Course Description
This course is a study on the history of vertebrate form (morphology) and the transformation of primitive chordates to advanced forms, focusing on major transitions.

Expectations
Students will be expected to attend and PARTICIPATE in class discussions. I believe strongly in offering a difficult course that challenges the student. The student who receives an ’A’ will have mastery of the subject matter (as is recommended by the university’s guidelines). The testing for this course will be based on my lectures. While I will not test from the textbook, the textbook is an essential resource. The information contained within it is far better than anything that will come out of my mouth. It has been scrutinized for grammar, accuracy, and effectiveness of pedagogy. Therefore, you can assume that by reading AND studying the text you will be learning the highest quality of information. Presentation slides are tools for presentation and review, but they DO NOT contain the entirety of information that will be expected of you. If entire textbooks could be distilled to a few dozen powerpoint files, textbooks wouldn’t be so big. Presentations by design are visual and carry as much information with as few words as possible. Keep this in mind when you decide how to study for an exam made entirely of ”words.”

Course Objectives
At completion of the course, student will be able to...
• articulate the big questions being addressed in comparative anatomy, such as those related to homology, phylogeny, adaptation, and convergence
• understand the tools used by researchers to ask questions in comparative anatomy
• speak intelligently about what evolution is, and what it can and cannot tell us about life on earth
• Describe how each of the body’s organ systems develops and how it has evolved

Textbook

Schedule
June 20   Intro; Morphological and Evolutionary Concepts
June 21   Origin and Characteristics of Chordates
June 24   Origin of Vertebrates and Characteristics of Fish
June 25   Tetrapod Evolution and Diversity
June 26   Comparative Embryology of Vertebrates
June 27   Integumentary System
June 28   Exam I (June 20-26)
July 1    Cranial Skeleton
Schedule (continued)
July 2  Axial Skeleton
July 3  Appendicular Skeleton
July 5  Muscular System
July 8  Exam II (June 27-July 5)
July 9  Respiratory System
July 10  Circulatory System
July 11  Digestive System
July 12  Urinary System
July 15  Reproductive System
July 16  Intro; Spinal Cord & Spinal Nerves
July 17  Exam III (July 9-15)
July 18  Brain & Cranial Nerves
July 19  Sensory Organs
July 22  Mechanoreceptors
July 23  Vision
July 25 8am FINAL EXAM

Grading
I will adhere to a 10 point grading scale, where 90 is an A-, 80 is a B-, etc. I reserve the right to make an exam or assignment as difficult as I like! Your score will be based on the following criteria:

1. Exams: 3 midterm and one final exam will contribute 24% each to your final grade

2. Writing Assignment: Each student must choose one non-human chordate or vertebrate on which they will report. 10-15 pages should describe the organism (or group) on the basis of phylogenetic background, any interesting aspects of development, and a system-by-system description. Papers will be due July 15. See me for more details. 4% of grade.

Honor Code
All work done in this class must be carried out within the letter and spirit of the UNC Honor Code. You must sign a pledge on all graded work certifying that no authorized assistance has been given or received. You are expected to maintain the confidentiality of examinations by divulging no information about any examination to a student who has not yet taken the exam. You are also responsible for consulting with your professors if you are unclear about the meaning of plagiarism or about whether any particular act on your part constitutes plagiarism. Please talk with the professor if you have any questions about how the Honor Code pertains to this course.