

**EEB 111 – THE BIOLOGY OF THE VERTEBRATES**  
**Course Outline – Spring 2008**

A. Instructors:

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Teaching Assistants:

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Undergraduate Assistant: Manish Pandya

B. Format

1. Lectures: MWF 10 - 10:50 AM Boelter 3400
2. Laboratory: LS 1315
  - a. Lecture by the assistant
  - b. Demonstrations and exercises
3. Field trips: sign up required, two field trips are mandatory
  - a. Guided observations
  - b. Demonstrations and exercises

C. Textbooks (required)

Pough, F. H., C. M. Janis, and J. B. Heiser (2005) Vertebrate Life, 7<sup>th</sup> ed.

D. Grading (1000 point course)

In lecture

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|---------------------------|------------|
| 1. Midterm Exam I         | 100 points |
| 2. Midterm Exam II        | 200 points |
| 3. Final Exam             | 250 points |
| 4. Water to land exercise | 25 points  |
| 5. Evolution of feathers  | 25 points  |

In lab

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|-------------------------------|------------|
| 6. Lab quizzes (6) x 5 points | 30 points  |
| 7. Owl pellet dissection      | 20 points  |
| 8. First Lab Exam             | 100 points |
| 9. Second Lab Exam            | 200 points |

Field trips:

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| 10. Field Trip 1 | 25 points |
| 11. Field Trip 2 | 25 points |

E. Grading Policies:

1. Exams taken on date and time (medical excuses only)
2. No “making up points” or “grading on improvement”
3. Departmental Std. Curve: 15-40-35-10, 90% and 50% limits

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## Lecture Schedule

DATE	TOPIC	Chapter in Pough et al.
3/31	Introduction to EEB 111; Vertebrate Phylogeny	1
4/2	Chordates, Craniates, and Vertebrate Characteristics	1
4/4	Origin, Diversity, and Evolution of Vertebrates	2
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4/7	Early Vertebrates: Jawless Vertebrates	3
4/9	The Evolution of Jaws and the Rise of Jawed Vertebrates	3
4/11	Living in Water	4
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4/14	Radiation of the Chondrichthyes	5
4/16	Major Radiation of Bony Fishes	6
4/18	<b>EXAM I</b>	
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4/21	The Transition from Water to Land	7, 8
4/23	Origin and Radiation of Early Tetrapods	8
4/25	The Evolution of Living Amphibians	9
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4/28	Salamanders, Anurans, and Caecilians	10
4/30	Synapsids and Sauropsids: Two Approaches to Terrestrial Life	11
5/2	Sauropsids: Turtles	12
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5/5	The Lepidosaur: Tuatara, Lizards and Snakes	13
5/7	The Lepidosaur: Tuatara, Lizards and Snakes	13
5/9	<b>EXAM II</b>	
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5/12	Mesozoic Diapsids	16
5/14	Mesozoic Diapsids	16
5/16	Birds and the Origin and Evolution of Feathers	
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5/19	Characteristics of Birds	17
5/21	The Origin and Evolution of Mammals	18, 19
5/23	Mammalian Characteristics and Diversity	20, 21
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5/26	<b>MEMORIAL DAY</b>	
5/28	Homeostasis: thermal, osmotic	14
5/30	Homeostasis: respiratory, circulatory	14
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6/2	Ectothermy and Endothermy	22
6/4	Migration	secs.17.8, 22.4, pp.319-322, 668-671
6/6	Reproduction	secs. in chapters 6, 10, 13, 17,21
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6/11	<b>WEDNESDAY</b>	<b>FINAL EXAM</b>
		<b>3 - 6 PM</b>

# EEB 111 – THE BIOLOGY OF THE VERTEBRATES - SPRING 2008

## Laboratory Schedule

All lab sections are held in Life Science room 1315

Biology of Vertebrates labs are designed to:

1. Present the diversity and characteristics of the vertebrates
2. Develop an understanding of their evolution and relationships
3. Present selected aspects of their morphology, ecology and natural history.

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Week 1	The origin of vertebrates / Vertebrate body plan / Jawless vertebrates
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Week 2	Quiz 1 Sharks, skates, and rays / Ancestral bony fishes Field Trip: Malibu Lagoon
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Week 3	Quiz 2 Advanced bony fishes
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Week 4	Quiz 3 Amphibians
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Week 5	Review of Labs 1, 2, 3, & 4 <b>FIRST LAB EXAM</b> <b>THURSDAY 5/1</b> <b>6 - 10 P</b> Field Trip: Cabrillo Marine Aquarium
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Week 6	Quiz 4 Turtles, Squamates and Crocodilians
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Week 7	Quiz 5 Birds
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Week 8	Quiz 6 Mammals
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Week 9	Owl pellet dissection (TWR) - No lab on Monday Field Trip: Los Angeles Zoo
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Week 10	Review labs 6, 7, 8, & 9 <b>SECOND LAB EXAM</b> <b>THURSDAY 6/6</b> <b>6 - 10 P</b>
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