

Biology 450/450L – Comparative Anatomy Lecture and Laboratory – Fall 2008

Meets: 10:30-11:20 MWF in AH 304
Instructor: S. Christopher Bennett, PhD
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Description: Selected details of the structure, function, and evolution of vertebrates are presented.

Prerequisite: Biology 260 - Introductory Zoology or equivalent.

Text: *Vertebrates: Comparative Anatomy, Function, Evolution, 4th ed.* K. V. Kardong, McGraw Hill, ISBN#: 0-07-252830-3.

Lab Manual: *Comparative Anatomy: Manual of Vertebrate Dissection.* D. W. Fishbeck and A. Sebastiani, Morton Publishing Co., ISBN#: 0-89582-517-1

Objectives: Upon successful completion of the course, you should be able to:

- Describe the origin of vertebrates, their characteristic features, and the evolution of major groups of vertebrates.
- Describe the evolution of the major organ systems of vertebrates.
- Demonstrate skill in dissection of vertebrates.

Grading: There will be 4 lecture exams (each worth 100 points) including the fourth exam during final-exam week, plus a term paper (worth 100 points). Your final lecture grade will be the sum of points earned on the 4 exams and term paper divided by 500, the total points possible. There will be 4 lab practical exams (each worth 100 points). Your final lab grade will be the sum of points earned on the 4 practical divided by 400, the total points possible. The grading scale is: A \geq 90 > B \geq 80 > C \geq 70 > D \geq 60 > U. You can at any time figure out your grade in the course by averaging the scores on your exams. If a significant illness or emergency will cause you to miss an exam notify me before the missed exam or you may not be allowed to make up the exam. If allowed to make up a missed exam, you must make up the exam promptly.

Attendance: Students should attend class and be on time; however, I understand that there may be illnesses or personal emergencies that may prevent you from attending class.

Cheating: Cheating is not allowed. If I find convincing evidence that a student cheated, I will deal with the incident appropriately (i.e., sanctions may include verbal or written warning; lowering of grade for assignment/activity; failure of class assignment; lowering of term grade; and a written report to the Provost). For more information see <http://web.fhsu.edu/universitycatalog/gen/academichonesty.asp>.

Disabilities: Any student in this class who has a disability that may prevent them from fully demonstrating their abilities should contact me personally as soon as possible so we can discuss accommodations.

Biology 450 - Comparative Anatomy – Fall 2008 Tentative Schedule

Date	Lecture	Topic	Reading in Text
Aug 25	1	Introduction to and history of Comparative Anatomy	Ch. 1
27	2	Evolution	"
29	3	Cladistics	"
Sep 1		Labor Day - no class	
3	4	Chordates	Ch. 2
5	5	"	"
8	6	Survey of major vertebrate groups and their evolution	Ch. 3
10	7	"	"
12	8	"	"
15	9	Form and function	Ch. 4
17	10	"	"
19		Development	Ch. 5
22	11	Exam I on Lectures 1-10	
24	12	Integument	Ch. 6
26	13	"	"
Oct 29	14	Axial skeleton	Ch. 8
1	15	Skull	Ch. 7
3	16	"	"
6	17	"	"
8	18	"	"
10	19	Appendicular skeleton	Ch. 9
13		Exam II on Lectures 11-18	
15		Dr. Bennett out of town - Work on term paper	
17		"	
20	20	"	"
22	21	"	"
24	22	Muscular system	Ch. 10
27	23	"	"
29	24	Respiratory system	Ch. 11
31	25	"	"
Nov 3	26	Circulatory system	Ch. 12
5	27	"	"
7	28	"	"
10	29	Digestive system	Ch. 13
12	30	"	"
14		Exam III on Lectures 19-28	
17	31	Urogenital system	Ch. 14
19	32	"	"
21	33	"	"
24-28		Fall Recess - no class	
Dec 1	34	Endocrine system	Ch. 15
3	35	"	"
5	36	Nervous system	Ch. 16
8	37	"	"
10	38	Sensory organs	Ch. 17
12	39	"	"
15		Exam IV on Lectures 29-39 @ 10:30 am -12:10 pm.	

Biology 450 - Comparative Anatomy Laboratory– Fall 2008 Tentative Schedule

Date	Topic	Reading in Text
Aug 25	No lab	
Sep 1	Labor Day; no class	
8	Cladistics; Protochordates and <i>Amphioxus</i>	p. 19
15	<i>Petromyzon</i>	p. 27
22	<i>Squalus</i>	p. 47
29	Lab Practical I; <i>Squalus</i>	
Oct 6	<i>Squalus</i>	
13	<i>Necturus</i>	p. 139
20	Lab Practical II; <i>Necturus</i>	
27	<i>Necturus</i>	
Nov 3	<i>Felis</i>	p. 205
10	Lab Practical III; <i>Felis</i>	
17	<i>Felis</i>	
20-24	Fall Recess - no class	
Dec 1	<i>Felis</i>	
8	Lab Practical IV	