2014

354-01 Human & Comparatie Anatomy

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**BIOL 354-01 HUMAN & COMPARATIVE ANATOMY**  
**SPRING 2014**

**LECTURE MW 1:00 – 1:50 P.M  ALBERS 103**

**Dr. William Anyonge**  
Office : Albers 104  
Office Hours: W: 10.00a.m - 12.00p.m and by appointment  
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<tr>
<th>DATE</th>
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| Mon Jan 13  Wed Jan 15 | Introduction to the Study of Vertebrates; Concepts Evolution of Chordates and Vertebrates | Ch.1: pp. 14-15; 24; 39  
Ch.2: pp. 48-55; 61-81 |
| Mon Jan 20  Wed Jan 22 | MLK HOLIDAY – NO CLASS  
Vertebrate Diversity | Ch.3 |
| Mon Jan 27  Wed Jan 29 | Embryology I  
Embryology II | Ch.5  
Ch.5 |
| Mon Feb 3  Wed Feb 5 | EXAM I  
Skeletal System: Skull I | Ch.7; and Ch. 5: pp. 180-181 |
| Mon Feb 10  Wed Mar 12 | Skeletal System: Skull II  
Skeletal System: Skull III | Ch.7:  
Ch.7 |
| Mon Feb 17  Wed Feb 19 | Biomechanics of Bone I  
Skeletal System: Axial Skeleton | Ch.4:pp149-155; Ch.5: pp182-187  
Ch.8 |
| Mon Feb 24  Wed Feb 26 | EXAM 2  
Skeletal System: Apendicular Skeleton | Ch.9 |
| Mon Mar 5  Wed Mar 5 | SPRING BREAK  
SPRING BREAK |   |
| Mon Mar 10  Wed Mar 12 | Muscles I & Biomechanics II  
Muscles II | Ch.10; Ch. 4: pp. 142-144  
Ch.10 |
| Mon Mar 17  Wed Mar 19 | Muscles III  
Locomotion | Ch.10  
Ch.10; 9 |
| Mon Mar 24  Wed Mar 26 | EXAM 3  
Circulatory System I | Ch.12 |
| Mon Mar 31  Wed Apr 2 | Circulatory System II  
Respiratory System I | Ch.12  
Ch.11 |
COURSE WEBPAGE
I have set up a course webpage on Blackboard where I will post lecture slides, announcements, and other course related material. I may also provide links to websites with useful information on certain topics. You should make a habit of checking the course webpage periodically. You can get to the course webpage on blackboard by logging into your XU account via the portal and clicking on the course link.

COURSE DESCRIPTION AND GOALS
BIOL 354 Human & Comparative Anatomy is designed to give you a detailed understanding of the form, function, and evolution of the vertebrate body. In order to do this we will use a comparative approach to investigate how evolutionary adaptations have resulted in the modification of a basic vertebrate body plan in different vertebrates to enable them to survive in their respective environments. This will be illustrated by the study of the vertebrate systems in ancestral to derived vertebrates (including our own species, *Homo sapiens*) to see how form and function are coupled with lifestyle. This course is for Biology and Natural Science majors and is intended to prepare you for other upper division and professional courses. This course expands on many biological concepts, such as evolution and physiology, which were introduced in General Biology. BIOL 355, Human & Comparative Anatomy Lab, is a co-requisite for this course.

Powerpoint slides will be available at least two days before lecture on the course webpage. Use the lectures as a guideline to the important points for each topic on the syllabus. You should attend office hours for clarification and expansion of any ideas presented in the lectures.

LEARNING OUTCOMES
After taking this course students should:
1. be familiar with the form and function of vertebrate organ systems.
2. understand how homologous traits vary among vertebrate groups.
3. be familiar with how morphological traits differ among vertebrate groups and how these differences affect the function of traits.
4. be able to explain the evolutionary basis of morphological differences and similarities among vertebrate groups.
5. be familiar with differences among vertebrate groups in organ systems that include, but are not limited to skeletal, muscular, nervous, cardiovascular, respiratory, excretory and reproductive.
6. Student performance will be assessed with lecture exams during the semester.
### STUDY TIPS

1. The best way to do well in this course is to get a good grasp of the concepts in good time before exams. You can achieve this by reviewing your notes within a day or two after each lecture.
2. Rewrite your notes if this helps you reinforce the ideas from class and write down questions that you may have about the material.
3. Come to office hours and have your questions answered and verify any other information from the lectures.
4. Start studying in good time before exams.

### EXAMS

There will be **five exams** over the course of the semester. The dates are indicated in bold. Each exam will be worth 100 points (500 points total). Each exam, including the last exam, will cover material since the last exam (there will be no cumulative final exam). **There will be no make-up exams unless you make a prior arrangement with me. You must provide verifiable evidence in the case of illness, family emergencies and other legitimate absences that result in the missing of an exam.** If any of the above reasons cause you to miss classes for an extended period of time, you or your family should notify me via phone or email. **Any unexcused absence during an exam will result in a zero for that exam.**

### GRADING

Your course grade will be based on the average of all exams and will be determined as follows:

- A to A−: 100 - 90%; B+ to B−: 89 - 80%; C+ to C−: 79 – 70%; D+ to D−: 69 – 60%; F: 59 and below.

**Consistent and significant improvement on all subsequent exams will be factored into your final grade. An improvement of 10 or more percentage points is considered significant.**

### ATTENDANCE

You are responsible for all material presented in the lectures. I expect and strongly recommend that you attend each and every lecture and take good notes. Get notes from a classmate if you happen to miss a lecture due to an illness or other legitimate reason. Feel free to come to my office hours (or make an appointment) to discuss any issues that are relevant to this course.

### ACADEMIC CONDUCT

You are expected to adhere to the school policy on academic conduct. Any academic misconduct or dishonesty such as plagiarism and cheating on exams and quizzes is unacceptable and will be dealt with as outlined in the Xavier University Catalog and student handbook. **Please be courteous and turn off all cell phones during lecture and exams.**

### CRITERIA FOR SELECTION INTO BIO 470 – 472 HUMAN ANATOMY I & II

(12 STUDENTS MAXIMUM)

1. Must attain a grade of B or better in both lecture and lab.
2. Must illustrate genuine interest in course material.
3. Must illustrate ability to work well with others and project positive attitude in laboratory setting.
4. Your lab instructor will evaluate your lab performance (e.g., quality of dissections etc.)