

## **Bi 355: Vertebrate Evolution and Development, Fall 2012**

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**Course Description:** We will explore how the vertebrate body forms, describe how evolution has shaped life on earth, and aim to develop the tools necessary to read primary literature in the exciting field of vertebrate evolution and development. We will examine the modern synthesis of classic evolutionary thought with recent advances in genetics and molecular biology to explain to amazing biodiversity found in the subphylum vertebrata. You should come out of this course convinced that your friends are most accurately described as tetrapods descended from Sarcopterygian fish.

**Course Objectives:** Our aim in this course is to provide the information necessary for you to become proficient in Vertebrate Biology, and the tools necessary to move forward in the emerging fields of gene evolution, comparative genomics, and evolution of development.

### **Grading:**

Group Reading Presentation	100 pts
Poster Session	200 pts
Exam1 (Midterm)	100 pts
Exam 2 (Final)	150 pts
Lab exercises (9)	200 pts
Lab participation	50 pts
Lecture participation	50 pts
Poster abstract	50 pts

**Total 900 pts**

## **Description of assignments:**

**Group Reading Assignment** (100 pts): You will work in groups of 4 to synthesize the assigned reading for a 1-week period of your choosing (you will be assigned groups on the first day of class). You will carefully read, synthesize, and outline the assigned readings, and then prepare an outline of the most important points for your classmates. I will post a grading rubric for your presentations on Blackboard. You will be graded on your group's work (40 pts), your individual presentation (30 pts), and for fairness each member of your group will grade your contribution (10 pts each x 3) for a total of 100 pts.

**Poster Session** (200 pts poster + 50 points abstract): In groups of 4 you will design 2 posters in pairs, each poster with a theme about 1 side of a current controversy in evolution of development. At week 5 (Midterm) your group of 2 needs submit an abstract describing the key points of your side of the controversy (50 pts). For the poster, you will have to research the controversy, and then present data in support of the view your poster defends. For the poster, your individual grade will be decided by 40pts from April, 40 pts from the GTF, 40 pts from an outside judge, and for fairness, 10 points each from each member of your group (10 pts each x 3) for a total of 200 pts. The poster session will take place during the last lab session (week 10).

**Blackboard Lectures and Labs** : Lectures will be available at least 2 weeks ahead of schedule. All lab exercises will be posted on Blackboard at the start of the term. You are responsible to download and print each exercise. There are NO LAB MAKE-UPS. If you fall very ill or have an emergency please speak to an instructor.

## **Required Texts:**

- "Vertebrates; Comparative Anatomy, Function, Evolution". By Kenneth V. Kardong. Sixth Edition.
- "Comparative Vertebrate Anatomy" By Kenneth V. Kardong and Edward J. Zalisko. Sixth Edition.
- "Your Inner Fish: A Journey into the 3.5-Billion-Year History of the Human Body" by Neil Shubin.

**Accommodating students with disabilities:** The University of Oregon is working to create inclusive learning environments. Please notify me if there are aspects of the instruction or design of this course that result in barriers to your participation. You may also wish to contact Disability Services in 164 Oregon Hall at 346-1155 or [disabsrv@uoregon.edu](mailto:disabsrv@uoregon.edu)

**Other reasonable accommodations:** If you are sick, or have an emergency, I will do my best to accommodate you if you must be absent for a lab, lecture, or exam, or are having problems completing an assignment. However, the agreement is that you must notify me as soon as possible of your situation and I will work with you.

**A note about email:** I will respond to all emails within 24-48 hours. Emails sent after 5pm or on a weekend will be answered during the next business day. Plan accordingly and pose questions at least 2 days in advance of the midterm or final exam. In general, I prefer that you come to office hours to discuss topics.