

# Syllabus

**Biology 3510**  
**Comparative Vertebrate Anatomy**  
**Fall, 2011**  
**Lecture: TR, 1-1:50**  
**Laboratory: TR, 2-3:40**  
**Classroom: WO 1214 or BO 2014**  
**Office Hours: TR 9:45-11:30AM or by appointment**

**Instructor: Guofa Liu**  
**Office: WO 4268B**  
**Phone: 419-530-2869**  
**E-mail: Guofa.Liu@utoledo.edu**  
**Lab Assistant: Mrs. Brenda Leady**  
**Teaching Assistant: Paul Williams**

BIOL 3510, a laboratory based course, is designed to introduce the comparative vertebrate morphology and give you an opportunity to focus on anatomy and its significance. Customarily, this course will prepare you headed into professional fields such as human medicine, dentistry, veterinary medicine, or scientific research.

## I. TEXTS

1. Kenneth V. Kardong (K/K), *Vertebrates Comparative Anatomy, Function, Evolution*, 5<sup>th</sup> ed.
2. Kenneth V. Kardong and Edward J. Zalisko (K/E), *Comparative Vertebrate Anatomy: A Laboratory Dissection Guide*.
3. Selected Readings:
  - A. George C Kent & Robert K. Carr, *Comparative Anatomy of the Vertebrates*, 9<sup>th</sup> ed.
  - B. Karel F. Liem, William E. Bemis, Warren F. Walker, Jr., Lance Grande, *Functional Anatomy of the Vertebrates, An Evolutionary Perspective*, 3<sup>rd</sup> ed.
  - C. Alan Feduccia & Edward McCrady, *Torrey's Morphogenesis of the Vertebrates*, 5<sup>th</sup> ed.
  - D. Dale W. Fishbeck & Aurora Sebastiani, *Comparative Anatomy: A Vertebrate Dissection Guide*.

## II. DATES OF IMPORTANCE

September 2	Last Day to Add
September 5	Last Day to Drop
<b>September 22</b>	<b>Lecture Test 1 (15%)</b>
<b>October 13</b>	<b>Laboratory Test 1 (25%)</b>
October 17 and 18	Fall Break
October 28	Last day to Withdraw
<b>November 1</b>	<b>Lecture Test 2 (15%)</b>
November 24	Thanksgiving
<b>December 8</b>	<b>Lecture Test 3 (20%)</b>
<b>December 14</b>	<b>Laboratory Test 2 (25%)</b>

## III. GENERAL INFORMATION

- A. If you are having difficulty understanding the lecture or lab material, see me or Mrs. Leady to get things straightened out.

- B. Each test will be recorded as a letter grade. Final grades will be an average of the letter grades earned in each test and assigned as below.

Grade	% Correct		Grade	% Correct
A	90-100		C	70-67
A-	87-89		C-	66-63
B+	83-86		D+	62-59
B	79-82		D	58-55
B-	75-78		D-	54-51
C+	71-74		F	50-0

Any student listed on a course grade sheet after October 28 can only receive a performance grade of A - F. A student with valid reasons to withdraw from a course after this date MUST contact the Dean of the college in which the course is offered.

**Students are responsible for reviewing the University Policy Statement on Academic Dishonesty which is found on**

**<http://www.utoledo.edu/dl/students/dishonesty.html>.**

**Any student who violates this Policy Statement will receive an F in this course.**

- C. I will only assign I grades in extraordinary cases when unexpected conditions prevent the student from completing the requirements of the course within the term of enrollment.
- D. Students are expected to attend **all of the lectures and lab sessions**. In the event of an unanticipated absence due to illness or emergency it is the students' responsibility to provide written documentation in the form of a doctor's letter or equivalent. Whether an excuse for missing a session is acceptable or not will be at the discretion of the instructor. If you must miss an exam because of an illness or other legitimate reasons, you need to contact me before the exam. If an emergency makes this impossible, you must inform me within 24 hours after the exam. In any case, be prepared with official documentation of the reason that forced you to miss the exam and we will work things out. **Without proper notification and documentation, you will receive a zero on the exam.**

#### IV. TENTATIVE LECTURE SCHEDULE

	<u>Topic</u>	<u>Reading Assignments</u>
A.	Origin of Chordates	K/K, Ch. 1-2
B.	The Vertebrate Story	K/K, Ch. 3
C.	Biological Design	K/K, Ch. 4.
D.	Life History	K/K, Ch. 5
E.	Integument	K/K, Ch. 6
F.	Skeletal System: the Axial Skeleton	K/K, Ch. 8
G.	Skeletal System: the Appendicular Skeleton	K/K, Ch. 9
H.	Skeletal System: the Skull	K/K, Ch. 7
I.	The Muscular System	K/K, Ch. 10
J.	The Digestive Systems	K/K, Ch. 13
K.	The Circulatory System	K/K, Ch. 12
L.	The Respiratory System	K/K, Ch. 11
M.	The Urogenital System	K/K, Ch. 14
N.	The Endocrine System	K/K, Ch. 15
O.	The Nervous System	K/K, Ch. 16
P.	The Sense Organs	K/K, Ch. 17

## V. LABORATORY SCHEDULE

**Lab Assistant:**      **Mrs. Brenda Leady**  
                                 **BO 1005**

<u>Date</u>	<u>Topic</u>	<u>Reference</u>
T 8/23	Introduction and Survey of Protochordates	K/E, Ch. 1-2; K/K, ch. 1-2
R 8/25	Survey of Protochordates	K/E, Ch. 2; K/K, ch. 2-5.
T 8/30	Agnathans---Examination of a Primitive Vertebrate: The Lamprey	K/E, Ch. 3 ; K/K, ch. 2-5
R 9/1	Agnathans---Examination of a Primitive Vertebrate: The Lamprey	K/E, Ch. 3; K/K, ch. 2-5
T 9/6	The Vertebrate Integuments	K/E, Ch. 4; K/K, ch. 6
R 9/8	The Skeletal Systems: Axial Skeleton	K/E, Ch. 5; K/K, ch. 8.
T 9/13	The Skeletal Systems: Appendicular Skeleton	K/E, Ch. 5; K/K, ch. 9.
R 9/15	The Skeletal Systems: Cranial Skeleton	K/E, Ch. 5; K/K, ch. 7.
T 9/20	The Skeletal Systems: Cranial Skeleton	K/E, Ch. 5; K/K, ch. 7.
R 9/22	<b>Review and Lecture Test 1 (Covered 8/23 -- 9/20)</b>	
T 9/27	Muscular Systems and External Anatomy	K/E, Ch. 6; K/K, ch. 10.
R 9/29	Muscular Systems and External Anatomy	K/E, Ch. 6; F/C, ch. 10
T 10/4	Muscular Systems and External Anatomy	K/E, Ch. 6; F/C, ch. 10
R 10/6	Muscular Systems and External Anatomy	K/E, Ch. 6; F/C, ch. 10
T 10/11	Review	
<b>R 10/13</b>	<b>LABORATORY TEST 1 (MATERIAL COVERED 8/23 -- 10/6)</b>	
<b>T 10/18</b>	<b>Fall Break</b>	
R 10/20	Digestive System	K/E, Ch. 7; K/K, ch. 13
T 10/25	Digestive System	K/E, Ch. 7; K/K, ch. 13
R 10/27	Digestive System	K/E, Ch. 7; K/K, ch. 13
T 11/1	<b>Review and Lecture Test 2 (Covered 9/27 -- 10/27)</b>	
R 11/3	Circulatory and Respiratory Systems	K/E, Ch. 8; K/K, ch. 11-12
T 11/8	Circulatory and Respiratory Systems	K/E, Ch. 8; K/K, ch. 11-12.
R 11/10	Circulatory and Respiratory Systems	K/E, Ch. 8; K/K, ch. 11-12
T 11/15	Urogenital System	K/E, Ch. 9; K/K, ch. 14
R 11/17	Urogenital System	K/E, Ch. 9; K/K, ch. 14.
T 11/22	Urogenital System	K/E, Ch. 9; K/K, ch. 14

**R 11/24    Thanksgiving**

T 11/29      Nervous System

K/E, Ch. 10; K/K, ch. 16.

R 12/1      Nervous System.

K/E, Ch. 10; K/K, ch. 16.

T 12/6      Nervous System

K/E, Ch. 10; K/K, ch. 16.

R 12/8      **Lecture Test 3**

**W 12/14    LABORATORY TEST 2 (MATERIAL COVERED 10/20 – 12/6)**

## VI. LABORATORY NOTES

1. There will be OPEN LABORATORIES every day except Wednesday from 9:00AM to 4:00PM if possible.
2. The listed topics are only a tentative schedule. Although some materials may not be available on days other than those listed, most will be and you may proceed at a faster or slower pace than suggested. However, you must be thorough, complete, and ready to take the laboratory tests on the specified dates. Finally, rather than rushing ahead to the next section, you are strongly advised to use all extra time to review recently studied material.
3. You should read over the referred to pages in the text and the laboratory manual material before coming to lab. The lecture text is helpful in your understanding of the laboratory material and provides useful diagrams or pictures.
4. Immediately report any damaged material to your TA. You will not be charged or punished, but we must replace it if the damage is severe.
5. The exercises in an anatomy laboratory are fairly straightforward: find and identify particular structures, note their relationships to other structures, and remember the location and relationships you have identified. Students also need to understand meaning and significance of these form-and-function relationships. The drawback is the amount of time it often takes to find and clearly identify a structure, especially since you are exploring unknown or unfamiliar territories. You will pick up some tricks along the way to make your quest easier, but there is no secret to what is necessary to do well in an anatomy lab—time, and lots of it! It is quite possible that you will need to spend two or three times the scheduled amount of lab time on your own in order to do well. The lab will be available to you; whether you choose to take advantage of this extra time is up to you.

## **STATEMENT OF ACADEMIC DISHONESTY**

### **Department of Biological Sciences**

Academic dishonesty by students enrolled in undergraduate and graduate courses and programs offered by the Department of Biological Sciences will not be tolerated. Academic dishonesty includes but is not limited to:

1. Obtaining assistance from another individual during an examination.
2. Giving assistance to another individual during an examination.
3. The unauthorized use of study material or textbooks during an examination.
4. Changing answers on an examination after it has been returned and then submitting it for regrading.
5. Plagiarizing written assignments. Plagiarizing includes but is not limited to: a) Copying laboratory reports from previous years, b) copying or paraphrasing reports, term papers, or these prepared by other students, c) unauthorized collaboration in the preparation of reports, term papers, or theses, and d) use of another author's materials without appropriate acknowledgement through quotation and citation.
6. Attempting to bribe or otherwise induce an instructor to alter either a grade or examination score.
7. Obtaining or attempting to obtain a copy of an examination prior to its administration.

In accordance with policies presented in The Student Handbook and The University Catalog, Instructors have the responsibility and right to report cases of alleged dishonesty to departmental, college, and university administrative units. Students involved in academic dishonesty may expect to receive a grade of F on specific assignments as well as in the course where the assignment was made. In addition, disciplinary action may be recommended through appropriate college and university disciplinary committees. Please consult your instructor for instructions on the implementation of this policy.