

Comparative Vertebrate Anatomy – BIOL 4300

Spring Semester, 2014

CRN - 21965

Instructor - Dr. J. Mitchell Lockhart

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Office Hours: As posted or by appointment

Course hours: Lecture – Tuesday and Thursday, 9:30 AM – 10:45 AM, BCB 2022

Laboratory – Wednesday, 10:00 AM – 1:00 PM, BCB 1085

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! I do keep track of who is and isn't attending lecture and laboratory. This 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, beeper, or earpiece is used during lecture or laboratory, you will lose

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 6; Final Exam – Thursday, May 8, 10:15AM - 12:15PM

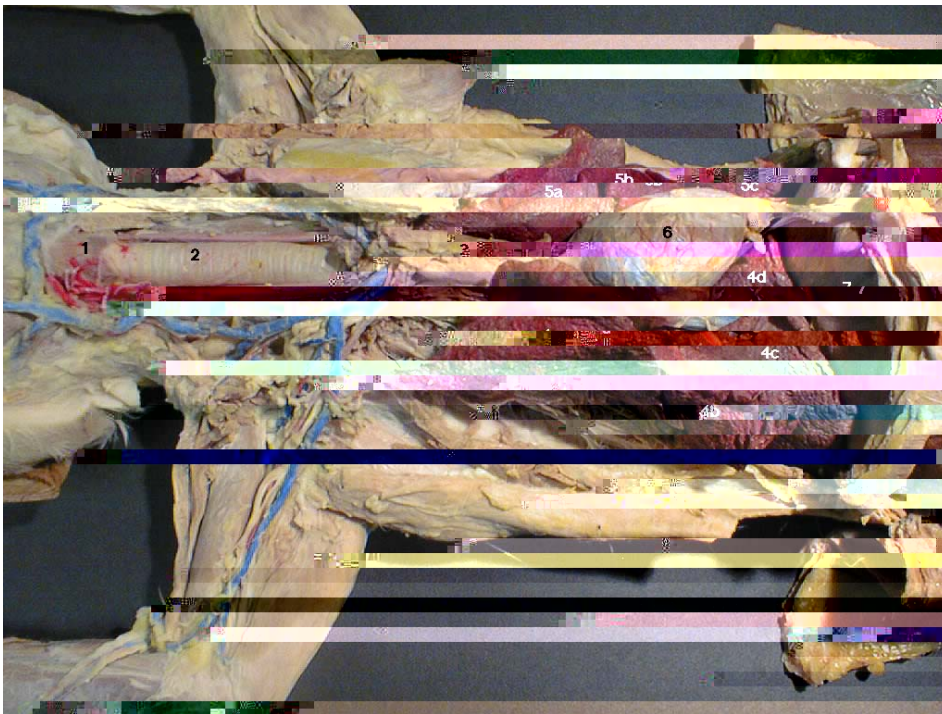
* The Instructor reserves the right to modify the above contents with proper notification.

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 decisions) 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 closely related to Comparative Vertebrate Anatomy. (DO – 2,3,5; VSUGEO – 5)
5. Acquired an interest in learning more by asking questions and seeking answers about Comparative Vertebrate Anatomy. (DO – 2,3,5; VSUGEO – 5)

Department:

1. Develop and test hypotheses, collect and analyze data, and present the results and conclusions in both written and oral formats used in peer-reviewed journals and at scientific meetings.
2. Describe the evolutionary processes responsible for biological diversity, explain the phylogenetic relationships among the major taxa of life, and provide illustrative examples.
3. Demonstrate an understanding of the cellular basis of life.
4. Relate the structure and the function of DNA/RNA to the development of form and function of the organism and to heredity.
5. Interpret ecological data pertaining to the behavior of the individual organism in its natural environment; to the structure and function of populations, communities, and ecosystems; and to human impacts on these systems and the environment.

Valdosta State University General Education Outcomes:

1. Students will demonstrate understanding of the society of the United States and its ideals.

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. Students will demonstrate knowledge of scientific and mathematical principles and proficiency in laboratory practices.

Tentative Lab Schedule -