Fall 2000

BIO 201: Human Anatomy and Physiology

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The human body is the culmination of creation and as such proclaims the glory of God (Psalm 19). This course and its companion course, Biology 202, will provide an brief overview of the structure of the human body and how it functions. In these courses we will look at the anatomy of the different systems of the body and how that anatomy relates to function. In the first semester you will be briefly introduced to the concepts and terminology of anatomy and physiology, and to the different tissues and organ systems. Subsequently we will begin to study each organ system in detail. Body systems covered in this semester include (comprising chapters 1-10 of the textbook):

- integumentary system
- skeletal system
- muscular system
- central nervous system
- peripheral nervous system
- senses

COURSE OBJECTIVES:

This course and its companion course will provide the student with a fundamental understanding and appreciation of the structure and function of the human body at both the macroscopic and microscopic levels. In addition its responses to external and internal stimuli, and to disease will be examined.

This course will also provide the students with an opportunity to develop their presentation skills by means of a poster presentation.
METHODS OF INSTRUCTION:

Lectures, labs, poster presentations

COURSE TEXTS:


POSTER PRESENTATION:

You will not be required to write a term paper, but instead will prepare a poster on any topic related to those aspects of human anatomy and physiology which will be covered this semester. Poster presentations are a frequent and important means by which information is presented in science. Posters provide a particular challenge in communication because information is presented visually, and must be communicated quickly. Topics may or may not include a particular disease or other disorder of the body but must go beyond what is presented in the textbook. Students will display their posters in the lab and will provide a brief explanation of the content. Evaluation will consist both of the quality of the poster and the knowledgeability of its presenter. A signup sheet for poster topics will be posted by my office door to avoid duplicate presentation topics, first come first served. The internet is a good place to look for information, but be sure your information is from a reliable source. The poster presentations will be made during the lab periods on November 30 and December 1. Late posters will not be accepted.

NB. It always takes a lot longer than you think to put a poster together, so allow yourself plenty of time.

Here are some guidelines for an effective poster:

1. Follow the KISS rule (Keep It Simple, Stupid). Too many words or pictures are tiring and the audience ends up not getting anything from the poster. Complete sentences are not necessary nor desired.
2. Follow the six foot rule: The gist of the poster should be grasped within ten seconds, from a distance of six feet. This allows the observer to decide quickly whether s/he is interested in the subject and is willing to come closer for further study. To accomplish this, your figure titles should give the information briefly and with large letters (legends under the figures may have smaller lettering, and references can be placed in "fine print").
3. Make the poster visually attractive. This aspect of the project is art, not science, but is nevertheless necessary to communicate your work. Use colored bristol board approximately 4' by 6'. Do NOT use handwritten lettering or hand-drawn figures.
4. The poster should have a title, introductory panel, two or three information panels and a conclusion/summary panel. These panels may include pictures, diagrams or simply a few statements. Feel free to show your instructor an outline of your poster for feedback.
LABORATORIES:

There will be weekly labs which illustrate further the concepts discussed in the lectures. Lab reports are to be filled out on the sheets provided and handed in the following week at the beginning of the lab period. Late reports are subject to a 10% penalty. It is vital, not only for you but for your lab partner as well, that you attend the labs. Anyone who misses two or more labs without a valid excuse will receive a final grade of F for the course. You must attend your assigned lab section. The proposed lab schedule is as follows (note that the order of the manual is not always followed):

Semester I:
Week of: Lab Number (Chapter number indicated)
Aug. 31/Sept.1: Introduction to the labs
September 7/8: 3. Dissection of the Fetal Pig (1)
September 14/15: 3. Dissection of the Fetal Pig cont’d (1)
September 21/22: (extra) Biochemical Processes I (2)
September 28/29: (extra) Biochemical Processes II (2)
October 5/6: Reading Days, no lab
October 12/13: 2. Physiochemical Processes (3)
October 19/20: 1. Cell Division (3)
October 26/27: 4. Histology (4)
November 2/3: 5. Skeletal System (6)
November 9/10: 6. Muscular System (7)
November 16/17: 7. Skeletal Muscle Physiology (7)
November 23/24: Thanksgiving break, no lab
Nov. 30/Dec.1: 8. Nervous System and Reflexes (8, 9)
December 7/8: 9. Receptors (10)
December 15/16: last week, no lab

TESTS AND QUIZZES:

The study of human anatomy and physiology requires considerable memorization (unfortunately). To “help” you in this, there will be several short (5-10 one word answer questions) quizzes covering topics which require memorization. The topics include:

- the language of anatomy (ch1)
- fetal pig anatomy
- bones (ch 6)
- muscles (ch 7)
- peripheral nerves (ch 9)

The quizzes will be written at the beginning of the first lecture period after we have covered the material in class or lab. The one exception to this is the fetal pig anatomy, which will be held in the lab at the end of the second fetal pig dissection week.
EVALUATION:

- quizzes: 10%
- midterm test: 20%
- lab reports: 20%
- poster presentation: 20%
- final exam: 30%

GRADE ASSIGNMENTS:

- 90-100% A
- 80-89% B
- 70-79% C
- 60-69% D
- 0-59% F