to obtain extra credit, you will need to attend four meetings.**

Cancelled classes:

The Registrar's Office will post cancelled classes on the intranet. Students and faculty may access this listing from on- or off-campus; a link to the page exists on both the home page and main page of the intranet (link is <http://home.moravian.edu/public/regis/classCancellations.htm>). The Registrar's office will also notify, via distribution list, key individuals on campus for posting of information about cancelled classes. The distribution list includes the Academic Affairs office, department secretaries, LouAnn Vlahovic (campus operator), and Ann Claussen (Hauptert Union).

Mrs. Vlahovic will also post class cancellations, due to inclement weather, on Moravian's Weather Hotline (610-625-7995).

If the school closes due to inclement weather or another emergency, notification will be posted on the website (listed above), on the Weather Hotline, and on local TV and radio stations (Channel 69, AM 790, AM 1400, FM 96.1, FM 100.7 and FM 104.1).

## LECTURE SCHEDULE

|           |   |
|-----------|---|
| M Aug 28  | Orientation and History   |
| W Aug 30  | Histology, pp. 82-118   |
| F Sept 1  | (continued)   |
| M Sept 4  | <b>NO CLASSES. Labor Day Observed.</b>  |
| W Sept 6  | Histology (continued)   |
| F Sept 8  | Reproduction, pp. 854-885   |
| M Sept 11 | (continued)   |
| W Sept 13 | (continued)   |
| F Sept 15 | (continued)   |
| M Sept 18 | (continued)   |
| W Sept 20 | <b>EXAM # 1</b>   |
| F Sept 22 | Integumentary System, pp. 121-142   |
| M Sept 25 | (continued)   |
| W Sept 27 | (continued)   |
| F Sept 29 | Osteology, Axial skeleton, pp. 174-216  |
| M Oct 2   | (continued)   |
| W Oct 4   | (continued)   |
| F Oct 6   | (continued)   |
| M Oct 9   | <b>NO CLASSES. Fall Break.</b>  |
| W Oct 11  | Appendicular skeleton, pp. 222-248  |
| F Oct 13  | (continued)   |
| M Oct 16  | Articulations, pp. 254-287  |
| W Oct 18  | (continued)   |
| F Oct 20  | (continued)   |
| M Oct 23  | <b>EXAM # 2</b>   |
| W Oct 25  | Muscle tissue and organization, pp. 209-319; selected sections                          |
| F Oct 27  | Appendicular muscles-muscles that move the pectoral girdle and upper limbs, pp. 356-375 |
| M Oct 30  | (continued)   |
| W Nov 1   | (continued)   |
| F Nov 3   | (continued)   |
| M Nov 6   | (continued)   |
| W Nov 8   | Muscles that move the pelvic girdle and lower limb, pp. 378-379                         |
| F Nov 10  | Muscles that move the knee joint/leg, pp. 382-394                                       |

M Nov 13 (continued)  
W Nov 15 **EXAM # 3**  
F Nov 17 (continued)

M Nov 20 Nervous system, Brain pp. 462-473  
Nov 22-26 **NO CLASSES. Thanksgiving.**

M Nov 27 Nervous system, Brain (continued)  
W Nov 29 (continued)  
F Dec 1 (continued)

M Dec 4 Cranial nerves, pp. 474-490  
W Dec 6 (continued)  
F Dec 8 (continued)

M Dec 11 **CLASSES END**  
T Dec 12 Reading Day

Dec 13-16, 18-19 **FINAL EXAMINATIONS**

*Note:* This schedule is tentative. I may expand or modify it depending on the progress of the students.

LABORATORY SCHEDULE  
Collier Hall of Science Rm. 303  
M W F 12:45-3:45 p.m.

Week of

|     |      |    |   |
|-----|------|----|---|
| Mon | Aug  | 28 | Orientation, histology, epithelium, pp. 82-94; connective tissue, pp. 95-103  |
| Mon | Sept | 4  | NO CLASSES. <b>Labor Day Observed.</b>  |
| Mon | Sept | 11 | Histology reproductive organs: ovary (pp. 857-8), oviduct (p. 863), Uterus (pp. 865-6), mammary gland (p. 870), vagina (p. 866) |
| Mon | Sept | 18 | (continued): testis (pp. 871-875), epididymis (p. 877), vas deferens (p. 877), prostate (p. 879)                                |
| Mon | Sept | 25 | Integument, pp. 122-126   |
| Mon | Oct  | 2  | Osteology, pp. 176-215  |
| Mon | Oct  | 9  | NO CLASSES <b>Fall Break.</b>   |
| Mon | Oct  | 16 | <b>practical exam</b>   |
| Mon | Oct  | 23 | Osteology (continued), pp. 223-245  |
| Mon | Oct  | 30 | Myology (special handouts on the cat will be provided)  |
| Mon | Nov  | 6  | (continued)   |
| Mon | Nov  | 13 | (continued)   |
| Mon | Nov  | 20 | Digestive viscera   |
| Mon | Nov  | 27 | Major blood vessels   |
| Mon | Dec  | 4  | <b>LABORATORY EXAM</b>  |

\* What is a practical exam? These are tests where you will be asked to identify labeled structures, locations, functions, etc., from slides, dissections, models, at various stations that are distributed around the laboratory.

### Helpful Tips for Success

1. See the instructor if you need help. I will attempt to facilitate the learning process.
2. Make good use of lab time. Be on time; don't leave early.
3. Make a study schedule.
4. Frequently review material that was covered.
5. Make anatomy interesting. How does it relate to you?
6. Does geography and morphology make sense? For instance, why is the pancreas next to the duodenum? Why would the small intestine be long and twisted and have plicae, villi, and microvilli on its inner wall?
7. On diagrams, cover up the labels. Turn the drawings upside down and identify structures.
8. When possible, attempt to correlate structure and function (see item 6).
9. Study with peers who are serious about their work and have similar goals.
10. Cramming and "all nighters" usually don't work. Keeping up is much easier than catching up.

### General Rules and Information

1. Student behavior in lecture and lab is to be maintained in a manner conducive to learning and study.
2. You must attend the lecture and lab unless there are extenuating circumstances (illness, family problems, etc.)
3. You are not allowed to remove any materials from the laboratory. Please return microscopes to their proper place at the end of the lab.
4. Food, drinks, and all tobacco products are NOT allowed in lab.
5. I expect you to treat the animal bones, models, slides, microscopes, and specimen with care and respect.
6. Dissection products should be placed in the designated containers, NOT in the sinks.