

BIO 485 Behavior and Morphology – Fall 2023

Instructor: Dr. Ian N. Cost

Office: Science 231

Office Phone: 610.921.7728

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Open Office Times: Tues 09:00 - 11:00 & Fri 13:00 - 15:00 or by appointment



Course Description:

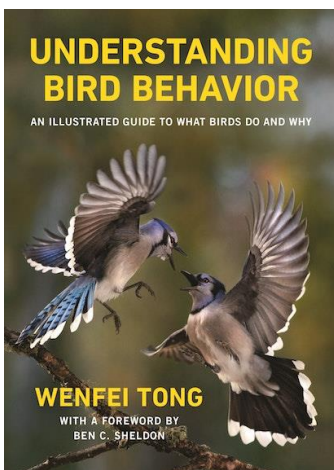
This seminar explores the anatomical structures underlying behaviors through a comparative study of avian (bird) species. Birds are an ideal group of terrestrial vertebrates to study behavior and its underlying anatomy in a comparative context because of their global distribution and highly variable ecological niche participation despite overall similar morphology. Discussed topics will include the biomechanics of locomotion, dietary strategies, feather color and structure, mating and courtship, avian intelligence, and the avian cardiovascular system. Students are expected to read, lead, and discuss journal articles pertinent to the topics assigned during journal club style class sessions and will work on a semester-long academic project. This project will consist of a paper analyzing and synthesizing an important aspect of avian behavior and its underlying anatomical structure.

Student Goals and Class Objectives:

1. Students will be able to read, discuss, and communicate scientific information in a meaningful and appropriate manner.
2. Identify the basic principles of how anatomical structures influence and are influenced by behaviors.
3. Interpret the results of different sources of scientific literature addressing complex questions of evolution, biomechanics, and functional morphology.

Recommended Text:

Tong, W. 2020. Understanding Bird Behavior: An Illustrated Guide to What Birds do and Why. UniPress Books Limited.



Additional readings will appear on Canvas throughout the semester.

Open Office:

Open office times are dedicated times during which I do not have set meetings where I am available on a first come first serve basis to talk with students. You are invited to come by my office for any reason. Some examples of topics during this time include career advice, research questions, college advice, saying hello, asking for a pop tart because you missed breakfast, seeking recommendation letters, coursework, and course material. One need not think of the “perfect question” to come to open office hours. If students need to speak with me outside of the times listed above send an email and make an appointment at any time.

Attendance:

Class attendance requirements are outlined in the Department of Biology (DoB) Attendance Policy posted [here](#). As outlined in this policy, it is the student’s responsibility to make contact prior to absences for illness and within 24 hours regarding unforeseen emergencies. Athletic or other non-illness related absences should be communicated at the student’s earliest convenience. All student athletes should provide a schedule of conflicting dates within **the first two weeks of classes** so that we can make plans regarding these absences. Unexcused absences from class will count as a **reduction of 3 points from the participation grade per absence**. Tardiness of greater than 10 minutes will result in a partial reduction of the participation grade. Every student has 3 passes where they can miss class

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without any participation points being lost. More information will be discussed during the first class.

Class Discussions:

Class discussions will be conducted on various topics throughout the semester. Class discussions will be conducted respectfully and professionally. We will use proper terminology to discuss topics. Each student is expected to be respectful of their peers and to hold everyone, including me, responsible for properly addressing students by their chosen names, pronouns, and respective titles and using proper terminology in discussions. If any student wishes to discuss class discussion, content, or any other aspect of class with me they are welcome and encouraged to do so. If you feel uncomfortable speaking with me for any reason, I encourage you to contact the [Office of the Dean of Students](#) with your concerns.

Diversity, Equality, and Inclusion in this Course:

Much of recorded science is subjective and has been historically based on the ideas and hypotheses of a collection of privileged voices. The readings in this course are based in part on the work done by this small and privileged group of individuals that were, and mostly still are, white men. We will discuss research and work done by scientists that have subsequently, some quite recently, been recognized as leaders in the field of behavior and functional morphology that do not identify as white men. Should you come across any contributions to this field that you think we ought to incorporate into our coursework or simply wish to discuss the merits of in light of this topic, please feel free to contact me in person, via email, or anonymously (by leaving a note either under my office door or in the building secretary's office on the third floor).

My expectations are that we will be a learning community that appreciates the successes, struggles, and skill sets that we each bring to this class and that we will learn from one another. This course will be a learning environment that is comfortable for students to explore the behaviors and functional morphology of birds. It is within that goal that this course will support and enrich student learning by using diverse learning styles in classroom discussions, promoting individualized thinking styles, honoring each student's perspectives and experience, and by being respectful of all members of our learning community. This includes yourself and no students should ever use language that is self-deprecating in this classroom; we are all learning and admitting that we do not understand or know something is part of that process and will never be looked down on.

Late Policy:

Deadlines are given below in the course calendar but will also be communicated in class. If an accommodation, illness, or other event causes a student to require a flexible deadline for any assignment, then the student must reach out prior to the due date (sudden illnesses – COVID, accidents, etc. – should be communicated as soon as reasonably possible). Flexible deadline requests are entirely the responsibility of the student; reach out to me with the length of extension you need so that we can discuss how to make sure your work is satisfactorily completed.

If a student is interested in an honors module for this course I ask that they please contact me within the first two weeks of class so that we can plan appropriately.

Class Assignments:

Class Discussion and Readings:

Participation in this class is mandatory and will include journal club style discussions of scientific articles. Assigned readings will be disseminated on Canvas. In addition to a class discussion, a forum will be posted for each reading. Students will be expected to post 3 questions. Class participation is worth a total of **120 points for the semester (3 pts. per class meeting)**. Background information will be discussed in a generalized survey style, with class presentations by the instructor providing adequate background to discuss related articles.

Quizzes:

Quizzes assessing student knowledge of the material covered in each unit of study will be taken prior to the start of the preceding unit. These quizzes will be worth **10 points each, for a total of 110 points**. The lowest quiz grade will be dropped.

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Leading Class Discussion:

Students will be assigned to lead discussions throughout the semester. Early class meetings will provide a background in ornithology and will be led by the instructor. During the week prior to the first journal club format, students will be given their first assignments for leading discussions. Students will also sign up for two more topics to lead. The student will be responsible for paper selection for these discussions and will meet with the instructor to go over papers they wish to present. The student will be responsible for teaching a short lecture (approximately half the class period) on the subject of their choosing and assigned readings to discuss in that context. Students will work with the instructor to assign appropriate readings to the class. The student directed presentation is worth **150 points**. Professionalism, content, knowledge, and the lesson's clarity will be considered when assigning points.

Observation Unessays:

All students are expected to write a research paper for this class. This paper will require significant effort and time to craft and will be worked on throughout the semester. All drafts and paper materials will be submitted through Canvas and will be subjected to examination through Turnitin. Any suspected plagiarism will be dealt with as outlined by the [Academic Integrity](#) policies of Albright College.

To that end, the use of generative AI tools (e.g. ChatGPT, Dall-e, etc.) is permitted on this assignment for the following activities:

- Brainstorming and refining your ideas;
- Fine tuning your research questions;
- Finding information on your topic;
- Drafting an outline to organize your thoughts; and
- Checking grammar and style.

The use of generative AI tools is not permitted on this assignment for the following activities:

- Writing a draft of a writing assignment.
- Writing entire sentences or paragraphs of the paper.

All sources suggested by generative AI tools should be found and verified by you. I will check all sources cited and if any are created by the AI (that is, they are not real papers, books, or articles or citations contain information not in a source) the assignment will be returned ungraded and students will be asked to resubmit for half credit.

Students will choose a topic concerning birds wherein they discuss the anatomy and related behavior(s) in appropriate detail. This paper will rely heavily on primary source information and students are expected to properly cite information in the text and in the bibliography at the end of the paper. Only primary source literature may be used for this assignment. Student interpretation and application of appropriate resources for their research paper will be discussed throughout the semester. Topics for the paper will be due on **9/6/23** with an initial annotated bibliography compiled by **9/15/23**. A first draft (**NOT** rough) of the project and statement will be due **9/22/23**. On **10/20/23** we will discuss peer review and scholarly articles. During this time students will submit a second draft of the project statement, which will be peer reviewed. Students will review their assigned project and statement and attach constructive comments at which point they will be submitted to the instructor by **11/3/23**, returned to the author, and a final copy of the project statement and self-assessment will be due on **12/1/23**. Drafts are worth **300 points total (100 points each)**, peer review is worth **30 points**, the topic is worth **5 points**, the initial bibliography is worth **10 points**, and the self-assessment is worth **15 points**.

4th Hour Journal:

All students will be required to do work outside of the normal scope of class to fulfill 4th Hour obligations. In this course this will take the form of maintaining a hand-written journal documenting avian behaviors. The idea behind this is that the journal will help students to write their paper and add observations that may not be found in academic papers on the subject of the student's choosing. Students will be expected to keep a hard copy that they can take out onto campus, on a walk to the grocery store, a hike, etc. A total of 16 entries (10 pts. each) will be created analyzing behaviors students observe, including potential meanings/targets of behaviors (territorialism, mate

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selection, etc.), duration of behavior, and observable interactions with other animals resulting from or instigating the observed behavior. This assignment will be worth **160 total points** for all entries.

Final Presentation:

The final exam period will be used to present short summaries of each student's research paper in a miniature research conference. Student presentations will last approximately 10 minutes and may include short PowerPoint presentations. Students may ask questions of the presenter, time permitting. This presentation is worth **100 points**.

Grading:

The point breakdown for the course will be as follows:

Class meetings:	- worth 120 points
Quizzes	- worth 110 points
Leading Class Discussion:	- worth 150 points
Observation Unessay (All Aspects):	- worth 360 points
4 th Hour Journal	- worth 160 points
Final Presentation:	- <u>worth 100 points</u>
	Total 1000 points

Notes on Assignments:

- **File types accepted on Canvas submissions:** Word, PDF, and PowerPoint documents are the only file types that can be turned in on Canvas.

Grading Scale for Final Grades in This Class:

> 98	A+	93-98	A	90-92	A-
87-89	B+	83-86	B	80-82	B-
77-79	C+	73-76	C	70-72	C-
67-69	D+	63-66	D	60-62	D-
		<60	F		

Academic and Health Support Services:

Student Success Center (SSC)

Subject Area Tutoring: Course-specific peer tutoring is available for many general education classes at the 100-200 level including small-group tutoring and Supplemental Instruction (SI). You can schedule an in-person or online session with a peer tutor by selecting the 'Subject Area Tutoring Schedule' at <https://alb.mywconline.com/> and limiting the schedule by course. Subject area tutoring takes place in the Peer Tutoring Studio located in the outdoor tunnel near Jake's Place and can be reached at SSC@albright.edu.

Writing Center: Writing center peer tutors will work with you at any stage of the writing process for any course and personal/creative writing. The writing center can also help you prepare for class presentations and practice strategies for college-level reading. The center is located in Jake's Place near the mailroom and can be reached at writingcenter@albright.edu or (610) 921-7540 with in-person and online appointments available at <https://alb.mywconline.com/>.

Success Coaching: The SSC also offers one-on-one academic coaching on study skills, time management, note-taking, and learning strategies. All students have a success coach. You can find out who your success coach is in Lions' Edge. To schedule a meeting with your success coach email them directly or contact the SSC by phone at 610-921-7662 or email SSC@albright.edu. The SSC main office is in Teel Hall 309A.

Gingrich Library:

The [Gingrich Library](#) provides resources to assist Albright students with their class projects and research needs. Library materials include books, e-books, print and electronic journals, databases and DVDs. All students have

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complete access to the Gingrich Library catalog, electronic books, and its electronic databases from on-campus, in residence halls or off-campus. Reference librarians are available in the Center for Computing and Mathematics (CCM) to answer questions and help students use resources and find appropriate materials. Students are encouraged to [contact a librarian](#) at any stage of the research process. Real-time chat services are available through the library's portal at the library's main page. The portal to the library can be [reached from here](#).

Office of Student Accessibility and Advocacy:

Consistent with the ADA and Section 504 of the Rehabilitation Act, Albright College welcomes students with disabilities into the college's educational programs. If you need impairment-related academic adjustments in this course, please contact Sherry Young, Director of Student Accessibility and Advocacy, [by email](#) or by phone at 610-921-7503. Our office is located in the Student Center Conference Room. Students should contact the office to schedule an appointment. Students who use accommodations should meet with course instructors privately and in a timely manner to discuss their Academic Accommodation Letter (AAL). Please note that IEPs and 504 plans do not apply to college-level courses.

Academic Integrity:

The College policy on dishonesty as stated in the section "Academic Dishonesty Policy" in the current Albright College Catalog applies to all aspects of this course, including exams and papers. Academic dishonesty is taking credit for another person's work and attempting to pass it off as your own. It includes: 1) copying from another student during exams and quizzes; 2) allowing someone to copy from you or providing someone with a copy of your work that results in plagiarism; 3) Presenting someone else's ideas as your own without express permission and crediting them; 4) Plagiarizing (copying) material from books, articles, and electronic sources for direct use in your work; 5) using cheat sheets, notes, cell phones, etc. to gain outside information during a test or quiz. A student charged with academic dishonesty will be given written or oral notice of the charge, will receive an F on the assignment in question, and the case will be referred to the Provost. At the Instructors' discretion, the student may receive an F for the course. Repeat offenses, in one class or different classes can lead to more severe penalties (e.g. academic dismissal). Please familiarize yourself with this policy.

Classroom Recording Policy:

The audio or visual recording of class lectures, discussions, simulations, and other course-related activity by either students or instructors is governed by the College's class recording policy, available in the Catalog. Albright's policy on class recording balances the needs of students who are differently abled, the intellectual property concerns of its instructors, and the privacy of its students. Any audio or visual recording made by a student during a class, regardless of the recording device, requires the instructor's written consent prior to the class and the student's signed agreement with the terms of the College's policy. Prior to a student recording of any class activity, the student and the instructor must sign a recording agreement and file it with the Office of Student Accessibility and Advocacy (if the recording is an approved disability accommodation) or with the Academic Dean's office (if not an accommodation). Violations of this Class Recording Policy may be directed through academic dishonesty procedures or the Office of Community Standards, and could involve civil or criminal violations.

Mental Health Matters:

The [Gable Health and Counseling Center](#) offers students the chance to meet with therapists at no charge. Students are encouraged to make appointments to receive confidential care for small and large issues. If you, or anyone close to you on campus, are suffering from any mental health issues, you are encouraged to reach out and use the services on campus to get the care you need. The office is open from Monday through Friday 8:30am - 4:30pm and appointments are scheduled from 10-6 M-TH and 9-5 on Fridays. Students can set up a meeting with a therapist on campus by walking to the Gable Health Center located on campus at 1829 Linden Street or by calling the Gable Health Center at 610-921-7532.

Class Schedule:

There are three class meetings per week. This schedule is subject to change based on class need and discussions.

Date	Topic	Readings	Work Due
8/28	Course Introduction, Field journals	Intro Material (Module 1)	Pre-quiz
8/30	Readings on Avian evolution	Module 1 Readings	
9/1	Readings on Avian evolution	TBA	
9/4	Readings on Avian systematics	TBA	Quiz
9/6	Readings on Avian systematics	TBA	Unessay Topics
9/8	Basic Avian anatomy	Module 2 Readings	
9/11	Basic Avian anatomy	TBA	Quiz
9/13	Evolution of Flight	TBA	
9/15	Evolution of Flight	TBA	Annotated Bibliography
9/18	Flight and basic bird functions	TBA	Quiz
9/20	Flight and basic bird functions	TBA	
9/22	Readings on Avian feathers and flight	TBA	Draft 1
9/25	Readings on Avian feathers and flight	TBA	Quiz
9/27	Readings on Avian physiology	Module 3 Readings	
9/29	Readings on Avian physiology	TBA	
10/2	Behavior and the lives of birds	Module 3 Readings	Quiz
10/4	Behavior and the lives of birds	TBA	
10/9	Readings on brain morphology/intelligence	TBA	Quiz
10/11	Readings on brain morphology/intelligence	TBA	
10/13	Readings on vocalization	TBA	
10/18	Readings on vocalization	TBA	Quiz
10/20	Peer Review Discussion	Module 4 Readings	Peer Review Draft
10/23	Peer Review Exercise Discussion	None	Peer Review Exercise
10/25	Avian Life History: Mating systems and styles	Module 5 Readings	
10/27	Avian Life History: Mating systems and styles	TBA	
10/30	Readings on mating systems	TBA	Quiz
11/1	Unstructured Observation	None	
11/3	Unstructured Observation	None	Peer Reviews Returned
11/6	Readings on mating systems	TBA	Quiz

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Date	Topic	Readings	Work Due
11/8	Readings on functional anatomy of reproduction	TBA	
11/10	Readings on functional anatomy of reproduction	TBA	
11/13	Avian Life History: Nesting and parenting	Module 6 Readings	Quiz
11/15	Avian Life History: Nesting and parenting	TBA	
11/17	Readings on nest construction behaviors	TBA	
11/20	Readings on nest construction behaviors	TBA	Quiz
11/27	Readings on parent and hatchling behavior	TBA	
11/29	Readings on parent and hatchling behavior	TBA	
12/1	Readings on species and populations	Module 7 Readings	Final Draft
12/4	Readings on species and populations	TBA	Quiz
12/6	Readings on social systems/hierarchy	TBA	
12/8	Readings on social systems/hierarchy	TBA	
Final	Final Presentations Due		Final Presentations