

ZOOL 4630 – Ornithology

Spring 2019

Instructor – Dr. Ann Kohlhaas

Office & Office hours: N275, Tues & Wed 1:30 – 3:00 pm, and by appt.

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Course location & times – N206, 8 am – noon Tuesdays and Thursdays

Books: **1) The Cornell Lab of Ornithology Handbook of Bird Biology, 3rd ed., 2016**, by I. J. Lovette and J. W. Fitzpatrick, eds., and **2) an approved field guide** (e.g. National Geographic Field Guide to the Birds of North America, 7th ed., 2017, OR Sibley Birds West: Field Guide to Birds of Western North America, 2016)

Tentative Schedule:

<u>Date</u>	<u>Lecture</u>	<u>Lab</u>
Jan 29	Introduction (Ch. 1)	Intro. to Birding Boxes 2.01 & 2.02
Jan 31	Systematics (Ch. 2)	Struthioniformes Anseriformes

Feb 5	Systematics (Ch. 2)	Galliformes Podicipediformes Pelecaniformes Suliformes
Feb 7	Evolution (Ch. 2.4)	Accipitriformes Falconiformes

Feb 12	Flight (Ch. 5)	External Morphology
Feb 14	Field Trip – San Luis NWR -----> 	

Feb 19	Feathers (Ch. 4)	Procellariiformes Gaviiformes Gruiformes
Feb 21	Exam 1 (70 pts.)	

Feb 26	Endothermy & Thermoregulation (Ch. 7.2)	Charadriiformes
Feb 28	Field Trip – San Luis NWR -----> 	

March 5	Respiration & Circulation (Ch. 6.3 and 6.6)	Charadriiformes
March 7	Digestion, Feeding, & Excretion (Ch. 6.4, 6.5, 7.1, 7.3, 8)	Internal Morphology

March 12	Brain and Senses (Ch. 6.7, 6.8, 7.7, 7.8)	Review
March 14	Field Trip – Knight’s Ferry -----> 	

March 18-22	SPRING BREAK	

March 26	Annual Cycles (Ch.12)	Lab Exam 1 (100 pts.)
March 28	Navigation & Migration(Ch. 12)	Columbiformes Cuculiformes

April 2	Navigation & Migration(Ch. 12)	Apodiformes
April 4	Field Trip – Del Puerto Canyon -----> 	

April 9	Exam 2 (100 pts.)	Coraciiformes Piciformes
April 11	Reproductive Physiology (Ch. 6.5, 11.5)	Strigiformes Caprimulgiformes

April 16	Mating & Breeding Systems (Ch. 9.1 – 9.5)	Passeriformes
April 18	Field Trip – Turlock Lake State Park -----> 	

April 23	Nests & Nesting (Ch. 11)	Passeriformes
April 25	Development & Parental Care (Ch. 11)	Passeriformes

April 30	Development & Parental Care (Ch. 11)	Passeriformes
May 2	Communication & Social Behavior (Ch. 9.6, 10)	Passeriformes

May 7	Communication & Social Behavior (Ch. 9.6, 10)	Passeriformes
May 9	Ecology & Population Dynamics (Ch. 13)	Lab Exam 2 (120 pts.)

May 14	Bird Conservation (Ch. 15)	Lab Exercise

May 16, Thursday, 11:15 am FINAL EXAM (130 pts.)		

Purpose

The purpose of this course is to become familiar with bird diversity and adaptation.

Objectives

- to gain a working knowledge of overall bird diversity.
- to learn the important and identifying features and adaptations of birds.
- to become familiar with the natural history aspects and ecological roles of birds.
- to attain the skills and knowledge required for basic bird identification and study.

Grading

Lecture Exams (70 + 100 +130)	= 300
Lab Exams (100 + 120)	= 220
Quizzes (8 x 10 ea. = 100)	= 80
Presentation	= 50
Participation/Notebook	<u>=100</u>
	750

Only letter grades will be assigned. The grades will be determined by a percentage of the possible points earned as follows: 90+% = A, 80-89.5% = B, 70-79.5% = C, 60-69.5% = D, and 59.5% and below = F.

Lecture Exams: There will be two midterm lecture exams and one final exam. The final exam is comprehensive. The material will be from the lectures and any assigned or referred readings or presentations. Exam questions will be of any type, except multiple-choice. Most commonly, exam questions will be identification, fill in the blank, definitions, lists, explanations, diagrams, and short essays.

Lab Exams: There will be one midterm lab exam worth 100 pts. and one final lab exam worth 120 pts. The final exam is comprehensive. The material will be from the laboratory and field portions of the course. The questions will most commonly require one word or at least very few words. The questions will commonly be identifications, morphology or related functioning, or ecological habits, such as diet, habitat, etc.

Quizzes: Quizzes will be on lab and field trip information. On class days, they will be at 8 am sharp. However, some quiz points may be earned during field trips. The questions will mostly be identifications, but may also be about diet or other natural history that we had already studied. These quizzes will be advantageous to you for two reasons. Firstly, this encourages studying steadily throughout the term and thus results in better outcomes on the major exams. Secondly, this is a very good opportunity for a high grade as at least ten quizzes will be given, and only the top eight quiz grades count. Since there are extra quizzes, missed quizzes cannot be made up.

Participation: Participation includes attendance and appropriate interaction and behavior in lectures, labs, and field trips. For instance, you are expected to attend all lectures, labs, and field trips. Attendance includes being on time, attentive, and appropriate participation in the activities.

During lectures, you are expected to pay attention to the lecturer, take notes, refrain from private conversations, refrain from web surfing and texting, and ask relevant questions.

During labs, you are expected to do your own work, also work cooperatively, handle the specimens carefully as specified at the beginning of the semester, and follow all lab safety rules.

During field trips, you are expected to follow the directions of the instructor. For instance, these will include no private conversations when we are actively birding, no loud communications when birding, and staying with the instructor. Be certain that you are always ready and participating in the field trip. You should always have and use your binoculars, field guide, and field notebook.

Participation points will be apportioned as follows: 20 pts. total for daily lecture/lab participation and 80 pts. total for daily field trip participation. Your field notebook will count for half of the field trip points. Your field notebook should contain the following information for each field trip: date, location, a list of species seen, and notes for each species on habitat, behavior, and any other relevant information. Missed field trip points can only be made up (with an extra assignment) if a verifiable excuse is provided.

Presentations will be on refereed published scientific papers on birds. Each student will do one presentation. Each presentation has three parts: an oral presentation, a written outline, and a written abstract.

Each oral presentation will be 9 - 12 minutes duration and using Powerpoint. It should include a short introduction to the study, a thorough explanation of the methods, clear results, and a short conclusion of the major findings.

Each typed outline will be a brief outline of the informational points in the oral presentation. The outline must conclude with two major “points to remember” from the paper. Note: these cannot be “random” points, but must be the major conclusions of the paper. Enough photocopies of the outline must be ready and given to everyone in the class prior to the oral presentation. This should be 1-2 pages in length, no more, no less.

Each typed abstract is, of course, on the paper being presented. An abstract consists of 1-2 sentences of introduction, 1-2 sentences on methods, and several sentences on major findings. This is generally written as one or two paragraphs. The lower and upper page limits for this are $\frac{3}{4}$ to $1\frac{1}{2}$ pages, double-spaced. Only one copy needs to be turned in directly to your teacher. This is also due on presentation day. Note that you cannot turn in the abstract which was published with your paper!

No quotes will be allowed in any part of the presentation or associated written tasks! No plagiarism allowed!

Papers for the presentation must come from refereed scientific journals and be approved by your instructor. Only papers published in 2018 and 2019 will be approved. The following scientific journals are focused on birds: Auk, Condor, Wilson Bulletin, and Journal of Field Ornithology. You should be able to access recent issues of Auk and Condor via the library website. Papers from other journals may be allowed with prior approval of your instructor.

Note: Proposed papers for presentation must be turned in (1st page of pdf) by 8 am on Feb 7!!

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

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. Points for extra credit work will be discussed prior to participation, but basically I foresee 20 pts. for outdoor work of ½ to 1 full day, or one short paper. 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 April 25. All extra credit work is due by 8 am on May 2. Final grades will be final.

CAUTIONS:

- Late materials lose 10 % of possible points per day late.
- Adherence to field trip rules is mandatory. Non-adherence to the regulations can result in grade penalties, including failing the course.
- 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.
- 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!
- Cell phones should be off and put away during class.
- Audio and video recording of class is not allowed.