

Vertebrate Biology
Biology 312, 312L, 392F
 (4 Units)

Instructor**Dr. Robert Espinoza**

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Meeting Times

Lecture: T/TH: 1–2 PM in LO 1317; *Laboratory/Field:* T/TH: 2–5 PM in LO 1317 or TBA

Texts & Field Guides

Pough et al. 2005. *Vertebrate Life*, 7th Edition. Prentice Hall, Upper Saddle River, NJ. (*required*)

Gergus and Schuett. 2000. *Labs for Vertebrate Zoology: An Evolutionary Approach*, 2nd Edition. Cooper Publishing Group/Biological Sciences Press. (*required*)

Stebbins. 2003. *A Field Guide to Western Reptiles and Amphibians*, 3rd Edition. Houghton Mifflin, Boston, MA. (*required*)

National Geographic Society. 2002. *National Geographic Field Guide to the Birds of North America*, 4th Edition. National Geographic Society. (*required*)

Kays and Wilson. 2002. *Mammals of North America*. Princeton University Press, Princeton, NJ. (*required*)

Additional references from the primary literature will be made available for photocopy.

Course Objectives

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. Students must be concurrently enrolled in the Lecture, Lab, and Field components.

Course Requirements

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|-----------------------|----------------------|
| Lecture Exams | 100 points X 2 = 200 |
| Laboratory Practicals | 75 points X 2 = 150 |
| Pop Quizzes | 25 points X 3* = 75 |
| Literature Reviews | 25 points X 2 = 50 |
| Lab Report | 50 points = 50 |
| Group Presentation | 50 points = 50 |
| Field Notebook | 50 points = 50 |
| Participation | 50 points = 50 |

Total points 675

* Four quizzes are given, but the lowest score is dropped.

Grading

Grades will be distributed as follows:

≥90% = **A**; 80–89% = **B**; 70–79% = **C**; 60–69% = **D**; ≤59% = **F**

Plus and minus grades will be assigned as follows: percentages ending with 8 > will be given a plus (e.g., 88–89% = B+); percentages ending with 1 or 0 will be given a minus (e.g., 80–81% = B-). Grades will not be curved.

Attendance, Participation, & Department Withdrawal Policy

This is an intellectually challenging and time-demanding course. Students with other time-consuming responsibilities (heavy course loads, jobs >20 h/wk, athletic teams, music groups, etc.) should seriously consider their ability to meet these demands. You are expected to attend and actively participate in every lecture, lab, and field experience. Ten points will be deducted for unexcused absences and five points will be deducted for each tardy or for leaving class/lab early. Class withdrawals are permitted until the end of the third week. Thereafter, requests to drop a class will be honored only when a verifiable serious and compelling reason exists and when there is no viable alternative to withdrawal. Poor performance is not an acceptable reason for dropping a class. Students with borderline grades (e.g., A- or B+) at the end of the semester will receive the higher grade if they have participated in all or nearly all class activities.

Fieldtrips

Throughout the semester we will go into the field during regularly scheduled class hours and on one weekend trip (see Syllabus). These experiences will provide you with the important opportunity to watch live vertebrates in their natural environments, note where and how they live, and practice field identification. Please come to class prepared: appropriate clothing, shoes, hat, water, sunscreen, etc. **All fieldtrips are a mandatory part of the course and no make-ups are possible.** Ten participation points will be deducted for unexcused absences from fieldtrips.

Lecture Exams

There will be two lecture exams. The second exam will only include topics discussed after the first exam (i.e., noncomprehensive). The exams will include matching, fill-in, multiple choice, short answer, and longer essay questions. Be prepared to synthesize ideas rather than just regurgitate information. There are **no make-up exams**.

Laboratory Practicals

There will be two, noncomprehensive lab practicals. During these exams, you will be required to know vertebrates (or their parts) on sight with minimal notes. Because of the substantial time required to set up lab practicals, **no make-up practicals** will be offered.

Pop Quizzes

Four unannounced (“pop”) quizzes will be given at the end of lecture. These will be short-answer format and should take no longer than 10 min to complete. **No make-up quizzes** will be offered, however, your lowest score will be dropped prior to calculation of your final grade.

Literature Reviews

Students will review a current paper (<3 years old) from the vertebrate literature. The topic is your choice, so long as it concerns vertebrate biology, and the source is not based on a review article and was published in a professional journal (i.e., magazines and internet sources are *not* acceptable). Your review should be a **2-page typed, double-spaced** (with 12-point font and 2.5-cm margins) synopsis of the entire article written in **layperson terms** (so the information is accessible to a general audience—as if you were a science reporter for a newspaper). Please include a photocopy of the abstract from the paper you review.

Laboratory Report

Students will write a report for the “*Thermal Acclimation & Performance*” lab exercise (see *Syllabus*). The report will require a brief review of the literature relevant to the topic of the study and will follow a standard scientific format (introduction, methods, results, discussion, etc.). Detailed instructions for writing this report will be provided later in the semester.

Group Presentation

Small groups of students (2–4) will develop a project **outside of class time** on a **pre-approved** vertebrate-related topic of their interest, synthesize gathered information, and present their findings in oral format using appropriate visual aides. Grades will be highest for groups that present well-researched topics in a clear, concise, and aesthetically pleasing manner. Presentations will be evaluated by the instructor and your fellow students.

Policies on Assignment Due Dates, Cheating, & Plagiarism

In exceptional cases and when arrangements have been made with the instructor **in advance** (at least one week), lecture exams (but not pop quizzes or lab practicals) may be taken at a mutually agreed upon time (usually before the remainder of the class takes the exam). All other assignments must be turned in **on time** on the due date. Late assignments will be docked **one full grade** for each day they are late. There are **no ‘extra credit’** assignments. As per CSUN policy, cheating and plagiarism will not be tolerated. If you are caught cheating or plagiarizing in any way or form, you will receive a **failing grade for the course** and be reported to the university for appropriate disciplinary action.

Disabilities

Any student with a documented disability who feels s/he may need academic adjustments or accommodations is requested to speak with the instructor by the second week of class. Any such discussions will remain confidential.