



BIO 498-001: Ornithology – The Life of Birds

Syllabus – Spring 2022

COURSE SCHEDULE: M: 1:00 – 5:20PM
ROOM: 328 CKB
INSTRUCTOR: Professor Daniel E. Bunker (dbunker@njit.edu)
OFFICE HOURS: W: 12-1 pm or by appointment
OFFICE LOCATION: Webex only: <https://njit.webex.com/meet/dbunkernjit.edu>
COURSE WEBSITE: NJIT Canvas (<https://canvas.njit.edu/>)

IMPORTANT: THE FIRST WEEK WE WILL MEET ONLINE HERE:

<https://njit.webex.com/meet/dbunkernjit.edu>

HOPEFULLY FACE TO FACE AFTER THAT

Course summary: Ornithology is the study of birds and bird biology, and is the focus of this course. Topics include: bird observation and identification, evolutionary origins and biodiversity, form and function, behavior, reproduction, and ecology and conservation. This field/lab course will include numerous field trips to natural areas in New Jersey. Students will also learn how to keep a field journal and use online resources such as Merlin, eBird, and iNaturalist.

Learning Outcomes

Upon successful completion of this course, students will accomplish the following objectives:

- Students will develop their ability to make scientific observations and generate hypotheses about natural phenomena.
- Students will be able to identify a wide variety of bird species in the wild.
- Students will be able to use a variety of electronic tools to identify and record bird observations.
- Students will understand the evolutionary history of birds.
- Students will understand the form and function of birds.
- Students will understand the behavior and reproductive aspects of bird biology.
- Students will understand the ecology and conservation of birds.
- Students will be able to conduct independent research on bird biology.
- Students will develop their critical thinking and communications skills.
- Students will conduct independent research on a bird species of their choice and communicate their results to the class.
- Students will learn to acquire and assess information on a selected topic, and to communicate this information in a scientifically sound yet publicly assessable format.

Course prerequisites: Bio 205, Foundations of Ecology and Evolution

THIS IS A FIELD COURSE!! That means that we will be in the field, both on campus and on field trips, most every day, rain or shine, freezing or sweltering. Please be prepared to be outdoors! Wear boots or sturdy shoes, long pants, layers, hat and gloves. Be prepared for rain, and for sun, and for bugs!!

Required Materials:

1. Handbook of Bird Biology (Cornell Lab of Ornithology) 3rd Edition by John W. Fitzpatrick (Editor), Irby J. Lovette (Editor). Available at the NJIT bookstore or Amazon. Also available as an e-book.
2. The Sibley Field Guide to Birds of Eastern North America: 2nd Edition, Paperback, 2016 by David Allen Sibley. Available at the NJIT bookstore or Amazon.

Grading:

Field observations and notes	25%
Quizzes	15%
Exams	30%
Species Monograph presentation	10%
Species Monograph paper	20%

Grading scale:

A	90-100	C	70-78
B+	88-90	D	60-70
B	80-88	F	0-60
C+	78-80		

Course Web page: Canvas (<https://canvas.njit.edu>).

We will use Canvas for coursework submission, for announcements, and for various activities. If you have not used NJIT canvas before, go here <https://ist.njit.edu/ucid/>, or call the NJIT helpdesk for assistance (973 596 2900). Be sure to check your NJIT email or set it to forward to your everyday email account. Check Canvas regularly for assignments, quizzes, announcements, etc. Your course grades can be found on canvas as well.

Makeup Policy:

Exams can only be made up with permission from the Dean of Students or with prior approval from Prof. Bunker. If you miss an exam for unforeseen circumstances, plead your case to the Dean of Students – I will abide by whatever they ask me to do. If you have a reasonable reason for missing an exam, you must contact me BEFORE the scheduled exam in order to be able to make it up.

Disability accommodations:

If you need accommodations due to a disability please contact the Office of Accessibility Resources and Services to discuss your specific needs. A Letter of Accommodation Eligibility from the Disability Support Services office authorizing your accommodations will be required.

Academic Integrity:

Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues your degree and all others from NJIT. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of

integrity policy. Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office.

Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of XF, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office.

Code of Student Conduct: <https://www.njit.edu/dos/policies/conductcode/index.php>
NJIT University Policy on Academic Integrity:
<http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>

Cellular Phones: While you may use your phones to record scientific observations in the field, please no noodling.

Key Dates:

January 24: First day of class ONLINE!!!
January 24: Last day to add/drop.
January 24: Last day to withdraw with 100% refund
January 31: Last day to withdraw with 90% refund
February 14: Last day to withdraw with 50% refund
March 7: Last day to withdraw with 25% refund
March 7: EXAM 1
March 14-19: Spring break
March 28: Species Monograph 1st drafts due
April 5: Last day to withdraw
April 11: Species Monograph 2nd drafts due
April 25: Species Monograph Presentations
April 25: Species Monographs due
May 3: Last day of classes for Ornithology
May 3: EXAM 2, both in class and in the field

Tentative course outline:

1. Why Study Birds?
2. Avian Diversity and Classification
3. How Birds Evolve
4. Feathers and Plumages
5. Avian Flight
6. Avian Anatomy
7. Bird Physiology
8. Avian Food and Foraging
9. Avian Mating and Social Behavior
10. Avian Vocal Behavior
11. Breeding Biology of Birds
12. Avian Migration and Dispersal
13. Ecology of Bird Populations
14. Bird Communities
15. Bird Conservation