

GEOLOGY/BIOLOGY 5166
Vertebrate Anatomy Laboratory
Tuesday 2:00 – 4:50 pm, Dedman Life Science Building, Rm. 129

Instructors: Scott Myers & Thomas Adams
Office: 314 Heroy; 336 Heroy
Office Hours: By appointment
Email: smyers@smu.edu; tladams@smu.edu
Phone: 214-768-1751 (Scott); 214-768-1596 (Thomas)

Course Texts:

Fishbeck, D.W. and A.M. Sebastiani. 2001. *Comparative Anatomy: Vertebrate Dissection Manual*. Englewood, CO: Morton Publishing Company, 358 pp. – *Required*

Sebastiani, A.M. and D.W. Fishbeck. 2005. *Mammalian Anatomy: The Cat*. 2nd edition. Englewood, CO: Morton Publishing Company, 184 pp. – *Optional*

Additional Materials:

Dissection kit
Protective eyewear (recommended)
Lab coat (optional)

<u>Date</u>	<u>Subject</u>	<u>Focus</u>	<u>Reading*</u>
1/16	Dogfish (<i>Squalus</i>) & Turtle (<i>Chelydra</i>)	Skeletal Morphology	p. 55-66, handouts
1/23	Dogfish (<i>Squalus</i>) I	Muscular/Digestive/Respiratory Systems	p. 67-78, 85-94
1/30	Dogfish (<i>Squalus</i>) II	Circulatory/Urogenital Systems	p. 95-116
2/06	Dogfish (<i>Squalus</i>) III	Sensory/Nervous Systems and Brain	p. 117-132
2/13	Salamander (<i>Necturus</i>) I	Muscular/Digestive/Respiratory Systems	p. 151-162, 169-174
2/20	Salamander (<i>Necturus</i>) II	Circulatory/Urogenital/Nervous Systems	p. 175-198
2/27	Exam I		
3/06	Cat (<i>Felis</i>) I	Skeletal Morphology	p. 209-226
3/13	Spring Break – No Class		
3/20	Cat (<i>Felis</i>) II	Appendicular Musculature	p. 242-258
3/27	Cat (<i>Felis</i>) III	Axial Musculature	p. 227-242
4/03	Cat (<i>Felis</i>) IV	Endocrine/Sensory/Nervous Systems	p. 325-346
4/10	Cat (<i>Felis</i>) V	Digestive/Respiratory/Urogenital Systems	p. 271-294
4/17	Cat (<i>Felis</i>) VI	Circulatory System & Heart	p. 295-324
4/24	Exam II		

* Page numbers cited refer to Fishbeck and Sebastiani (2001).

Class Description:

This class is intended as a laboratory supplement to the Vertebrate Origins and Evolution lecture course (GEOL/BIOL 5366). The lab is meant to be an intensive and fast-paced introduction to vertebrate anatomy, yet assumes no prior anatomical knowledge or dissection experience. Given the small amount of time available to us and the large amount of information we must cover, the lab will focus primarily on identification of anatomical structures. Function and evolutionary significance, though extremely important, will comprise a smaller portion of the class. These topics will be addressed more thoroughly in the lecture course.

Grading:

There will be two exams, each 50 questions in length. Exams will be specimen-based and will involve primarily identification of structures, though questions may also include functional components. Additionally, there will be nine brief quizzes, each administered at the beginning of class. Quiz questions may address a range of topics, including structural identification, functional aspects of anatomy, and evolutionary significance of structures. The lowest quiz grade will be dropped. No make-ups are allowed. You will not be graded on the quality of your dissections, though it is in your best interest to be as neat as possible. Assigned dissections must be completed in full and all indicated structures exposed or points will be deducted from your grade.

Exam I:	35%
Exam II:	35%
<u>Quizzes:</u>	<u>30%</u>
Total:	100%

Lab Procedures:

Each pair of students will receive a specimen. All students are expected to participate in the dissections. Close-toed shoes are required (no sandals), and use of protective eyewear is strongly encouraged. In between dissections, keep your specimen moist by placing it back in its bag or storage container. Also be sure to properly dispose of used scalpel blades in the sharps container.

You will likely need extra time to complete certain dissections or study specimens outside of class, so the lab will be opened for a predetermined amount of time after hours during the week or on weekends. A set schedule for these extra sessions will be determined during the first week of class.