

EEB 111 – Biology of the Vertebrates Fall 2008

Course Overview: This course provides a general overview of the biology of vertebrate animals including aspects of their evolutionary history, taxonomy, anatomy, physiology, ecology, behavior, and natural history. The emphasis is on adaptive breakthroughs within each major lineage as studied in a phylogenetic context. Laboratory and Field experiences will complement and expand upon topics introduced in the lectures.

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Office Phone: 310-825-4669
Office Hours: M and W, 11:00-11:50 (after class) or by Appt., held in LS 5304

Lecture: MWF, 10:00-10:50 am, in Franz 1260

TAs: Josh Olson
Email: jdolson@ucla.edu
Office Hours: 12-1, M, Tu, W
Office: LS 1113

Tina Wey
Email: twey@ucla.edu
Office Hours: W 1-2, F 11-12
Office: LS 4804

Discussion: 1A: M 1:00-3:50 pm; LS 1113, Josh
1B: Tu 9:00-11:50 am; LS 1113, Josh
1C: Tu 1:00-3:50 pm; LS 1113, Josh
1D: W 1:00-3:50 pm; LS 1113, Josh
1E: Th 9:00-11:50 am; LS 1113, Tina
1F: Th 1:00-3:50 pm; LS 1113, Tina

Textbooks: Vertebrate Life, 8th edition (7th edition is ok too) by Pough, Janis and Heiser
The preceding text is required for this course. However, the exams will be from my lectures. I recommend you read the chapters in your textbook for further clarity and understanding. Reading the textbook before lecture can also be helpful. Familiarity with general topics will make things run much more smoothly.

Laboratory: There is a required reader for the laboratory course. It is available at the UCLA bookstore for \$30. You should purchase this reader before your first lab section.

Website: <http://www.lsic.ucla.edu/>

Your login name is your UCLA Login (used in MyUCLA and URSA); the default password is your Student ID #.

Course Construction:

This class consists of three one hour lectures and one lab section per week. There is a lot of material to cover in lecture and lab, so please prepare accordingly. Prior to each lecture I will post my slides on the course website, but these are only an outline of what will be covered. You must pay attention and take your own notes to do well in this course. You are welcome (and encouraged) to tape any of my lectures. When studying, focus on what I covered in class. My lecture is telling you what material is the most important to learn.

Grading: The following is the point distribution for the class:

Lecture:	Midterm 1	100pts
	Midterm 2	150pts
	Final Exam	200pts
	Fieldtrips (2)	80pts total
Laboratory:	Owl pellet dissection	20pts
	Midterm Practical	150pts
	Final Practical	200pts
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	TOTAL	900pts

Lecture Exams: Can be any of the following: Multiple choice, matching, fill-in-the-blank, and short to medium answers (describe, explain, outline, draw) covering material from the previous lectures. Both midterms will be held during class time. **NO MAKE-UP EXAMS ARE ALLOWED, SO SCHEDULE ACCORDINGLY!**

Laboratory: Attendance and participation is mandatory. The lab for this class is very rigorous so you need to use your time wisely. You will only be allowed to be in the lab room if the instructor or a TA is present, so you cannot stay past your lab time. Read the lab before you attend section so you are ready when you get to lab. Please be sure to follow all your TAs instructions. In this lab there are many preserved vertebrate specimens. Please treat these specimens with respect and care so we can preserve them for generations to come. **Please attend the lab section you are registered for.** If you need to switch lab sections for any reason, please let your TA know and contact the appropriate TA in advance. Any lab section switching is up to their discretion. There will be two practicals covering the material you learn in lab, a midterm practical and a final practical. Please notice the times and days for the practicals and plan accordingly. Because of extensive set-up and breakdown **THERE WILL BE ABSOLUTELY NO MAKE-UP PRACTICALS!!** If an emergency arises, let us know immediately and we will work around it.

Field Trips: There are **two mandatory fieldtrips** during the quarter. You may choose which two you attend. Please see the syllabus for the dates and places of the fieldtrips. In order to get credit for attending, you must check-in with the instructor (either a TA or myself) when you get to the fieldtrip and complete a short exercise which you should turn in before you leave. Some fieldtrips have limited space and we will tell you ahead of time if you must sign up for a position on the field trip.

Grading Scale: The following scale will be used as a guideline to determine the final course grades based on the points earned (grading is not based on the “curve”).

90-100% = A

80-89% = B

70-79% = C

60-69% = D

< 60% = F

Cheating and Plagiarism: Cheating and plagiarism will not be tolerated in any form.

Guidelines and Advice:

- 1. Please ask me for help at any time.** I am here to help you learn and I want you to do well.
- 2. Take thorough lecture notes; these are your keys to success.** Note taking will help you concentrate in class and remember what you hear.
- 3. Make sure to read the assigned readings, they will complement my lectures and help you to learn.** If possible, you should do the readings before you come to lecture. That way you can focus on understanding the lecture content and not on unfamiliar topics or vocabulary.
- 4. Start studying sooner than later.** To do well on the exams, you cannot start studying the night before. The best way to learn is by studying a little each day.
- 5. Try to spend 3 hours studying out of class for every hour spent in class.** Your grade in this and any other course will reflect your study efforts.
- 6. Work together, form a study group.** Your grade is not curved and does not depend on anyone else. Working together will help you with difficult concepts or problems.
- 7. Be an active learner.** Don't just memorize information; integrate it into your existing knowledge base.

Lecture Schedule:

Week	Date	Topic	Chapter*
0	Sept. 26	Introduction, Diversity, Evolution and Classification of Vertebrates	1
1	Sept. 29	Vertebrate relationships and basic structure; chordates	2
1	Oct. 1	Early Vertebrates and Jawless Fishes	3
1	Oct. 3	The evolution of jaws and the rise of jawed vertebrates	3
2	Oct. 6	Adaptations for living in water	4
2	Oct. 8	Radiation of the Chondrichthyes	5
2	Oct. 10	Major radiation of bony fishes	6
3	Oct. 13	Ecology of bony fishes	6
3	Oct. 15	Water to Land transition	8
3	Oct. 17	Exam 1	
4	Oct. 20	Origin and radiation of tetrapods	9
4	Oct. 22	Living Amphibians	10
4	Oct. 24	Rise of the amniotes, synapsids and sauropsids	9,11
5	Oct. 27	Turtles	12
5	Oct. 29	Lepidosaurs: Tuatara, Lizards and Snakes	13
5	Oct. 31	Ectothermy	14
6	Nov. 3	Archosaurs: crocodilians, plesiosaurs, ichthyosaurs and pterosaurs	16
6	Nov. 5	Archosaurs: dinosaurs	16
6	Nov. 7	Bird evolution and evolution of flight	17
7	Nov. 10	Bird diversity	17
7	Nov. 12	Exam 2	
7	Nov. 14	Bird ecology	17
8	Nov. 17	Evolution of Synapsida	18
8	Nov. 19	Endothermy	22
8	Nov. 21	Mammal diversity	20
9	Nov. 24	Mammal diversity	20
9	Nov. 26	Mammal ecology	21,23
9	Nov. 28	Thanksgiving Holiday	
10	Dec. 1	Mammal ecology	21,23
10	Dec. 3	Primate and human evolution	24
10	Dec. 5	Human impacts on other species	25
Finals	Dec. 9 (Tuesday)	Final Exam 3-6 PM	

*Indicates chapter in Pough, Janis and Heiser, 7th edition.

Laboratory Schedule:

Week	Topic
1	Chordates and Craniates
2	Chondrichthyes and Sarcopterygians
3	Actinopterygians
4	Amphibians
5	Open labs and LAB PRACTICAL 1; 5-10 pm, Thursday Oct. 30th
6	Turtles, Archosaurs and Lepidosaurs
7	Birds – no labs on Tuesday, Tuesday labs MUST attend another section
8	Mammals
9	Owl pellet dissection – no labs Thursday, Thursday labs MUST attend another section
10	Open labs and LAB PRACTICAL 2; 5-10 pm, Thursday Dec. 4th

Fieldtrips:

Fieldtrip location	Date	Time and Place
Cabrillo Aquarium	Saturday, October 18	2-5 pm, place TBD
Malibu Lagoon	Saturday, November 8	7:00 am, place TBD
Los Angeles Natural History Museum	Tuesday, November 18 Friday, November 21	Place and time TBD
Page Tar Pits Museum	Saturday, November 22	Giant ground sloth, 1:00 pm
Los Angeles County Zoo	Saturday, December 6	Front gate, 10:00 am

Please notice that most of these dates are on a Saturday. You must pick two fieldtrips that you want to attend over the course of the quarter and plan accordingly.