BIOL 4035 & 5035: Behavioral Ecology
Fall 2025, 3 credits

Welcome to Behavioral Ecology! This topic investigates how organisms change what they are doing as they interact with other organisms and with their environment. We will focus on understanding the evolution of behavior, primarily with animals. You may find some of the material challenging, but I hope you will also be fascinated by what you learn.

As members of the UNT community, we have all made a commitment to be part of an institution that respects and values the identities of the students and employees with whom we interact. UNT does not tolerate identity-based discrimination, harassment, or retaliation. UNT's full Non-Discrimination Policy is in the UNT Policies section of this syllabus.

Instructor: Dr. Elinor Lichtenberg, elichten@unt.edu, (940) 891-6956, ENV 310E
Recommended Prerequisites: Completion of foundation requirements for the biological sciences major and C or higher in BIOL 2140/BIOL 2141 or BIOL 2251 (or equivalent, for grad students)
Office Hours: By appointment, in person or via Zoom. Please do not hesitate to schedule a time to talk about things you don't understand, or any concerns you have!
Communication: Announcements may be made in class or via Canvas. Check for Canvas announcements at least once per week. Contact me via the Canvas Inbox. Expect a response within 2 business days (i.e., not weekends); do not count on a quick response. If you have a time-sensitive problem (e.g., technical issue), start the subject with "URGENT". Failure to work on homework or your project until just before the deadline is not a time-sensitive problem.

For all communication, including among students, I expect you to follow the Code of Student Conduct, UNT's Online Communication Tips, and the Rules of Engagement below to keep interactions inclusive of and useful for everyone.

Course Structure: Live class meetings *TuTh 9:30-10:50* in Chilton 245. Students are expected to attend class in the classroom unless there are extenuating circumstances. If you are sick, out of town, or have another unusual circumstance, you will be able to attend via Zoom. To do so, you *must notify* Dr. Lichtenberg of your circumstance at least 1 hour in advance, receive my approval, and be logged on to Zoom at least 5 minutes before class starts.

You Will Need:
- Textbook: Dugatkin, LA. 2019. Principles of Animal Behavior. 4th Edition. Digital and paperback versions available for sale or rent, also on Course Reserves at Willis Library.
- Computer or other device that enables you to use Canvas and Perusall (accessed via Canvas), including uploading written assignments (as documents or scans/photos) and taking quizzes in class. Laptops are available for checkout, and there are multiple computer labs across campus.

Canvas: All syllabus updates, assessments, supplemental readings and videos, and other class materials will be on Canvas. Students are responsible for regularly checking for announcements and course materials. I recommend that you set notifications to "on" in your Canvas settings.

Homework will be turned in, and quizzes will be conducted, via Canvas. Canvas provides a [Student Guide.](#)

Technical Assistance: Inconveniences and frustration that can arise when technology breaks down or does not perform as expected. UNT has a [Help Desk](#) that you can contact for help with Canvas or other technology issues. They provide support in person (Sage Hall Room 330), on the phone (940-565-2324), via e-mail (helpdesk@unt.edu), and via live chat on their website.

Course Goals:
Upon successful completion of this course, students should:
1) Be familiar with major concepts in behavioral ecology.
2) Understand and be able to apply standard methods used to design, analyze and critique behavioral ecology experiments.
3) Understand how to apply the scientific process to behavioral ecology questions, and be able to evaluate the use of the scientific process in papers from this field

Learning Objectives:
Students should be able to:
1) Explain how behavior links genetics, organisms and the environment.
2) Critically read journal articles.
3) Confidently interpret data and graphs.
4) Develop specific predictions from hypotheses about behavior, and design experiments to test those predictions.

Assessment and Grading: Assessments are designed to confirm that you understood and are able to apply what you are learning. In this course, you are assessed every week. To do well, it is very important to review course material on a regular basis, keep an eye on deadlines ,and make sure you complete all coursework. Because life sometimes affects everyone, at the end of the semester I will drop your lowest quiz and article annotation scores.

1. *Quizzes:* Quizzes will assess your understanding and retention of textbook readings, lecture material, and assigned articles. They will be administered via Canvas, in class on the weeks indicated in the schedule. You will have 10 minutes to complete the quiz. Questions will include a mix of multiple choice, matching, definitions, and short answer questions. Quizzes will be closed note and closed book. At the end of the semester, your lowest two quiz scores will be dropped.
2. *Homework*
   a. Textbook readings: You are expected to read the assigned textbook chapters before the day we discuss a topic. Readings reinforce lectures and provide additional examples to help you better understand course material. Textbook content may be on quizzes.
   b. Other readings/videos: I will occasionally assign supplemental material that needs to be read or watched before class. These assignments will be posted on Canvas.
   c. Syllabus and Questions assignments: These are explained in Canvas, and due Monday, 8/25 (Syllabus) or 9/1 (Questions) by 11:59pm.
   d. Article annotations: This homework involves annotating assigned journal articles. These are due on Mondays at 11:59pm. At the end of the semester, your lowest article annotation score will be dropped.

e. Graduate student extra assignment: Students enrolled in the graduate section will complete an extra assignment, due on Dec. 8. Details will be provided in Canvas.
3. **Final project:** Each student will independently prepare a project due near the end of the semester, with intermediate deadlines throughout the semester. See Canvas for details.

Points will be assigned as follows.

Category	Day/date due (11:59pm)	Point per assignment	# assigned	# excluded from final grade	Total points
Quizzes	In class, day announce in advance	30	10	2	240
Syllabus assignment	Monday, 8/25	5	1	0	5
Questions homework	Monday, 9/1	10	1	0	10
Article annotations	Mondays	8	5	1	32
Final project	Several	Varies		0	260
Grad student extra assignment	Monday, 12/8	60	1	0	60

Grading scale:
   A ≥ 90%, B 80-89.99%, C 70-79.99%, D 60-69.99%, F < 60%

Since analysis and critical thinking are part of the learning objectives, all assignments should be prepared by the student. Developing these competencies will prepare you for a competitive workplace. Thus, ***plagiarism and use of generative AI (e.g., ChatGPT) for any work in this course are prohibited*** and will be treated as academic misconduct.

Late/makeup Policy: Grading is structured so that if you miss a quiz or article annotation, it will not significantly affect your grade. At the end of the semester, your lowest 2 quiz and 1 article annotation grades will be dropped. You will have at least a week to submit all other assignments. Thus, no late work or make-ups will be accepted.

The University is committed to providing a reliable online course system to all users. In the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity via Canvas, the instructor will extend the time windows and provide an appropriate accommodation based on the situation. Students should immediately document (e.g., screenshot of error message) and report any problems to the instructor and contact the UNT Help Desk: helpdesk@unt.edu or 940.565.2324 and obtain a ticket number. The instructor and the UNT Help Desk will work with the student to resolve any issues at the earliest possible time.

Health Impact on Attendance: Students are expected to attend class meetings regularly and to abide by the attendance policy established for the course. It is important that you communicate with the professor prior to being absent so you and the professor can discuss and mitigate the impact of the absence on your attainment of course learning goals. Please inform the instructor if

you are unable to attend class meetings because you are ill, in mindfulness of the health and safety of everyone in our community.

If you are sick, please seek medical attention from the Student Health and Wellness Center (940-565-2333 or askSHWC@unt.edu) or your health care provider PRIOR to coming to campus. While attendance is an important part of succeeding in this class, your own health, and that of others in the community, are more important.

Rules of Engagement: Rules of engagement refer to the way students are expected to interact with each other and with their instructors. Here are some general guidelines:
- While the freedom to express yourself is a fundamental human right, any communication that utilizes cruel and derogatory language on the basis of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal or state law will not be tolerated.
- Treat your instructor and classmates with respect in any communication online or face-to-face, even when their opinion differs from your own.
- Ask for and use the correct name and pronouns for your instructor and classmates.
- Speak from personal experience. Use "I" statements to share thoughts and feelings. Try not to speak on behalf of groups or other individuals' experiences.
- Use your critical thinking skills to challenge other people's ideas, instead of attacking individuals.
- Avoid using all caps while communicating digitally. This may be interpreted as "YELLING!"
- Be cautious when using humor or sarcasm in emails or discussion posts as tone can be difficult to interpret digitally.
- Avoid using "text-talk" unless explicitly permitted by your instructor.
- Proofread and fact-check your sources.
- Keep in mind that online posts can be permanent, so think first before you type.

Tentative Schedule: Students are responsible for knowing all assignment deadlines and quiz dates. Topics and assignments may change at the instructor's discretion. All assignment instructions and due dates will be provided during lecture or given in Canvas.

Week (Monday)	Topics	Textbook readings (due Mondays) and assessment(s)
1 (8/18)	Course overview What is behavior, and why and how do we study it?	Read Ch. 1 before Thursday class
2 (8/25)	Evolution of behavior, phylogenies	Read Ch. 2 Syllabus annotation – due 8/25
3 (9/1)	Proximate factors: hormones, neurobiology	Read Ch. 3 Questions homework – due 9/1 Select final project topic – 9/1
4 (9/8)	Proximate factors: neurobiology (cont.), molecular genetics, development	Read Ch. 4 Quiz 1

Week (Monday)	Topics	Textbook readings (due Mondays) and assessment(s)
5 (9/15)	Proximate factors: development (cont.) Review ultimate & proximate factors Learning & cultural transmission	Read Ch. 5 & 6 Article 1 annotations – 9/15 Be prepared to discuss Article 1
6 (9/22)	Learning & cultural transmission (cont.) Sexual selection	Read Ch. 7 Quiz 2
7 (9/29)	Sexual selection (cont.)	Article 2 annotations – 9/29 Quiz 3
8 (10/6)	Mating systems	Read Ch. 8 Quiz 4
9 (10/13)	Kinship	Read Ch. 9 Article 3 annotations – 10/13 Final project search assignment – 10/13 Quiz 5
10 (10/20)	Cooperation	Read Ch. 10 Quiz 6
11 (10/27)	Foraging	Read Ch. 11 Article 4 annotations – 10/27 Final project references list – 10/27 Quiz 7
12 (11/3)	Antipredator behavior	Read Ch. 12 Quiz 8
13 (11/10)	Communication	Read Ch. 13 Article 5 annotations – 11/10 Quiz 9
14 (11/17)	Habitat selection, territoriality, migration	Read Ch. 14 Final project first submission – 11/17
Fall break (11/24)		
15 (12/1) Pre-finals week	Final project	Quiz 10 – 12/4 Peer reviews – 12/1
Finals week (12/8)		Grad student extra assignment – due Mon (12/8) Final project – due Wed (12/10)

ACADEMIC SUPPORT & STUDENT SERVICES

Student Support Services
Mental Health: UNT provides mental health resources to students to help ensure there are numerous outlets to turn to that wholeheartedly care for and are there for students in need, regardless of the nature of an issue or its severity. Listed below are several resources on campus that can support your academic success and mental well-being:

- Student Health and Wellness Center (https://studentaffairs.unt.edu/student-health-and-wellness-center)
- Counseling and Testing Services (https://studentaffairs.unt.edu/counseling-and-testing-services)
- UNT Care Team (https://studentaffairs.unt.edu/care)
- UNT Psychiatric Services (https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry)

Chosen Names: A chosen name is a name that a person goes by that may or may not match their legal name. If you have a chosen name that is different from your legal name and would like that to be used in class, please let the instructor know. Below is a list of resources for updating your chosen name at UNT.
- UNT Records
- UNT ID Card
- Legal Name
*UNT euIDs cannot be changed at this time. The collaborating offices are working on a process to make this option accessible to UNT community members.

Pronouns: Pronouns (she/her, they/them, he/him, etc.) are a public way for people to address you, much like your name, and can be shared with a name when making an introduction, both virtually and in-person. Just as we ask and don't assume someone's name, we should also ask and not assume someone's pronouns.
You can add your pronouns to your Canvas account so that they follow your name when posting to discussion boards, submitting assignments, etc.
Below is a list of additional resources regarding pronouns and their usage:
- What are pronouns and why are they important?
- How do I use pronouns?
- How do I share my pronouns?
- How do I ask for another person's pronouns?
- How do I correct myself or others when the wrong pronoun is used?

Additional Student Support Services
- Registrar (https://registrar.unt.edu)
- Financial Aid (https://financialaid.unt.edu/)
- Student Legal Services (https://studentaffairs.unt.edu/student-legal-services)
- Career Center (https://studentaffairs.unt.edu/career-center)
- Eagle Engagement Center (https://studentaffairs.unt.edu/eagle-engagement-center/index.html)
- Counseling and Testing Services (https://studentaffairs.unt.edu/counseling-and-testing-services): provides counseling services to the UNT community, as well as testing services; such as admissions testing, computer-based testing, career testing, and other tests.
- UNT Food Pantry (https://studentaffairs.unt.edu/desresources/programs/food-pantry/index.html)

Academic Support Services
- [Academic Success Center](https://success.unt.edu/asc) (https://success.unt.edu/asc): information regarding how to be a successful student at UNT
- [Office of Disability Access:](#) exists to prevent discrimination based on disability and to help students reach a higher level of independence
- [UNT Learning Center:](#) provides a variety of services, including tutoring, to enhance the student academic experience; now has a school supply pantry
- [UNT Libraries](https://library.unt.edu/) (https://library.unt.edu/)
- [Writing Lab](http://writingcenter.unt.edu/) (http://writingcenter.unt.edu/): offers free writing tutoring to all UNT students, undergraduate and graduate, including online tutoring

UNT POLICIES

All policies are available on the [Student Support Services & Policies](#) page.

Academic Integrity Policy
Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.
Examples where no credit will be given for the assignment include:
- Discussing a quiz with one or more classmates before the entire class has completed it.
- Copying a classmate's annotation in Perusall.
- Copying other work from a classmate, or letting a classmate copy your work.
- Copying text from an article without quoting and citing.
- Citing non-existent sources.
- Using generative AI such as ChatGPT on assignments.

Examples where a student will be reported to the Office of Academic Integrity are:
- Completing a quiz, homework, or other assignment for another student.
- Committing any of the above types of academic dishonesty more than one time.

This list is not exhaustive.

ADA Policy
The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time; however, ODA notices of reasonable accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information,

refer to the [Office of Disability Access](#) website (http://www.unt.edu/oda). You may also contact ODA by phone at (940) 565-4323.

Prohibition of Discrimination, Harassment, and Retaliation (Policy 16.004)
The University of North Texas (UNT) prohibits discrimination and harassment because of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal or state law in its application and admission processes; educational programs and activities; employment policies, procedures, and processes; and university facilities. The University takes active measures to prevent such conduct and investigates and takes remedial action when appropriate.

Emergency Notification & Procedures
UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Canvas for contingency plans for covering course materials.

Retention of Student Records
Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion. Course work completed via the Canvas online system, including grading information and comments, is also stored in a safe electronic environment for one year. Students have the right to view their individual record; however, information about student's records will not be divulged to other individuals without proper written consent. Students are encouraged to review the Public Information Policy and the Family Educational Rights and Privacy Act (FERPA) laws and the University's policy. See UNT Policy 10.10, Records Management and Retention for additional information.

Acceptable Student Behavior
Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The University's expectations for student conduct apply to all instructional forums, including University and electronic classroom, labs, discussion groups, field trips, etc. Visit UNT's [Code of Student Conduct](#) (https://policy.unt.edu/policy/07-012) to learn more.

Access to Information - Eagle Connect
Students' access point for business and academic services at UNT is located at: [my.unt.edu](#). All official communication from the University will be delivered to a student's Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward e-mail [Eagle Connect](#) (https://aits.unt.edu/eagleconnect/).

Student Evaluation Administration Dates
Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be available Nov. 11 – Dec. 4 to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey they will receive a confirmation email that the survey has been submitted. For additional information, please visit the SPOT website (https://vpaa.unt.edu/spot/) or email spot@unt.edu.

Survivor Advocacy
UNT is committed to providing a safe learning environment free of all forms of sexual misconduct. Federal laws and UNT policies prohibit discrimination on the basis of sex as well as sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking and/or sexual assault, there are campus resources available to provide support and assistance. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-5652648.

Important Notice for F-1 Students taking Distance Education Courses
Federal Regulation
To read detailed Immigration and Customs Enforcement regulations for F-1 students taking online courses, please go to the Electronic Code of Federal Regulations website (http://www.ecfr.gov/). The specific portion concerning distance education courses is located at Title 8 CFR 214.2 Paragraph (f)(6)(i)(G).

The paragraph reads:
(G) For F-1 students enrolled in classes for credit or classroom hours, no more than the equivalent of one class or three credits per session, term, semester, trimester, or quarter may be counted toward the full course of study requirement if the class is taken on-line or through distance education and does not require the student's physical attendance for classes, examination or other purposes integral to completion of the class. An on-line or distance education course is a course that is offered principally through the use of television, audio, or computer transmission including open broadcast, closed circuit, cable, microwave, or satellite, audio conferencing, or computer conferencing. If the F-1 student's course of study is in a language study program, no on-line or distance education classes may be considered to count toward a student's full course of study requirement.

University of North Texas Compliance
To comply with immigration regulations, an F-1 visa holder within the United States may need to engage in an on-campus experiential component for this course. This component (which must be approved in advance by the instructor) can include activities such as taking an on-campus exam, participating in an on-campus lecture or lab activity, or other on-campus experience integral to the completion of this course.

If such an on-campus activity is required, it is the student's responsibility to do the following:

(1) Submit a written request to the instructor for an on-campus experiential component within one week of the start of the course.

(2) Ensure that the activity on campus takes place and the instructor documents it in writing with a notice sent to the International Student and Scholar Services Office. ISSS has a form available that you may use for this purpose.

Because the decision may have serious immigration consequences, if an F-1 student is unsure about his or her need to participate in an on-campus experiential component for this course, s/he should contact the UNT International Student and Scholar Services Office (telephone 940-565-2195 or email internationaladvising@unt.edu) to get clarification before the one-week deadline.

Student Verification

UNT takes measures to protect the integrity of educational credentials awarded to students enrolled in distance education courses by verifying student identity, protecting student privacy, and notifying students of any special meeting times/locations or additional charges associated with student identity verification in distance education courses.

See UNT Policy 07-002 Student Identity Verification, Privacy, and Notification and Distance Education Courses (https://policy.unt.edu/policy/07-002).

Use of Student Work

A student owns the copyright for all work (e.g. software, photographs, reports, presentations, and email postings) he or she creates within a class and the University is not entitled to use any student work without the student's permission unless all of the following criteria are met:

- The work is used only once.
- The work is not used in its entirety.
- Use of the work does not affect any potential profits from the work.
- The student is not identified.
- The work is identified as student work.

If the use of the work does not meet all of the above criteria, then the University office or department using the work must obtain the student's written permission.

Class Recordings & Student Likenesses

Synchronous (live) sessions in this course may be recorded for students enrolled in this class section to refer to throughout the semester. Class recordings are the intellectual property of the university or instructor and are reserved for use only by students in this class and only for educational purposes. Students may not post or otherwise share the recordings outside the class, or outside the Canvas Learning Management System, in any form. Failing to follow this restriction is a violation of the UNT Code of Student Conduct and could lead to disciplinary action.