

BIOL 4510 – Ornithology Syllabus - Spring 2018

Prerequisite: Grade of C or higher in BIOL 1200

Recommended that you have taken BIOL 3800 (Ecology and Evolution)

Lectures: KH B2012; TuTh 2:00pm-2:50pm

Labs and Field Trips:

Weeks 1-3 ASCL 243; Friday (9:30am-12pm)

Weeks 4-16, Fridays (7a-12p) – Field trips will be on an ‘every-other week’ schedule on Fridays. Please see field trip schedule at end of syllabus for dates and meeting locations.

Instructor information

Instructor

Dr. Eric Wood

Email

ericmwood@calstatela.edu

Office, Hours, & Phone

La Kretz (A) 312, R 12p-1p, x 2055

OFFICE HOURS: I have one time listed above for formal office hours. If you would like to schedule a meeting outside of my office hours, please email me or discuss with me after class.

REQUIRED RESOURCES

1. eBird account, used for logging bird observations <http://ebird.org/content/ebird/>
2. Bird identification guide:
 - a. Merlin App for smartphone – free bird identification app with songs and range maps <http://merlin.allaboutbirds.org/>
 - b. The Sibley Field Guide to Birds of Western North America (2003), David Allen Sibley
3. Life of Birds Video Series – BBC video documentary narrated by David Attenborough (\$8.99 from Amazon Video for full series – 10 videos: <https://www.amazon.com/Life-of-Birds/dp/B001EBTQ8G>)

Recommended Resources

1. Ornithology 3rd Edition – Gill (supplied on Moodle)
2. Bound field notebook (recommend: Rite in the Rain #374-M Mini Field Flex Bound Book, 3 1/2" x 5", 112 Pages)

COURSE WEBSITE: The course site on Moodle will be your resource for acquiring information and required and recommended materials for this course.

Course Overview

Ornithology is the study of birds. Under this very broad umbrella, an ornithologist may study physiology, genetics, ecology, evolution, or conservation, covering information from individuals to populations and communities.

I have two primary goals for this course. The first is for students to develop a broad understanding of avian biology and ecology; including morphology, physiology, avian life history, habitat ecology, and conservation. I am an avian ecologist, and I will heavily emphasize principles of avian ecology during lecture and our field trips. The second is for students to learn how to identify birds by sight and sound. This is a field-intensive course where students will be required to attend field trips based in various habitats throughout the Los Angeles area, and an overnight trip to the Mojave Desert National Monument.

Course Learning Objectives

1. Demonstrate an understanding of the fundamental concepts of ornithology, across evolutionary, population, community, and ecosystems scales
2. Develop knowledge of bird topography and physiology
3. Identify, by sight and sound (for select species), upwards of 100 species of birds found throughout the Los Angeles region
4. Become adept at using a field guide for identifying wildlife
5. Learn field skills used by research ornithologists
6. Demonstrate an ability to carefully record bird observations and field conditions using a notebook and eBird (software database application developed by the Cornell Lab of Ornithology)
7. Effectively communicate scientific information by discussing scientific material that is focused on ornithology and avian ecology
8. Demonstrate an understanding of the application of avian science to society and everyday life

Course Policies

ATTENDANCE AND PARTICIPATION in the field trips is required, and forms a major part of your grade (70 points). Students will sign a roster at the beginning of each lab or field trip. ***It is imperative that you organize transportation to field trips ahead of time and that you arrive on time. I will not wait to start field trips, as that is unfair to all students who are on time. Therefore, a late arrival will mean losing your participation points.*** Since the class schedule is set in advance, conflicts with outside employment will not be accepted as a valid excuse for absence from a field trip. Students with a medical emergency (letter required), or who have checked with me at least two weeks in advance of a field trip regarding a scheduling conflict may be excused at my discretion. My exams are heavily based off of my lectures and I often discuss material in class that is not available on slides. Therefore, it is highly recommended that you attend all lectures, that you arrive to lecture on time, and that you participate during discussion and question & answer.

OVERNIGHT FIELD TRIP. We will do one overnight field trip to the Desert Studies Center (<http://nsm.fullerton.edu/dsc/>) during the weekend of **May 4-6**. We will be staying for two nights (4th and 5th) and we will spend the entire day of the 5th in the field. The evening of the 5th we will explore the desert surroundings for nocturnal animals (e.g. scorpions), and I will give a field lecture on astronomy (you can see a lot of stars in the desert!). We will also spend the morning of the 6th birding at the center and completing a field quiz. It is a 3 hr and 45 min drive to the center (without traffic) But, note that the Desert Studies Center is on the 15 (the route to Las Vegas) and it can be very busy on a Friday afternoon. Best to leave early on the 4th to

ensure a smooth drive. I will be there by midday on the 4th and we are welcome anytime that day. All are required to attend as there will be no opportunities for making up the assignments and points for the trip (80 pts). ***Cost for the field trip is \$70***, which includes lodging and food. We will arrange payments during the first few weeks of course. This is a great deal, and the idea is that the costs for class materials are low so that you will be able to afford the trip. If this will be a problem, please speak to me. The overnight field trip will be a blast. ***However, as with all field trips, no drugs or alcohol are allowed, and you will be expected to be on your very best behavior.*** We will be guests at the center, and you are expected to always act with respect to the property, the environment, and staff. If you violate these rules, you will be reported to the university disciplinary committee and given a failing grade in the class.

OTHER REQUIREMENTS: Each student is expected to have access to the MyCalStateLA campus portal. Class materials will be made available on the course Moodle site, accessible through the MyCalStateLA portal. Email correspondence with me must occur through your Cal State LA account. ***I cannot and will not reply to emails received from accounts administered outside of Cal State LA.***

ACADEMIC HONESTY: Students are expected to abide by the University's Academic Honesty Policy, (<http://www.calstatela.edu/academic/senate/handbook/ch5a.htm>). Students who violate this policy will be subject to disciplinary action, and may receive a failing grade in the course for a single violation. Students are expected to do independent work on all exams, homework, field notebooks, field quizzes, and written assignments. Copying from each other or from any other source without proper attribution will be considered plagiarism, and I *will* discipline offenders accordingly.

STUDENTS WITH DISABILITIES: Reasonable accommodation will be provided to students with documented disabilities on a case-by-case basis. Students must register with the Office for Students with Disabilities (<http://web.calstatela.edu/univ/osd/>; Administration Building, Room 127; 323-343-3140) and provide appropriate documentation to the university before any academic adjustment will be provided. It is the responsibility of the student to initiate any request for accommodation in the course; the Office for Students with Disabilities does NOT notify faculty unless the student requests it for that course. I am happy to make accommodations, but I cannot make them without prior notice.

LAPTOPS IN CLASS: I will make the slides available on Moodle prior to lecture. I encourage you to take handwritten notes during lectures based on the slides (it may be useful to print them out) rather than blankly following along with your laptop. Further, you are permitted to voice record my lectures. My lectures will almost always include graphs and figures, which are not easy to reproduce in typed notes. For the first two weeks in lab, we will use laptops for learning avian physiology.

MENTAL AND PHYSICAL HEALTH: College can be extremely stressful, with both academic and personal challenges. Diminished mental and physical health, including significant stress, mood changes, excessive anxiety, or problems with eating or sleeping can interfere with academic performance. The source of symptoms may be strictly related to your coursework; if so, please speak with me. However, problems with relationships, family worries, loss, or a personal struggle or crisis can also contribute to decreased academic performance. Please remember that help is always available. Cal State LA provides resources for Counseling and Psychological

Services (<https://www.calstatela.edu/mindmatters>) to support the academic success of students.

Assessment

Point values are as follows	Points	% of grade
Attendance (Field trips) and Participation (Lectures)	80	16
Moodle Video Assignments (Eleven - 5 pts each)	55	11
Exam 1	60	12
Exam 2	60	12
Final Examination	90	18
Lab Practical	20	4
Lab Assignment - Bird Morphology and Physiology	20	4
Desert Ecology Assignment (Saturday at Field Trip)	25	5
Desert Ecology Field Quiz (Sunday Morning)	20	4
Desert Ecology Field Trip Participation	20	4
Field Final (Bird identification - sight and sound)	30	6
eBird checklist (Two check-ins, 10 pts each)	20	4
Total	500	100%

GRADING: Grading is based on the +/- system. Your letter grade will be computed from your total number of points as follows:

> 465	A	414-400	B-	349-330	D+
464-450	A-	399-385	C+	329-300	D
449-435	B+	384-365	C	299-275	D-
434-415	B	364-350	C-	< 275	F

ATTENDANCE AND PARTICIPATION, 80 points. Attendance is mandatory for field trips (10 pts for each of the seven field trips, 70 pts total) and participation in lecture is worth 10 pts.

LIFE OF BIRDS VIDEO ASSIGNMENTS: 55 points. You will be watching the Life of Birds Documentary Series produced by the BBC and narrated by David Attenborough. The series is an *outstanding* resource for learning ornithology. Each assignment will be based on a selected video (see end of syllabus for video schedule and due dates) and will consist of 5-10 questions that you will answer on Moodle. Each student is responsible for purchasing/accessing the series. For students with hardships who cannot purchase, I will be happy to stream from a laptop in my lab (room 310, La Kretz) during my office hours. If a student wishes to use this option, arrangement must be made with me by Tuesday's lecture of a given week (office hours are on Thursday from 12p-1p).

EXAMS (3). 210 points. Two examinations (60 pts each) and a final (90 pts), which will reflect the material covered during lecture activities and readings. Exams will be composed of multiple choice, and short-answer questions. Make-up exams will be given only for absences

with valid, documented excuses. The final exam is cumulative, but will emphasize material covered during the last section of the course.

LAB ASSIGNMENT AND QUIZZES: 40 points. During the first two lab sessions, you will be completing an assignment, done over the first two weeks, to prepare you for the practical (20 pts). During the third week of lab, we will do a lab practical (20 pts), which will cover bird morphology, physiology, and some taxonomy.

FIELD QUIZZES: 50 points. During our trip to the Desert Studies Center, we will do a quiz where you will identify 20 bird species that we see in the field (20 pts). During week 16, we will have a field final at Eaton and Canyon Nature Center (30 pts), where you will identify 20+ bird species that we will find as a group. Further, you will be quizzed on a handful of bird songs (I will let you know which birds to focus your study for each field trip). You will record answers to the field quizzes in your notebook and hand responses to me immediately following a quiz.

DESERT STUDIES CENTER, The desert ecology trip has one assignment (25 pts), a field quiz (20 pts), and participation points (20 pts). I will place further documentation and instructions for the field trip on the course Moodle site.

eBIRD OBSERVATIONS, 20 points. For each field trip, you will be required to enter data into your eBird database. eBird is a citizen-science based database compiled by the Cornell Lab of Ornithology, and is a great tool for keeping track of which birds you see and where. Further, eBird is a phenomenal tool for learning where to go birding and what you will possibly see at locations. You will turn in to Moodle two summaries of your database (an exported excel sheet), and a brief overview of field notes. I will provide full details during the first few weeks of class.

Exam Preparation: This is a challenging yet fun course, and you should review material early and often. The lecture for this class will rely on the textbook/readings, and my own experience. Prioritization of the material should be straightforward: if I cover it in lecture, it is material that I expect you to know for exams.

Field trip preparation: For each field trip, you will be tasked with learning and identifying upwards of 30+ species (over 100 species total). I will provide an excel spreadsheet with the 'main' species that you will need to know for each field trip. As with any field skill, birding takes an immense amount of practice, and I expect you to use your field guide and Merlin bird identification app to learn all birds by sight (and some by sound – see excel sheet). Your time during field trips will be greatly enhanced if you study beforehand, and will greatly help you for your field quizzes.

Field trip gear: I will provide binoculars and carry spotting scopes for your use. You need to wear comfortable clothes and shoes, and dress for the weather. We will be hiking between two-to-four miles for each trip, and out in the sun for up to four hours. Plan accordingly (i.e. sunscreen, hat, long sleeves, food, and water). We will not be bushwhacking, and rather walking on trails or pathways. Bring a backpack to hold all of your items.

Extra credit: There are no extra credit assignments.

Lecture Schedule - BIOL 4510 / Ornithology / Spring 2018

Note that dates, topics and activities may change. Any changes to the schedule will be announced in class or in labs and posted online on the class Moodle site; it is the responsibility of the student to remain informed of any announced schedule changes.

	Week	Day/Date	Lecture Topic	Lab Topic and Field Trip Schedule	Suggested Readings
Part 1	1	T - 1/23	Course Introduction & What is a bird?		Ch.1
<i>Origins</i>		R - 1/25	Evolution and Bird Diversity	F, 1/26 - Intro to bird morphology and physiology	Ch.2
	2	T - 1/30	Systematics		Ch.3
Part 2: Form & Function		R - 2/1	Feathers	F, 2/2 - Bird morphology and physiology	Ch.4
	3	T - 2/6	Feathers and Flight		Ch.4, 5
		R - 2/8	Flight	F, 2/9 - Lab practical	Ch.5
Part 3: Behavior & Communication	4	T - 2/13	Physiology, Senses, Brains, and Intelligence		Ch.6, 7
		R - 2/15	Physiology, Senses, Brains, and Intelligence	F, 2/16 - Field Trip (Bolsa Chica)	Ch.6, 7
	5	T - 2/20	Vocalizations		Ch.8
		R - 2/22	EXAM #1 (Parts 1, 2, and 3)		
Part 4	6	T - 2/27	The Annual Cycle of Birds		Ch.9
<i>Behavior & the Environment</i>		R - 3/1	Migration, Navigation, Connectivity	F, 3/2 - Field Trip (Ballona Wetlands)	Ch.10
	7	T - 3/6	Migration, Navigation, Connectivity		Ch.10
Part 5: Avian Life Histories		R - 3/8	Social Behavior		Ch.11
	8	T - 3/13	Mates		Ch.12
		R - 3/15	TBD	F, 3/16 - Field Trip (Sea and Sage, Irvine)	
	9	T - 3/20	Breeding Systems		Ch.13
		R - 3/22	Reproduction and the Bird Egg	F, 3/23 - Field Trip (Legg Lake)	Ch.14
	10	T - 3/27	No class - Spring Break		
		R - 3/29	No class - Spring Break		

Part 5: Avian Life	11	T - 4/3	Nests, and Incubation	<i>F, 4/6 - Field Trip (Hahamongna)</i>	Ch.15
<i>Histories cont.</i>		R - 4/5	Parents and their Offspring		Ch.16
	12	T - 4/10	<i>TBD</i>		
		R - 4/12	EXAM #2 (Parts 4 and 5)		
Part 6: Avian Ecology	13	T - 4/17	Habitat Ecology - part 1		Johnson and Wood 2017
<i>& Techniques</i>		R - 4/19	Habitat Ecology - part 2	<i>F, 4/20 - Field Trip (Switzer)</i>	
	14	T - 4/24	China Bird Research		
Part 7: Pop. Dynamics		R - 4/26	Agroecosystems and Birds		
<i>and Conservation</i>	15	T - 5/1	<i>TBD</i>		
		R - 5/3	Birds in the Urban Environment	<i>F, 5/4-6 - Field Trip (Desert Studies Center)</i>	
	16	T - 5/8	Conservation		
		R - 5/10	State of the Birds	<i>F, 5/11 - Field Trip (Eaton Canyon)</i>	PIF - State of the Birds 2016
	17	TBD	FINAL EXAM (Parts 6-7 - 75%; Parts 1-5 - 25%)	TBD	

Field Trip Schedule - BIOL 4510 / Ornithology / Spring 2018

Note that field trip locations may change. Any changes to the field trips will be announced in lecture and posted online on the class Moodle site; it is the responsibility of the student to remain informed of any announced schedule changes.

ALL FIELD TRIPS MEET AT 7AM AT MEETING LOCATION
To reach meeting location, copy and paste lat/long into gmaps/apple maps

Week	Day/Date	Field Trip	Meeting Location	Habitat	Bird List - on spreadsheet
4	F - 2/16	Bolsa Chica Conservancy	33.695578, -118.046624	Salt Marsh - Nearshore	Bolsa Chica
6	F - 3/2	Ballona Wetlands (meet at 7:15a)	33.960515, -118.451577	Marsh - Nearshore	Ballona
8	F - 3/16	San Joaquin Marsh (Sea and Sage)	33.661080, -117.840464	Marsh and coastal sage scrub	San Joaquin Marsh
9	F - 3/23	Whittier Narrows Nature Center	34.034394, -118.044583	Riparian and Woodland	Whittier Narrows
11	F - 4/6	Hahamongna Watershed	34.192728, -118.175858	Floodplain and Woodland	Hahamongna Watershed
13	F - 4/20	Switzer Picnic Area	34.266121, -118.144341	Montane	Switzer Picnic Area
15	F - 5/4-6	<i>Desert Studies Center (overnight)</i>	35.143561, -116.105648	Mojave Desert	Desert Studies Center
16	F - 5/11	Eaton Canyon (field final)	34.175691, -118.096477	Chaparral and Woodland	Eaton Canyon

Video Assignment Schedule - BIOL 4510 / Ornithology / Spring 2018

Note that video quizzes may change. Any changes will be announced in lecture and posted online on the class Moodle site; it is the responsibility of the student to remain informed of any announced schedule changes.

Moodle assignment due date (Assignment closes at midnight)	Video schedule
F - 2/2	VIDEO 1: Life of Birds (To Fly or Not to Fly)
F - 2/9	VIDEO 2: Life of Birds (The Mastery of Flight)
F - 2/16	VIDEO 3: Life of Birds (Signals and Songs)
F - 3/2	VIDEO 4: Gulf Crossing: Story of Spring - https://goo.gl/M4YKCh
F - 3/9	VIDEO 5: Life of Birds (Finding Partners)
F - 3/16	VIDEO 6: Life of Birds (The Demands of the Egg)
F - 3/23	VIDEO 7: Life of Birds (The Problems of Parenthood)
F - 4/6	VIDEO 8: Life of Birds (The Insatiable Appetite)
F - 4/20	VIDEO 9: Life of Birds (Meat Eaters)
F - 4/27	VIDEO 10: Life of Birds (Fishing for a Living)
F - 5/4	VIDEO 11: Life of Birds (The Limits of Endurance)