

**ZOOL 3610 General Vertebrate Zoology lecture and laboratory****Fall 2016**

Instructor: Dr. Ann Kohlhaas; phone 667-3695; email: akohlhaas@csustan.edu

Office and office hours: N275; Mon &amp; Wed 1:30-3 pm, and by appt.

Class hours and location: Tues &amp; Thurs in N206; lecture 12:30 – 1:20p, lab 2:00 – 4:50p.

Textbook: Vertebrate Life, 9<sup>th</sup> ed. by Pough, Janis, & Heiser (2013)**Tentative Schedule:**

<b><u>Date</u></b>	<b><u>Lecture</u></b>	<b><u>Laboratory</u></b>
Aug 25	Introduction to Chordata and Craniata (Ch.1)	Systematics
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Aug 30	(cont.)	Intro. to Vertebrates
Sept 1	Craniate features (Ch.2)	Agnatha
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Sept 6	(cont.)	Chondrichthyes
Sept 8	Jawless Fishes (Ch.3)	Chondrichthyes
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Sept 13	Cartilaginous Fishes (Ch.5, 4)	Chondrichthyes
<b>Sept 15</b>	(cont.)	<b>LAB EXAM 1 (50 pts.)</b>
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<b>Sept 20</b>	<b>EXAM 1 (80 pts.)</b>	Bony Fishes
<b>Sept 22</b>	<b>Field Trip (12:30 – 5 pm)</b>	<b>San Luis NWR</b>
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Sept 27	Bony Fishes (Ch.6, 4)	Bony Fishes
Sept 29	Bony Fishes (cont.)	Bony Fishes
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Oct 4	Bony Fishes (cont.)	Bony Fishes
Oct 6	Bony Fishes (cont.)	Bony Fishes
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Oct 11	Amphibians (Ch.8, 9, 10)	Amphibia
Oct 13	Amphibians (cont.)	Amphibia
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Oct 18	Amphibians (cont.)	Amphibia
Oct 20	Amphibians (cont.)	Reptilia
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Oct 25	Reptilia (Ch.11, 12, 13, 16)	Reptilia
Oct 27	Reptilia (cont.)	Reptilia
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<b>Nov 1</b>	Reptilia (cont.)	<b>LAB EXAM 2 (80 pts.)</b>
Nov 3	Birds (Ch.16, 17)	Aves
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<b>Nov 8</b>	<b>EXAM 2 (100 pts.)</b>	Aves
<b>Nov 10</b>	<b>Field Trip (12:30 – 5 pm)</b>	<b>Salmon Spawning &amp; Birding</b>
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Nov 15	Birds (cont.)	Aves
Nov 17	Birds (cont.)	Mammalia
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Nov 22	Mammals (Ch.18, 20, 21)	Mammalia
Nov 24	<b>NO CLASSES – Thanksgiving</b>	
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Nov 29	Mammals (cont.)	Mammalia
Dec 1	Water & Homeostasis (Ch. 2, 4, 8, 11)	<b>LAB EXAM 3 (80 pts.)</b>
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Dec 6	(cont.)	Lab Exercise
Dec 8	Ectothermy and Endothermy (Ch.14, 22)	Lab Exercise
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**Thursday, Dec 15 at 2:00 p.m. FINAL EXAM (130 pts.) – Lecture/Lab**

### **Purpose**

The purpose of this course is to become familiar with vertebrate diversity and adaptation, and some of the techniques employed by vertebrate zoologists.

### **Objectives**

- to gain a working knowledge of overall vertebrate diversity with some emphasis on local species.
- to learn the important and identifying features and adaptations of the vertebrates.
- to become familiar with the natural history aspects and ecological roles of vertebrates.
- to practice some of the techniques commonly used by vertebrate zoologists.

### **Grading**

Lecture Exams (80 + 100)	= 180
Lab Exams (50 + 80 + 80)	= 210
Lab Quizzes (8 x 10 pts. ea.)	= 80
Final Exam – Lecture & Lab	= 130
Presentation	= 50
Field trips + Participation	<u>= 50</u>
	700

**Grades** will be assigned as a percentage of the total possible points earned. Thus, A = 90+%, B= 80-89.5%, C = 70-79.5%, D = 60-69.5%, F= 59.5% and below. Please note that there will be no “+” or “-“ grades and that Cr/NC is not an option.

**Lecture Exams** will cover material from lecture notes and assigned readings. Questions may be of any type. Most likely question types are definitions, short essays, and fill in the blanks.

**Lab Exams** will cover material from laboratory. This will be set up as a lab practical. Thus, most commonly, actual specimens will be set out with specific questions about them. Expect very direct questions requiring specific answers, such as “name the Class/Order/Species”, “name the indicated structure”, “what is the function of the indicated structure”, etc. Also, you may be asked to use a biological key, take measurements, etc.

Only in very rare circumstances can alternative exam times be prearranged. Any exam that is missed without prearrangement with your instructor will result in a permanent loss of those exam points.

**Lab Quizzes** will be short, announced, and given at the beginning of lecture or lab. They will be on any lab material including written materials in your lab handouts, figures used in lab, keys used in labs, and specimens.

**Final Exam** is comprehensive. It will consist of materials from the previous exams, any other materials your instructor also specifies, and any material presented since the last exam.

**Presentations** will be on refereed published scientific papers on vertebrates. Each student will do one presentation. Each presentation has three parts: an oral presentation, a written outline, and a written abstract. More instructions will be given in another handout.

Papers for the presentation must come from refereed scientific journals. Only papers published in 2015 or 2016 will be approved. I recommend the following journals as they are focused on vertebrates. Papers from other journals may be allowed.

Copeia – fish, amphibians, and reptiles  
Herpetologica – amphibians, and reptiles  
Auk – birds  
Condor – birds  
Wilson Bulletin – birds  
Journal of Field Ornithology – birds  
Journal of Mammalogy – mammals

Note: Everyone must submit a paper for presentation by **September 1 at the beginning of lecture**. There will be a limit on how many people may present for each taxonomic group. Earlier submissions will have priority.

Note: Your presentation in this class cannot be from the same paper as used in any other class and must be your own work.

**The purpose of the presentations is to increase familiarity with scientific literature and methodology and to practice communications skills.**

**Participation** in labs and field trips is expected. You are expected to actively participate in all activities and work cooperatively with your fellow students and teacher. Most of the points for participation will be earned during the field trips. Attendance and participation in **field trips** is an important part of this course. I consider field trips to be the best part of the course because it involves seeing living vertebrates in their natural habitats and allows practice of techniques. Thus, of the 50 participation points, approximately 20 pts. are earned for each of the scheduled field trips. The other 10 pts. for general lab participation. Note that missing the field trips automatically incurs a loss of the designated points. Alternative means for gaining back the points are available only when the absence is due to an unforeseen, unavoidable, and verifiable reason.

**Extra Credit** of up to 20 pts. may be earned by participating in some projects with prior approval from your instructor. Examples of projects that are likely to be approved include: participation in a vertebrate field project with a researcher (ex. ESRP), participation in a conservation project (ex. at a state or federal park), and writing a short paper on an appropriate topic. Expect to have to find your own projects, but I will let you know of any that I hear of. Please note that extra credit work is in no way a requirement of this course. For any outside projects, you must be willing to accept liability for your participation, as the university and I cannot control your outside environment. Also, no extra credit will be approved of after Nov. 17. Any extra credit papers are due Nov. 24. Final grades will be final.

**Other:**

- 1) Cheating and other forms of academic dishonesty (ex. plagiarism) will result in an automatic grade of F in the course. Note that plagiarism is using another's words without acknowledging the source. It includes minor tweaking of sentences and near quotes. Thus, when you do your presentation and associated outline and abstract, be sure that you use your own wording. Some special phrasings must stay the same to retain meaning, but "lifting" of entire sentences or using entire paragraphs with just some minor rewording are both considered plagiarism!
- 2) Let me know if there is some reason why you need your cell phone on during class. Otherwise, cell phones should be **OFF** during class. This includes texting which is both rude and disruptive to your concentration and mine. Research has shown that "multitaskers" have decreased comprehension and accomplishment than "single taskers." When you are in class, be totally in class.
- 3) Audio and video recording of this class are not allowed. Let me know if you have some reason why you think you should have an exception to this.