

ZOO 3303: Vertebrate Zoology Spring 2013, MMC

Instructor: **Dr. John Withey**
OE 212 (office)
Office Hours: Tu after class in ECS 158 (lab)
 Th after class in OE 212 (office)
 or by appointment

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Class meets: **TuTh 11:00am – 12:15 pm | Chem & Physics (CP) 197**

Textbook (req): *Vertebrate Life* (2013) by Pough, Janis & Heiser, 9th edition (text in bookstores; e-text available at <http://www.coursesmart.com/0321812050>).

Online resources: Tree of Life: <http://tolweb.org/tree/>
American Museum of Natural History: <http://research.amnh.org/vz/>
Zoo Miami Conservation Projects:
<http://www.miamimetrozoo.com/conservation.asp>

Blackboard Learn: <http://online.fiu.edu/login/ecampus>

(you are required to log on to course page on Blackboard)

Purpose: Vertebrate Zoology is the study of the vertebrates' anatomy, physiology, ecology, and behavior, as well as their evolutionary lineages. In this course you will have an opportunity to build on your knowledge of Biology by learning how scientists answer several key questions in vertebrate zoology. These questions range from how vertebrates evolved from ancestral species, to how today's fish and wildlife adapt (or don't) to environmental change. I am here to facilitate both your learning of key biological concepts and the important skills of critical thinking, interpretation and synthesis that will be valuable no matter what career path your future holds.

Objectives: After taking ZOO 3303, successful students will be able to:

- 1) Describe the evolutionary radiation of vertebrate animals.
- 2) Use biological terminology in the proper context to communicate your knowledge of the relationship of vertebrates to other taxa and other vertebrates, and the identification of common Florida fish and wildlife species.
- 3) Interpret figures commonly used to communicate results of research in vertebrate zoology.
- 4) Summarize the main points of, and critically evaluate, publications from scientific and popular literature related to vertebrate zoology.
- 5) Apply your knowledge of key concepts of vertebrate zoology to modern issues such as biomedical research, ecological relationships of vertebrates to their environment, and ethical treatment of research animals.

The syllabus serves as a contract. Please review this syllabus carefully and bring any schedule conflicts (especially with exams) or questions (for example on grading policy) to my attention during the first week of class. If unanticipated events occur, these will be handled according to the policies in this syllabus and FIU policies.

Class communications: I will post all important class announcements on Blackboard, so please check the site regularly. I will repeat these announcements in class and by email. You can always ask me specific questions in class, via Blackboard, or by emailing me at jwithey@fiu.edu

Readings: I will assign readings from the Pough et al. *Vertebrate Life* text for most topics. The 9th edition is the current version of the textbook. NOTE: If you decide to use a copy of the 8th edition instead, all of the chapter titles are the same but the content may differ somewhat, so make sure to study your lecture notes and follow up (with me or a classmate) on any details you don't find in the text. In addition to the course textbook, there will be some additional readings from a variety of publications for each course topic. *You are responsible for the content of all assigned readings.* All additional readings will be available for download on Blackboard.

Lectures: My class lectures are the core component of this course. I will use slides as the basis for most classes and I will post the slides each day after class on Blackboard. In some cases I may include additional slides in the posted material that we did not get to during class time – ALL of the posted material will be important to review.

In addition to the slides, I will often go into more detail on any given topic – for example, verbally in response to student questions, writing down additional notes, watching a relevant video in class to illustrate a particular concept, or going over a figure in detail. Take notes in class to capture the important concepts from this material to study.

Exams: There will be three exams this course. Exam questions will focus on the most recent topics in the course, but after the first exam, up to 20% of the questions will be on topics covered previously in the course. This exam policy reflects the fact that concepts learned later in the course will often depend on the material we cover early on. Use the previous exams as a guide to what concepts are important. The third exam is on the last day of the course, NOT during finals week. It will focus on the material we cover after spring break but may include questions on topics covered previously.

The exams will be in multiple-choice form, but can include T/F and graph interpretation questions. The online quizzes will help you prepare for the exams and in addition I will give you practice questions before each exam. The exams and the final are closed book and must be completed on your own without any materials at your desk other than a pencil (something to drink also OK). Leave all other materials at home or at the front of the classroom.

Online Quizzes: A total of ten quizzes will be posted on Blackboard for you to complete, every week other than exam weeks. The purpose of the quizzes is to reinforce what you learn from the lectures and readings. The quizzes are open book, notes, and you are free to collaborate with classmates to try to get the correct answers. They will only be open online from Friday afternoon through midnight on Sunday for you to complete, and they must be completed in a single sitting.

In-class Assignments: I will also assign in-class activities which will typically be graded pass/fail and will consist of small group work that you turn in at the end of the class period. **You must be in class to complete the in-class assignment.** If you have a University-approved excused absence (see Contingencies, below) you may make up the assignment, by turning it in on a due date specified after the excused absence.

Paper Critiques: You will submit five paper critiques during the semester worth 20 points each. Each critique will focus on a paper from the primary scientific literature published in the last 5 years (2008-2013). The critique must include the purpose of the study and hypotheses tested, the basic scientific approach (observation vs. experimentation), the most important result, the aspect of the study that confused you the most, and the most interesting thing you learned from the paper and why it was interesting. Formatting rules are: one-inch margins all around, no font smaller than 12 point, single space the citation, double-space your critique, and do not use page numbers. Papers that exceed the length of 2 pages will be penalized as will those that do not reach at least 1½ pages. Upload your critique to Blackboard by midnight on the day it is due. Late assignments will be penalized 5 points the first day it is late and 1 pt/day thereafter – however you can and should turn in late papers to avoid a 0 on these assignments. An example of a good critique and a grading rubric will be available on Blackboard before the first one is due.

Course Grading: My grading philosophy is that every student should be able to decide what his or her grade will be. I don't mean this literally (you don't get to fill out the grade sheet), but rather that my grading expectations will be clear, I will provide you support for and feedback on your quizzes, assignments, and exams, and if you do your work carefully and extremely well (and on time), you will receive an A. If you choose not to do all of the required work, or not to attend class, or do work that is not carefully done, or is late for unexcused reasons, you will receive something less than an A. Your overall grade is based on the following components:

Course Component	Maximum Points
High Exam (or Quizzes) Score	100
2nd-highest Exam (or Quizzes) Score	100
3rd-highest Exam (or Quizzes) Score	100
Lowest Exam (or Quizzes) Score is dropped	X
In-class Assignments	100
<u>Paper Critiques</u>	<u>100</u>
Total	500

Getting Additional Help: The **University Learning Center** is on the first floor of the Library, GL-120. They serve all undergraduate students, not just those struggling in a particular class. See <http://undergrad.fiu.edu/learning/index.html> for more information.

Learning or Physical Disabilities: If you have a disability that may impact your academic performance, you may request accommodations by registering with the Disability Resource Center (<http://drc.fiu.edu/>). Their MMC office is in Graham Center 190. Once you have completed their intake process, their office will notify me of the accommodations for which you are eligible.

Contingencies: Excused absences and prior notification (if possible) are required to make up any course work. A *University-approved* excuse is necessary to qualify for a make-up exam. A

documented medical emergency, jury duty, or car accident (documented with a police report) are examples of university-approved excuses. *It is your responsibility* to provide the documentation before I will schedule a make-up exam.

You are responsible for **arriving on time for the Exams**. Leave extra time for traveling to campus on exam days! Bad traffic, car trouble, job interviews, etc. are not acceptable reasons for missing exams or arriving late. If you do arrive late I will allow you to take the exam, in the remaining class time, only if you arrive BEFORE any individual student finishes the exam. Dropping your lowest exam grade means that you can miss ONE exam for any non-excused reason, and it would not affect your grade.

Academic Honesty: You are expected to follow the FIU Student Code of Conduct which in this course primarily applies to doing your own work on exams and critiques. Cheating (for example, looking at notes, or other students' tests) will not be tolerated and I will have graduate students proctor exams in addition to myself. If I find sufficient evidence that cheating has taken place, you will receive a score of 0 for that exam – which will count as your 'third-highest exam score' since it is not eligible to be dropped. You may also be subject to Academic Misconduct procedures and sanctions as detailed in the FIU Student Handbook.

Final Grades will be assigned according to the following table according to the total points earned in the class (out of 500). By including pass/fail homework, and dropping your lowest exam (or combined quizzes) score, I am already factoring in a cushion that lifts your grades. I therefore will not give extra credit, or consider how close you are to the next grade up in assigning your final grade. Your work, athletic activities, scholarship requirements, future career plans, etc. are also not appropriate for me to consider in assigning your final grade.

<u>Letter Grade</u>	<u>Points</u>
A	450 to 500
B+	435 to 449
B	400 to 434
C+	385 to 399
C	350 to 384
D	300 to 349
F	<300 points

(continued: course schedule)

Course Schedule with Readings, Assignments and Important Dates

- Jan 8: Introduction to Vertebrate Zoology; Syllabus
- Jan 10: Chordates: Vertebrate Life (VL) Ch. 1
- Jan 14: Last Day to Add/Drop without Fees*
- Jan 15: For review, UC-Berkeley's 'Understanding Evolution' site
Vertebrate Evolution: VL Ch. 2
- Jan 17: Vertebrate Evolution (continued)
Research Databases (in-class activity)
- Jan 18: Online Quiz 1*
- Jan 22: Craniates and Agnathans: VL Ch. 3
- Jan 24: Chondrichthyes: VL Ch. 5
- Jan 25: Online Quiz 2*
- Jan 29: Chondrichthyes (continued)
- Jan 31: Bony Fishes: VL Ch. 6 *Elasmobranch (Sharks, Skates & Rays) Paper Critique Due*
- Feb 3: Online Quiz 3*
- Feb 5: Bony Fishes (continued)
- Feb 7: Exam 1 (material presented 1/8 through 2/5)**
- Feb 12: Tetrapods: VL Ch. 9
- Feb 14: Amphibians: VL Ch. 10
- Feb 15: Online Quiz 4*
- Feb 19: Amphibians: VL Ch. 10
- Feb 21: Synapsids and Auropsids: VL Ch. 11
- Feb 22: Online Quiz 5*
- Feb 26: Reptiles: VL Ch. 12
- Feb 28: Reptiles: VL Ch. 13 *Amphibian Paper Critique Due*
- Mar 1: Online Quiz 6*
- Mar 5: Evolution of Birds: VL Ch. 16 (pp.399 – 405)
Mid-course assessment by the Center for the
Advancement of Teaching (required in-class activity)
- Mar 7: Exam 2 (through 2/28, Reptiles)**
- Mar 11-16 ***Spring Break***
- Mar 18: Last Day to Drop with a DR grade*

Mar 19:	Birds: VL Ch. 17	
Mar 21:	Birds: VL Ch. 17	<i>Reptile Paper Critique Due</i>
Mar 22:	<i>Online Quiz 7</i>	
Mar 26:	Birds: VL Ch. 17	
Mar 28:	Mammals: VL Ch. 20	
Mar 29:	<i>Online Quiz 8</i>	
Apr 2:	Mammals: VL Ch. 21	
Apr 4:	Mammals: VL Ch. 23	<i>Bird Paper Critique Due</i>
Apr 5:	<i>Online Quiz 9</i>	
Apr 9:	Primate Evolution: VL Ch. 24	
Apr 11:	Primate Evolution: VL Ch. 24	
Apr 12:	<i>Online Quiz 10</i>	
Apr 16:	Vertebrate Adaptations: VL Ch. 25	
Apr 18:	Exam 3 (through 4/16)	
Apr 19:	<i>(no class)</i>	<i>Mammal Paper Critique Due</i>
Apr 22:	<i>Final Exam week: no class or exam</i>	