Course overview: Ornithology is designed to cover the major areas of avian biology, introduce students to techniques used in studying wild birds and teach students how to identify the majority of avian species found in western North America. The course consists of lectures, laboratory exercises, field trips and independent activities. This course meets the Field Course Requirement for the Biology major and the ornithology requirement for federal employment.

Lecture/lab/field sessions Tuesday and Thursday 7:30-10:15 BNR 7 Quizzes will be given at the beginning of lab sessions and on field trips. Worksheets are not turned in and can be used as a study guide for the laboratory sessions. The learning objectives at the beginning of each class can be used as a study guide.

Instructor: Dr. Kim Sullivan BNR 313, yejunco@biology.usu.edu, 435-770-6806 Office hours by appointment, all lectures will be posted on Canvas.

Teaching assistant: Dylan Hopkins dhopkins415@gmail.com BNR 206. Undergraduate teaching fellow: Ryan Sabel sabelryan@gmail.com


Online resources:
All About Birds free www.birds.cornell.edu
All About Birdsong free www.birds.cornell.edu
Merlin smartphone app – free www.birds.edu
iBird Pro app $

iBird West app $
Audubon Birds Pro app $
Sibley Birds of North America or Guide to Birds of western North America app $
National Geographic Guide to North American Birds app $
Petersen Field Guide to Western Birds app $
The apps run $5-30. You can often find one on sale. Some are for iphone, others for Android platform.
Western Soundscapes http://westernsoundscape.org/ free
Utah Division of Wildlife website free ebird ebird.org

Attendance: All students enrolled in the course are expected to attend all lectures, labs, and field trips.
**Course Goals:** Students will be able to identify by sight and sound the common bird species of the intermountain west and will be able to predict avian occurrence from location and habitat type.

Students will discuss and answer questions on topics in the major research areas in avian biology.

Students will answer questions on the basics of avian evolution, physiology, anatomy, flight, systematics, ecology, field techniques and natural history.

Students will understand the concepts of hypotheses and theories in science and that science is a way of knowing rather than a collection of facts.

Students will engage in authentic research and communicate their findings at a poster symposium.

**Lab Fee:** The lab fee covers minivan rentals for the field trips, repair and replacement of spotting scopes, tripods and other equipment specifically used in this class, expendable lab supplies including the pigeons used for dissection, safety equipment and supplies, and copying of course materials. In addition, the lab fee provides some of the costs of teaching assistants for this course.

Bring your field guide to lab where indicated. For the field trips bring your field guide, binoculars, Cache County bird list, writing utensil and a notebook. Dress for the weather on the field trips. Note: binoculars are required on the field trips. Quizzes will be given at the start of labs or during field trips. Quizzes cannot be made up but four scores will be dropped.

Students will provide their own transportation to the field trips held in Logan. For the other field trips, students will meet at the NE corner of BNR and we will travel by university mini-van. Disruptive behavior will not be tolerated. Students must use seatbelts at all times in university vehicles.

Weather conditions may necessitate changing field trip dates. If a field trip is cancelled, a lab will be held instead. The schedule is tentative and may be changed to accommodate weather and migration patterns.

**Lab Safety:** No food or drink is allowed in BNR 7. Students should wear gloves and wash hands if handling bird specimens. Students will wear protective eye wear and aprons during the dissections. Students must wear closed toe shoes and long pants or long skirts in lab.

**Use of instructional materials:** Instructional materials for this course have been acquired through lab course fees and Biology Department funds. To ensure that all students have access to the materials, students are provided with the lock combination to BNR 7. Students are not to remove any materials from BNR 7 without written permission from the instructor or teaching assistant. Removing teaching materials without permission may result in a lowered grade, dismissal from the class and prosecution for theft of university property.
Students with disabilities: The Americans with Disabilities Act states: "Reasonable accommodation will be provided for all persons with disabilities in order to ensure equal participation within the program. If a student has a disability that will likely require some accommodation by the instructor, the student must contact the instructor and document the disability through the Disability Resource Center (797-2444), preferably during the first week of the course. Any request for special consideration relating to attendance, pedagogy, taking of examinations, etc., must be discussed with and approved by the instructor. In cooperation with the Disability Resource Center, course materials can be provided in alternative format, large print, audio, diskette, or Braille." If you are working with the DRC, it is your responsibility to schedule a room for your exams. All exams should be taken at the same time as the rest of the class or the on the previous day.

Schedule (may be changed to accommodate weather, migration patterns or other unforeseen events)

Tues Jan 10  Binoculars and field guides, introduction to the course, introduction to the research projects, Birds and windows, pre-quiz. Read Chapter 1.

Thurs Jan 12 Climate change assignment, library research techniques, read climate change paper before class, discussion of climate change paper. Paper is available under Files in Canvas.


Thurs Jan 19 Evolution of Birds. External anatomy, OEJ Intro, pioneers, diversification 1 and 2. Read Chapter 3 How birds evolve. How to learn bird songs.


Thurs Feb 16 Song. Read Chapter 10. How to learn bird songs. OEJ Appalachian Spring and Outro. Raptor ID. Bring field guide to class.


Tues Feb 21st – no class

Thurs Feb 23 Foraging and Predation Read Chapter 8. Waterbird ID. Watching Wild Wings video. Bring field guide to class.

Tues Feb 28 Bird Banding or Taxidermy demonstration.

Thurs March 2 Mating systems and breeding biology. Read Chapter 9 and Chapter 11. Shorebird and allies ID 1. Bring field guide to class.

Tues March 7 and Thurs March 9 - no class

Tues March 14 Parental Care. Passerine ID 1. Bring field guide to class.

Thurs March 16 Migration and navigation. Read Chapter 12. Passerine ID 2. Bring field guide to class.

Tues March 21 Populations and Communities. Read Chapters 13 and 14. Passerine ID 3.

Thurs March 23 Willow Park Zoo, First Dam. Bring field guide and binoculars, dress for the weather. Provide own transportation.

Tues March 28 Sewage Lagoons and Sue’s Ponds or Hyrum Reservoir. Bring field guide and binoculars, dress for the weather

Thurs March 30 Midterm 2 Census Techniques (in BNR 7)

Tues April 4 Mendon Loop Bring field guide and binoculars, dress for the weather
Thurs April 6  Benson Loop  Bring field guide and binoculars, dress for the weather

Tues  April 11  Hyde Park Lane  Bring field guide and binoculars, dress for the weather

Thurs  April 13 Amalga Barrens or passerine ID practice. Bring field guide and binoculars, dress for the weather

Tues April 18 Logan River Golf Course Trail- provide own transportation. Bring field guide and binoculars, dress for the weather

Thur April 20 Census.  Bring field guide and binoculars, dress for the weather

Tues April 25  Best of Cache Valley Bring field guide and binoculars, dress for the weather

Wed April 26  Probable date of poster session.

Thur April 27  Birdathon. Bring field guide and binoculars, dress for the weather

OEJ:- Ordinary Extraordinary Junco videos are available at http://juncoproject.org/ if you wish to view the videos on your own.

Grading

Midterm 1  100 points
Midterm 2  100 points
Lab quizzes 2 points each 50 points total  (Lowest 4 lab quizzes are dropped, lab quizzes cannot be made up).
Final 100 points
Birds in the news- 2 points extra credit (may do 1 time)
Extra credit Birdathon,  2 points to participate, 5 points winning team, middle school bird tours 5 points
Poster 25 points
Participation in bird census project – 15 census periods 30 points
Participation in woodpecker project – 5 videos 20 points
Great Backyard Bird Count- 5 points

Total 430 points

>93% A
90-93% A-
87-90% B+
83-87 % B
80-83% B-
77-80% C+
73-77% C
70-73% C-
67-70% D+
60-67% D
< 60% F

Songs and calls for Midterm 1

American Robin
Great Horned Owl
Northern Pygmy Owl
Western Screech Owl
Mourning Dove
Eurasian Collared Dove
Black-capped Chickadee
Mountain Chickadee
Northern Flicker
Pine Siskin
House Sparrow
American Crow
Common Raven
Black-billed Magpie
Townsend’s Solitaire
Belted Kingfisher
Mallard
Dark-eyed Junco
Downy Woodpecker
Hairy Woodpecker
Cedar Waxwing
White-breasted Nuthatch
Red-breasted Nuthatch
Canada Goose

Songs and calls for midterm 2

Ruby-crowned Kinglet
American Goldfinch
Chipping Sparrow
House Finch
Cassin’s Finch
White-crowned Sparrow
Red-tailed Hawk
Sandhill Crane
Ring-necked Pheasant
Killdeer
Long-billed Curlew
Black-necked Stilt
American Avocet
Common Snipe
Killdeer
Long-billed Curlew
House Wren
Pacific Wren
Canyon Wren
Marsh Wren
Yellow-headed Blackbird
Red-winged Blackbird
Western Meadowlark
Song Sparrow
Wilson's Snipe

Songs and calls for the final

Common Nighthawk
Broad-tailed Hummingbird
Western Tanager
Black-headed Grosbeak
Yellow Warbler
Wilson's Warbler
MacGillivray's Warbler
Yellow-rumped Warbler
Northern Oriole (Bullock's)
Olive-sided Flycatcher
Warbling Vireo
Orange-crowned Warbler
Western Wood-Peeewee
Say's Phoebe
Hermit Thrush
Swainson's Thrush
Spotted Towhee
Green-tailed Towhee
Brown-headed Cowbird
Western Bluebird
Lazuli Bunting
Savannah Sparrow
Vesper Sparrow
Virginia Rail
PRINCIPLES OF BIRDING ETHICS—American Birding Association

Everyone who enjoys birds and birding must always respect wildlife, its environment, and the rights of others. In any conflict of interest between birds and birders, the welfare of the birds and their environment comes first.

Code of Birding Ethics

1. Promote the welfare of birds and their environment.

1(a) Support the protection of important bird habitat.

1(b) To avoid stressing birds or exposing them to danger, exercise restraint and caution during observation, photography, sound recording, or filming.

Limit the use of recordings and other methods of attracting birds, and never use such methods in heavily birded areas, or for attracting any species that is Threatened, Endangered, or of Special Concern, or is rare in your local area;

Keep well back from nests and nesting colonies, roosts, display areas, and important feeding sites. In such sensitive areas, if there is a need for extended observation, photography, filming, or recording, try to use a blind or hide, and take advantage of natural cover.

Use artificial light sparingly for filming or photography, especially for close-ups.

1(c) Before advertising the presence of a rare bird, evaluate the potential for disturbance to the bird, its surroundings, and other people in the area, and proceed only if access can be controlled, disturbance minimized, and permission has been obtained from private land-owners. The sites of rare nesting birds should be divulged only to the proper conservation authorities.

1(d) Stay on roads, trails, and paths where they exist; otherwise keep habitat disturbance to a minimum.

2. Respect the law, and the rights of others.

2(a) Do not enter private property without the owner's explicit permission.

2(b) Follow all laws, rules, and regulations governing use of roads and public areas, both at home and abroad.

2(c) Practice common courtesy in contacts with other people. Your exemplary behavior will generate goodwill with birders and non-birders alike.

3. Ensure that feeders, nest structures, and other artificial bird environments are safe.

3(a) Keep dispensers, water, and food clean, and free of decay or disease. It is important to feed birds continually during harsh weather.

3(b) Maintain and clean nest structures regularly.

3(c) If you are attracting birds to an area, ensure the birds are not exposed to predation from cats and other domestic animals, or dangers posed by artificial hazards.
4. Group birding, whether organized or impromptu, requires special care.

Each individual in the group, in addition to the obligations spelled out in Items #1 and #2, has responsibilities as a Group Member.

4(a) Respect the interests, rights, and skills of fellow birders, as well as people participating in other legitimate outdoor activities. Freely share your knowledge and experience, except where code 1(c) applies. Be especially helpful to beginning birders.

4(b) If you witness unethical birding behavior, assess the situation, and intervene if you think it prudent. When interceding, inform the person(s) of the inappropriate action, and attempt, within reason, to have it stopped. If the behavior continues, document it, and notify appropriate individuals or organizations.

Group Leader Responsibilities [amateur and professional trips and tours].

4(c) Be an exemplary ethical role model for the group. Teach through word and example.

4(d) Keep groups to a size that limits impact on the environment, and does not interfere with others using the same area.

4(e) Ensure everyone in the group knows of and practices this code.

4(f) Learn and inform the group of any special circumstances applicable to the areas being visited (e.g. no tape recorders allowed).

4(g) Acknowledge that professional tour companies bear a special responsibility to place the welfare of birds and the benefits of public knowledge ahead of the company's commercial interests. Ideally, leaders should keep track of tour sightings, document unusual occurrences, and submit records to appropriate organizations.

Please Follow this Code and Distribute and Teach it to Others

The American Birding Association’s Code of Birding Ethics may be freely reproduced for distribution/dissemination. Please acknowledge the role of ABA in developing and promoting this code with a link to the ABA website using the url http://www.aba.org. Thank you.