

Bisc 334: Ornithology
University of Mississippi
Spring Semester 2020

Instructor: Dr. Jason Hoeksema (phone: 915-1275, e-mail: hoeksema@olemiss.edu)

Office hours: Tues and Thurs 11-12 or by appointment (Shoemaker Hall, Rm. 318)

Lecture/Lab: T & Th 8:00 to 10:50 (Shoemaker Hall, Rm. 205)

Course Description:

Bisc 334 introduces students to all aspects of the biology of birds, including development, anatomy, physiology, behavior, ecology, evolution, systematics, field identification, and conservation. Course instruction consists of a combination of lectures, laboratory exercises, and field trips. Assessment includes laboratory projects, quizzes, written exams, homework assignments, presentations, and field identification tests.

Course Learning Outcomes:

By the end of the semester, students should be able to:

- Understand the structure and function of the major organ systems of birds, including skin/feathers, muscles & bones, digestive system, circulatory system, and reproductive system
- Recognize and interpret important behaviors of birds such as song, territoriality, nesting, foraging, and migration
- Understand the ecological factors influencing the abundance and distribution of bird species
- Know the key characteristics and evolutionary relationships of bird lineages
- Identify bird species occurring in a diversity of habitats in Mississippi, by sight and sound

Required Materials:

Bird Identification Guide: The Sibley field guide to birds of eastern North America, 2nd Edition by David A. Sibley. Alfred A. Knopf Publishing Company, 2016.

Equipment: One pair of functioning binoculars appropriate for field observation of birds, i.e. 7-10 magnification x 30-50 mm objective lens diameter (e.g., 7 x 35, 8 x 35, 8 x 40, or 10 x 40)

Schedule

Date	Lecture	Lab
Tues. Jan. 21	Unique features & evolutionary origins of birds	Intro to birds of Mississippi (part 1), and bird ID Basics
Thur. Jan. 23	Classification and diversification of birds	Birding on campus, eBird data entry
Tues. Jan. 28	Feathers, plumages, & molting, Part 1	Topography of the bird body
Thurs. Jan. 30	Feathers, plumages, & molting, Part 2	Feathers
Tues. Feb. 4	Intro to birds of Mississippi (part 2)	Field Trip
Thurs. Feb. 6	Bones & muscles	Skeleton, begin specimen project
Tues. Feb. 11	Respiration, circulation, digestive, & excretion systems	Continue specimens
Thurs. Feb. 13	Sensory Systems	Continue specimens
Tues. Feb. 18	Reproduction & Nesting	Finish specimens
Thurs. Feb. 20	TEST 1 (Lecture & Lab)	
Tues. Feb. 25	Mating systems	Songs & calls
Thurs. Feb. 27	Social behavior: Territoriality & flocking	Species, families, & orders
Tues. Mar. 3	Population ecology	Species, families, & orders (continued)
Thurs. Mar. 5	Community ecology	Species, families, & orders (continued)
Mar. 10 & 12	NO CLASS—SPRING BREAK	
Tues. Mar. 17	Annual cycles & migration	eBird exercise
Thurs. Mar. 19	Conservation biology	Species, families, & orders (continued)
Tues. Mar. 24	Presentations	
Thurs. Mar. 26	TEST 2: Lab practical portion	
Tues. Mar. 31	TEST 2: Written portion	
Thurs. Apr. 2	Field trip (7:30 a.m.)	
Tues. Apr. 7	Field trip	
Thurs. Apr. 9	Field trip	
Tues. Apr. 14	Field trip	
Thurs. Apr. 16	Field trip	
Tues. Apr. 21	Field trip	
Thurs. Apr. 23	Field trip	
Tues. Apr. 28	Field trip	
Thurs. Apr. 30	Field trip	
Tues. May 5	Final Exam: Field Test (early morning, time & location to be announced)	

Outside activities: In addition to the activities listed above, you are required to participate in a subset of “optional” activities outside of class, including field trips and attendance of seminars and bird-related events. Details on those activities will be provided separately.

Blackboard, and lecture files: Partial lecture notes, will be available for download from Blackboard before each lecture. Note: The files available for download are in broad outline form only, and do not contain all material that will be tested on exams. Thorough note-taking in class will be required to document additional information mentioned by the instructor, in order to obtain all required material. The downloadable files are intended to somewhat reduce the amount of writing and sketching that students have to do during class, not to replace note-taking.

Grading/Points Breakdown:

Source	Points	Grading scale (+/- scale):
Test 1 (lecture & lab)	100	90%+ = A (or A-)
Test 2 (lecture & lab)	100	80-89% = B (+/-)
Presentation	50	70-79% = C (+/-)
Final Field Test	100	60-69% = D
Lab exercises + participation	100	<60% = F
Outside activities	125	
April Field Trips	225 (9 trips x 25 pts each)	
Total	800	

Expectations, Attendance, Participation, and Preparation: A laboratory course in biology requires a substantial time commitment, both in and out of the classroom. For each hour of class (lecture and lab), you should plan to study for at least two hours outside of class in preparation, and/or to complete at least two hours of homework or project activities. Please consider this commitment carefully. If you do not study regularly outside of class, and prepare for lecture and lab by reading and studying assigned materials (see below for study suggestions), class activities will likely be difficult to follow, and exams will also be very difficult. You are expected to attend and be *on time* for **ALL** lectures, labs, and field trips. Attendance of all field trips is essential preparation for the final field test, and the 25 pts for each April field trip cannot be made up.

Cell phones, texting, e-mail and web-browsing in class and meetings:

Turn off and put away your phones before field trips and before entering lecture, lab, or a meeting with the instructor. The only acceptable use of a phone during a field trip is to post on social media about how much fun you are having while birding. Laptop computers and other note-taking devices are allowed in lecture, but **ONLY** for taking notes. Texting, e-mailing, internet browsing, and making phone calls are all **strictly prohibited** during lecture, lab, field trips, and meetings with instructors.