**Biology 370 Comparative Vertebrate Anatomy Spring 2013**

Dr. Christopher J. Yahnke
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Office hours: Tuesday 2-5 and Wednesday 9-12 or by appointment
Lecture: T R 9:00 - 9:50 TNR 400
Lab section: T R 10:00 - 11:50 TNR 400

**Required Books:**
Vertebrates; Comparative Anatomy, Function, Evolution 6th ed. Kenneth Kardong (rental)
Comparative Vertebrate Anatomy; A Laboratory Dissection Guide, Kardong and Zalisko (purchase)

**By the end of this semester students will be able to:**

- ✓ Understand the Darwinian concept of Decent with Modification by studying homologous structures across a variety of vertebrate groups.
- ✓ Identify anatomical structures including bones, muscles, and organ systems from representative vertebrates including lamprey, mudpuppy, shark, and cat.
- ✓ Discuss topics in comparative anatomy with your classmates during classroom lectures, labs, and online. Integrate information from the lectures, labs, textbook, primary literature and other courses into the discussion.

**Comparative Anatomy and the Bigger Picture**

Skills learned in comparative are applicable to the fields of wildlife ecology, veterinary medicine, systematic biology, and the behavioral sciences. This course fulfills 4 credits of 300 level course work towards the Forty Credit Rule for a BS degree. The course also fulfills an elective requirement for the Biology Major (advanced animal biology) and a collateral course requirement for the Wildlife Ecology Major.

**Course Description and Objectives:**

This course will emphasize the structure and function of vertebrates, accomplished primarily through lectures and discussion as well as investigation through laboratory study. I will use Desire2Learn to distribute lecture outlines, which you will need to have filled in PRIOR to attending lecture. The idea is to facilitate discussion and interaction rather than have me feed you facts. We will also use D2L for discussion. The laboratory portion of the course is designed to look in detail at vertebrate anatomy and you will rely heavily on the rather pricey laboratory manual I've asked you the purchase.

**Grading**

Your grade in this class will be determined by your performance on two one-hour exams, three laboratory practicals, class notes, and the online quizzes. Each exam is worth 100 points (x2 = 200 points), lab practicals are worth 50 points each, and 10 online quizzes worth 5 points each. Class notes will be filled in and submitted to the drop box in d2l prior to class and be worth 5 points each (x20 = 100 points). Thus, there are a total of 500 points to be earned in this class. The final points will be added up, divided by 500, and multiplied by 100; the percentage obtained will determine your grade.

90-100% = A
80-89% = B
70-79% = C

60-69% = D
< 60% = F

There will be no make-up exams unless arranged with the instructor in advance. This is a 9:00am lecture; don't oversleep and arrive late or sleep through an exam (the final is at 8:00 am). You will not be able to reschedule a lab practical so make sure to set your alarm on "really frickin' loud" the night before a lab practical. Missed exams will result in a zero. Extreme cases will be reviewed on an individual basis.

**Academic Honesty:** Any form of cheating on exams, quizzes, home works, or lab reports, or any misrepresentation of your work will result in zero (0) points being recorded for that graded component of the course. **This includes plagiarism of published works or fellow students. Please see me for any clarification on what constitutes plagiarism if you have doubts.** All students are required to adhere to the standards outlined by UWS/UWSP Chapter 14, Student Academic Standards and Disciplinary Procedures which can be found at the following web address: http://www.uwsp.edu/admin/stuaffairs/rights/rightsChap14.pdf

# Tentative schedule of lectures & labs for Comparative Vertebrate Anatomy (Bio 370)

Spring 2010

Reading assignments are from the required text, *Vertebrates*, 5th edition, Kenneth Kardong (2009).

Syllabus design By Isabelle Girard™

| | Date | | [#] Topic | Chapter Reading | Weekly Lab exercise |
|---|---|---|---|---|---|
| JANUARY | **week 1** | **Introduction** | | Kardong | Lab 1: Cladograms |
| | 22 | Tuesday | [1] Course Introduction | none | Setting up lab and working in groups / Cladograms |
| | 24 | Thursday | [2] Introduction | 1 | |
| | **week 2** | **Origin of Chordates** | | | Lab 2: Agnathans |
| | 29 | Tuesday | [3] Origin of Chordates I | 2 | Protochordates and Agnathans; Lamprey dissection |
| FEBRUARY | 31 | Thursday | [4] Origin of Chordates II | 2 | |
| | **week 3** | **Integument** | | | Lab 3: Integument |
| | 5 | Tuesday | [5] Integument | 6 | |
| | 7 | Thursday | [6] The Vertebrate Story I | 3 | |
| | **week 4** | **The Vertebrate Story** | | | Lab 4: The Skull |
| | 12 | Tuesday | [7] The Skull I | 7 | |
| | 14 | Thursday | [8] The Vertebrate Story II | 3 | |
| | **week 5** | **The Skull** | | | Lab 5: The Skull |
| | 19 | Tuesday | [9] The Skull II | 7 | |
| | 21 | Thursday | [10] Paul Soreno discussion | | |
| | **week 6** | **Postcranial Skeleton** | | | Lab 6: Postcranial Skeleton |
| | 26 | Tuesday | [11] The Vertebrate Story III | 3 | **Feb 28: Practical I** |
| MARCH | 28 | Thursday | [12] The Axial Skeleton | 8 | |
| | **week 7** | **Appendicular Skeleton** | | | Lab 7: Postcranial Skeleton |
| | 5 | Tuesday | [13] The Appendicular Skeleton | 9 | |
| | 7 | Thursday | [14] Locomotion | 9 | |
| | **week 8** | **Exam I** | | | Lab 8: Muscular System |
| | 12 | Tuesday | [15] **Exam I** [1 through 14] | | |
| | 14 | Thursday | [16] | | |

Spring break from Friday March 22 (5 pm) through March 31 yippee!

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| MARCH | **week 9** | **Muscular System** | | Lab 9: Muscular System |
| | 19 Tuesday | [17] Muscular System I | 10 | |
| | 21 Thursday | [18] Muscular System II | 10 | |
| APRIL | **week 10** | **Digestive System** | | Lab 10: Digestive System |
| | 2 Tuesday | [19] Digestive System I | 13 | |
| | 4 Thursday | [20] Digestive System II | 13 | |
| | **week 11** | **Urogenital System** | | Lab 11: Urogenital System |
| | 9 Tuesday | [21] Urogenital System I | 14 | **April 10: Practical II** |
| | 11 Thursday | [22] Urogenital System II | 14 | |
| | **week 12** | **Respiratory System** | | Lab 12: Respiratory system |
| | 16 Tuesday | [23] Respiratory System I | 11 | |
| | 18 Thursday | [24] Respiratory System II | 11 | |
| | **week 13** | **Circulatory System** | | Lab 13: Circulatory system |
| | 23 Tuesday | [25] Circulatory System I | 12 | |
| | 25 Thursday | [26] Circulatory System II | 12 | |
| MAY | **week 14** | **Sensory Organs** | | Lab 14: Sensory Organs |
| | 30 Tuesday | [27] Sensory Organs I | 17 | |
| | 2 Thursday | [28] Sensory Organs II | 17 | |
| | **week 15** | **Endocrine System** | | Lab 15: Final Practical |
| | 7 Tuesday | [29] Endocrine System | 15 | **May 10: Practical III** |
| | 9 Thursday | [30] Endocrine System | 15 | |
| | **13 Monday** | **Exam II** [16 through 30] | **TNR 400** | **8:00—10:00** |