

**Comparative Vertebrate Anatomy BIOL 4300**

**Spring Semester, 2012**

**CRN - 21392**

**Instructor** - Dr. J. Mitchell Lockhart

**Office** Biology/Chemistry Building, Rm. 2029

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**Office Hours:** As posted or by appointment

**Course hours:** Lecture Tuesday and Thursday, 11:00 AM - 12:15 PM, BCB 2022

Laboratory Wednesday, 12:00 PM - 2:50 PM, BCB 1088

**Textbook** - Kent and Carr, Comparative Anatomy of the Vertebrates, Ninth Edition, (**Required**)

**Laboratory Textbook** - Fishbeck and Sebastiani, Comparative Anatomy Manual of Vertebrate

Dissection (**Required**)

Dissection Kit (**Required**)

Specimens (**PROVIDED**)

**Course Objectives:** As stated in your handbook, this course involves an anatomical and phylogenetic survey of representative vertebrate animals. We will cover objectives in more depth during the first few lectures.

**Attendance: MANDATORY**

course has a considerable amount of new concepts and terminology and it serves your best interest to attend class regularly. Any student disrupting the classroom and affecting the learning experience of others will be asked to leave. Along these lines, **NO** cell-phones, beepers, and/or associated earpieces are allowed either in the **lecture room or laboratory**. My policy is not to give a warning, rather, if a cell-phone or beeper activates during lecture/laboratory, you will lose one **LETTER GRADE** from your final grade. Viewing a cell-phone or pager that activates on **CHEATING** and handled accordingly (in addition to the above penalty). Those wishing to utilize laptop computers as part of the class are required to sit in the first row of the classroom. Viewing anything other than BIOL 4300 coursework on a computer during course time will result in the loss of one **LETTER GRADE** from your final grade. University guidelines dictate that students missing 20% of lecture sessions for this class **regardless** of their standing in the course.

**Students With Documented Disabilities:** Students requiring accommodations or modifications because of documented disabilities should discuss this need with Dr. Lockhart at the beginning of the quarter. Students not registered with Special Services Program must contact the Access Office for Students with Disabilities in Farber Hall. Their phone number is 245-2498.

**Grades:** For the lecture grade, three exams (tentative) plus a comprehensive final will be given. Questions will be based on both material covered in lecture and reading material assigned in class. Exam questions will be in a variety of formats including (but not limited to) essay, short answer, multiple choice, fill in the blank, drawings, etc...Any questions concerning grading should be brought to the attention of the instructor **NO LATER** than one week following return of the exam. **NO make-up exams will be given.**

For the laboratory grade, 3 lab practicals (tentative) will be given. The **Lab practicals cannot be made up. If a lab practical is missed, you will receive a zero for that lab grade.**

The final grade will be a combination of your lecture exam score, laboratory exam score, final exam score, and dissection project:

Lecture Exam 1, 2, and 3	40% (each worth equal)
Lab Exam 1, 2, 3	30% (each worth equal)
Dissection Project	15%
Comprehensive Final Exam -	15%

**Grade Scale: 90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, <60 = F**

**Cheating:** Refer to the Student Code of Ethics in the Valdosta State University Student Handbook. A student caught cheating will be penalized ranging from receiving a zero for that assignment or test to failing the class.

**Important Dates:** Midterm Thursday, March 1; Final Exam Wednesday, May 2, 2:45a.m.-4:45 p.m.

\* The Instructor reserves the right to modify the above contents with proper notification.

## **DISSECTION ASSIGNMENT**

You will work in groups of two, with the partner you have in lab, to prepare a powerpoint chronology of the dissections you are performing. This will stimulate you to do excellent, meticulous dissections in the laboratory. I want each group to take digital photographs of their dissections, import them into powerpoint, and label all parts that you are required to learn in the laboratory. When you import the photographs into powerpoint, make two slides of each photograph. Leave one blank and label the other. Label anatomical parts clearly within powerpoint with either NUMBERS or LETTERS. Then on the following powerpoint slide, provide a key for the previous photograph.

You are not required to do this for the lamprey, but I do want photographs of the mudpuppy, shark, and cat. Your laboratory guide gives you an EXCELLENT reference and should you come anywhere close to the quality found in the lab guide, you will do well on the project.

This project will be due on April 27 at noon. You will turn in a CD or jump drive copy of your project that I CAN OPEN on my computer.

**Course Outcomes:**

**Course:**

By the end of BIOL 4300, students who successfully complete the course should have:

1. Gained factual knowledge, to include anatomy and physiological terminology, methods, and principles, about Comparative Vertebrate Anatomy. (DO 2,3,5; VSUGEO 5)
2. Learned fundamental principles, generalizations, or theories of Comparative Vertebrate Anatomy. (DO 2,3,5; VSUGEO 5)
3. Learned to apply course material (to improve thinking, problem solving, and decision) in Comparative Vertebrate Anatomy. (DO 2,3,5; VSUGEO 5)
4. Developed specific skills, competencies and points of view needed by professional in the fields most (cies/MCID 1n)JTJ.3(ate )-5(A)1 TJ6(at.ETBT/F4 9.96 Tf)3( )-2(4.02 3lls)lfessmparative Vertebrate Anf

to enable them to become informed and responsible citizens. They will understand the connections between the individual and society and the roles of social institutions. They will understand the structure and operational principles of the United States government and economic system. They will understand United States history and both the historical and present role of the United States in the world.

2. Students will demonstrate cross-cultural perspectives and knowledge of other societies. They will possess sufficient knowledge of various aspects of another culture, including the language, social and religious customs, aesthetic expression, geography, and intellectual and political history, to enable them to interact with individuals within that society from an informed perspective. They will possess an international viewpoint that will allow them to examine critically the culture of their own nation and to participate in global society.
3. Students will use computer and information technology when appropriate. They will demonstrate knowledge of computer concepts and terminology. They will possess basic working knowledge of a computer operating system. They will be able to use at least two software tools, such as word processors, spreadsheets, database management systems, or statistical packages. They will be able to find information using computer searching tools.
4. Students will express themselves clearly, logically, and precisely in writing and in speaking, and they will demonstrate competence in reading and listening. They will display the ability to write coherently in standard English; to speak well; to read, to understand, and to interpret the content of written materials in various disciplines; and to listen effectively and to understand different modes of communication.
- 5.

**BIOL 4300/6300 Comparative Vertebrate Anatomy**  
**Spring Semester, 2012**  
**Dr. J. Mitchell Lockhart**

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**Tentative Lecture Outline - This is the order in which we will cover topics.**

**TOPIC**

Nature of Vertebrate Morphology/Introduction

Origin and Classification of Vertebrates/Early Chordates

Fishes

Tetrapods

Development/Embryology

Integument and Derivatives

Coelom and Mesenteries

Head Skeleton

Teeth

Axial Skeleton

Appendicular Skeleton

Muscular System

Digestive System

Respiratory System

Circulatory System

Nervous System

Reproductive System

Excretory System

Endocrine System

**Lecture Exams:**

1 February 9

2 March 22

3 April 26

Final Exam

