Course: Evolution (BIOL 4260/5260)
Term: Fall 2025
Location: Matthews Hall (MATT) 312
Time: Tuesdays and Thursdays from 8:00 a.m.– 9:20 a.m.

Instructor:
Dr. Zacchaeus Compson
Email: zacchaeus.compson@unt.edu
Office: ENV 310J
Lab: ENV 263

Office Hours:
Tuesdays from 10:00 a.m. – 12:00 p.m. or by appointment.

Textbook:
Herron JC, Freeman S (2014) *Evolutionary Analysis*. 5th ed. Pearson. (ISBN: 978-1292061276 [paperback]; 978-0321616678 [hardback])

Prerequisites:
Human Heredity (BIOL3350) or Genetics (3451/3452), or equivalent.

Course Information on Canvas: https://unt.instructure.com
Zoom links and supplementary information for the lectures will be on Canvas. The course Canvas site will include a list of frequently asked questions (FAQ), as well as an aggregated, anonymous list of weekly, student-submitted questions and my responses. The web information is not a substitution for class attendance.

Exams (total exam grade points = 300 pts. undergrad / 400 pts. grad students):
There will be four exams (including the final exam) during the semester, each worth 100 pts. ***For undergraduates enrolled in the course (BIOL 4260), the lowest score of your first three exams will be dropped for your final grade.*** Exams will consist of definitions, problems, short-answer, multiple-choice, and essay questions.

Literature Summary Assignments (50 & 100 pts.; 150 pts. total):
The Literature Summary Assignments are for ***undergraduates only***; graduate students will be required to write an Evolution Review Paper (see below). There are two assignments that require a written summary of current research in Evolutionary Biology. Each summary should not extend beyond a single page (typed, Times New Roman font size = 12, double spaced, with one-inch margins). You will submit your assignments online via the course website on Canvas. No printed hard copies will be accepted.

Summary paragraph 1 (50 pts): Write a summary paragraph describing a research paper from the primary, peer-reviewed scientific literature focused on a topic in the field of Evolution published between 2015-2021. See assignment on Canvas for additional information.

Summary paragraph 2 (100 pts): Identify three peer-reviewed research papers from the primary literature that focus on a particular evolutionary question and, in some way, are complementary with each other (i.e., build on each other or provide mutual insight). Write a paragraph that combines a brief overview of each of the studies, along with a short discussion focused on the conceptual threads or arguments that connect the papers. See assignment on Canvas for additional information.

Evolution Review Paper (150 pts. total):
This assignment is for ***graduate students only***, and it will be written in lieu of the Literature Summary Assignments for undergraduates (described above). Graduate students will form a single group and work together to choose a topic of interest in the field of Evolutionary Biology. Students will then survey the literature to make sure their topic is novel, and then they will work together with the class instructor to devise a review paper that will be written up for submission into a peer-reviewed journal. The review paper can be a) a traditional subject-matter conceptual review, b) a review paper with qualitative analyses, c) a meta-analysis review paper with quantitative analyses, or d) some combination of a-c. The key will be to make sure the topic is novel enough to be published in a journal specializing in some aspect of Evolutionary Biology. Once graduate students have worked with the instructor to devise a review paper idea, they will formulate a detailed outline and an annotated bibliography and divide analyses and/or writing tasks up equitably amongst group members. The paper will be formatted for submission to the target journal, and the manuscript will be evaluated by the instructor based on its quality, novelty, and potential impact in the field of Evolutionary Biology. Full credit on the assignment will only be obtained with successful submission to the target peer-reviewed journal.

Phylogenetic and Population Genetics Homework (3 assignments, 50 pts. each; 150 pts. total):
Assignments will be required during the semester and posted on Canvas.

Participation and Attendance – iClicker Quizzes (50 pts):
Engagement, participation, and interaction are important elements of the learning process. To that end, we will be using Reef Polling, so each student must be registered to iClicker Cloud (or Reef) and have a device (computer, smartphone, or tablet) for polling responses in this course.

First, link your iClicker account to this course. You will be asked to create an iClicker account if you do not already have one set up. Login to the course website on Canvas. To link your iClicker account with the course (or create an iClicker account if you do not already have one), choose "iClicker Sync" on the side menu on the course website on Canvas. Next, choose "Launch iClicker Reef". If you already have an account, just login to iClicker Reef and choose this course (see below). If not, you will need to create an account with Reef by following the directions to create an account. Choose "University of North Texas" as your institution, and then fill out the requested information. Make sure you enter your EUID as used when logging into Canvas, otherwise the two accounts will not be linked and you will be unable to view your points from the Reef Polling questions from within Canvas.

Next search for each course in which you will use the iClicker app. This course is listed as follows: **"Principles of Evolution (Compson, Fall 2025)"**. Second, you will need to download the Reef Polling App on your device for use in class. See the following URL: https://www.iclicker.com/students/apps-and-remotes/apps. Make sure you bring a device to class that will allow you to participate in the REEF Poll when prompted. I will let you know when it is time to JOIN the course on iClicker during class. We may not use iClicker every lecture, but be prepared when required (i.e., have your device with you during the lectures and make sure they are connected to WiFi).

iClicker grading: You will receive 1 point for each answer recorded (participation) and an additional 1 point for each correct answer, for a total of 2 points possible per question. The questions will focus on content covered in class on the day of the REEF Poll. Therefore, you are ***receiving credit for participating*** and ***additional credit for answering correctly***.

SPOT Evaluations: While no extra credit will be offered in this class, I am very interested in getting your feedback to improve the course in the future. One of the ways you will be able to provide feedback is through your SPOT course evaluations. Because securing feedback is so important to my professional development and the development of this class, ***each student will be given 10 bonus points if at least 75% of enrolled students provide SPOT evaluations prior to the deadline.*** I will make announcements in class once these evaluations become available to you toward the end of the semester.

Grading

Grades are based on mastery of the content. As a rule, I do not grade on a "curve" because that is a comparison of your outcomes to others. I do, however, encourage you to find opportunities to learn with and through others. Explore Navigate's Study Buddy (https://navigate.unt.edu) tool to join study groups. Maximize your learning with our coaching staff at the Learning Center. Focus on areas where you are struggling in this course by attending optional review sessions with me before each exam. Remember: you are not alone. Resources abound, so please ask me for help at any time.

Total points for the class are as follows. For the undergraduate student section (BIOL 4260), there are a total of 650 pts. For the graduate student section (BIOL 5260), there are a total of 750 pts. This translates to the following points needed to obtain each letter grade for the respective section, as follows:

BIOL 4260:	**BIOL 5260:**
A: 585 – 650 pts.	A: 675 – 750 pts.
B: 520 – 584 pts.	B: 600 – 674 pts.
C: 455 – 519 pts.	C: 525 – 599 pts.
D: 390 – 454 pts.	D: 450 – 524 pts.
F: ≤ 389 pts.	F: ≤ 449 pts.

Attendance Policy:

Research has shown that students who attend class are more likely to be successful. You should attend every class unless you have a university excused absence such as active military service, a religious holy day, or an official university function as stated in the Student Attendance and Authorized Absences Policy (PDF) (https://policy.unt.edu/sites/default/files/06.039_StudAttnandAuthAbsence.Pub2_.19.pdf). While I will not formally take attendance, if you do not attend class, you are still responsible for all material covered during that class meeting, and you will receive a zero (0) for missed participation points (i.e., for not answering Reef Polling questions) and any missed assignments. If you cannot attend a class due to an emergency, please let me know. Your safety and well-being are important to me.

Make-up exams:

Make-up exams are allowed only for valid medical reasons or official school activities, in which case a verifiable written excuse is required. Students who have a valid reason for missing an exam may PRE-ARRANGE (before the exam) a date for taking the make-up exam. If a student misses an exam without making arrangements prior to the exam date, or misses the arranged make-up exam, the student will obtain a zero for the missed exam. ***The instructor has the option of choosing a different test format for the make-up exam.***

Incomplete (I) Grade:
Do not ask for an "Incomplete" grade unless you have a MAJOR life event that does not allow you to attend class. I will only give an incomplete grade under extraordinary circumstances. Please refer to the UNT policy regarding incomplete grades.

AI, Plagiarism, and Academic Integrity:
The unauthorized use of any person or technology that assists in a student's assignment, project, or paper is considered cheating under the UNT Student Academic Integrity Policy (UNT Policy 6.003). In this class, AI cannot be used to complete assignments, projects, or papers. Doing so will result in a cheating violation. AI should not be used to assist in writing papers, searching for sources, or creating citations. Citations provided by AI are often fabricated by mimicking existing bodies of work. In many cases, AI will pull direct quotes from existing sources to answer queries and make up information about the source. AI can be used ethically to help you develop an outline for a paper, generate ideas, and learn a citation style. Talk to your professor about how you can use AI ethically.

Plagiarism is the act of using someone else's words, ideas, or work without proper acknowledgment, whether by copying directly, paraphrasing too closely, or failing to cite sources appropriately. Plagiarism includes, but is not limited to: the knowing or negligent use by paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgment, and the knowing or negligent unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials. In academic writing, plagiarism undermines the values of honesty, fairness, and responsibility that form the foundation of academic integrity. Because scholarship depends on the clear and accurate communication of original ideas, passing off another person's work as your own violates the trust between students, instructors, and the academic community. To maintain integrity in this class, all submitted writing must reflect your own understanding and properly credit any sources that inform your work.

Students caught cheating or plagiarizing will receive a "0" for that particular assignment or exam. This includes using AI to write your class papers. The instructor reserves the right to use AI detection tools to evaluate your work and determine if it was generated from a human or AI. If a student is caught cheating in any way, the incident will be reported to the Dean of Students, who may impose further penalty. According UNT's catalog, the term "cheating" includes, but is not limited to: a.) use of any unauthorized assistance in taking quizzes, tests, or examinations; b.) dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; c.) acquisition, without permission, of tests or other academic material belonging to a faculty or staff member of the university; d.) dual submission of a paper or project, or resubmission of a paper or project to a different class without express permission from the instructor(s); or e.) any other act designed to give a student an unfair advantage. See UNT's Academic Integrity Policy (PDF) (https://policy.unt.edu/sites/default/files/06.049_Standard%20Syllabus%20Policy%20Statements_supplement.pdf) for more information.

Disabilities Accommodation:
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.

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 classrooms, labs, discussion groups, field trips, etc. See https://deanofstudents.unt.edu/conduct for more information.

Use of AI Tools:
AI tools, like large language models (e.g., Claude, GPT), are quickly becoming

Emergency Procedures and Notifications:
Students will be notified by Eagle Alert if there is a campus closing that will impact a class; consequently, the calendar is subject to change. I will also update all students of changes via the course Canvas page. For more information, please refer to the Emergency Notifications and Procedures Policy (PDF) (https://policy.unt.edu/sites/default/files/06.049_Standard%20Syllabus%20Policy%20Statements_supplement.pdf).

Retention of Student Records:
Student records pertaining to this course are maintained in a secure location by the instructor. 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. Coursework completed via the Canvas on-line system, including grading information and comments, is also stored in a safe electronic environment. You have a right to view your individual record; however, information about your records will not be divulged to other individuals without proper written consent. You are encouraged to review the Public Information Policy and F.E.R.P.A. (Family Educational Rights and Privacy Act) laws, as well as the university's policy in accordance with those mandates (see: https://registrar.unt.edu/faculty/ferpa-and-student-records).

Evolution and Religion:
This is a science course. The content of the course is based on information accepted by the scientific community. This course is not designed to challenge your personal belief system in any way, and you should not feel threatened by the information presented if it does not agree with your beliefs. You are responsible for learning the material presented in the course and for understanding why scientists have arrived at the conclusions they have in the field of Evolutionary Biology, even if you personally disagree with those conclusions.

Tips for Success:
Students will be expected to complete reading assignments and think about the lecture topics ***before*** attending lectures (see Schedule below). This is important because the lectures are designed to consolidate and deepen your understanding of the material, not to introduce you to the concepts for the

first time. Do as many review problems as possible at the end of each textbook chapter. Concentrate your efforts on understanding key concepts that are stressed in class. Study groups are encouraged. The study of evolution is problem- and fact-oriented. ***Do not wait until the night before the exam to start studying!*** I recommend reading the chapter prior to the lecture's scheduled date as listed in the syllabus calendar. The study of Evolution requires much more study time than required by many biology courses. Memorization is not encouraged because a better understanding of evolutionary concepts and principles is achieved through an accumulation of evidence and thought. Attend all lectures and ask questions during class if necessary. Additional resources that will help you can be found on the course Canvas site, including supplemental readings, a Frequently Asked Questions page, and a Weekly Q and A page. Finally, I will host several optional exam review sessions; while these sessions are optional, I strongly encourage you to attend these to help you focus your studies for the exams.

Date	**Topic**	**Reading**	**Assignment**	**Points Possible**
Aug. 19 (T)	Intro. and expectations; Pattern of Evolution	Chapter 2		
Aug. 21 (Th)	Darwinian Natural Selection	Chapter 3		
Aug. 26 (T)	Darwinian Natural Selection (continued)			
Aug. 28 (Th)	Video: *Darwin's Dangerous Idea*	See link on Canvas.		
Sept. 2 (T)	Phylogenetics: Mapping Evolution	Chapter 4		
Sept. 4 (Th)	Phylogenetics (continued)			
Sept. 9 (T)	Phylogenetics (continued)		**Homework 1** (due by midnight)	**50 pts.**
Sept. 11 (Th)	**Exam 1** (Chapters 2-4, *Darwin's Dangerous Idea* video)		**Exam 1** (due at end of class period)	**100 pts.**
Sept. 16 (T)	Mutation and Genetic Variation	Chapter 5		
Sept. 18 (Th)	Hardy Weinberg Equilibrium	Chapter 6, pg. 179-191		
Sept. 23 (T)	Mechanisms of Evolution: Selection and Mutation	Chapter 6, pg. 191-227	**Homework 2** (due by midnight)	**50 pts.**
Sept. 25 (Th)	Mechanisms of Evolution: Migration, Drift, and Random Mating	Chapter 7		
Sept. 30 (T)	Evolution of Sex and Linkage Disequilibrium	Chapter 8	**Homework 3** (due by midnight)	**50 pts.**
Oct. 2 (Th)	Review Population Genetics HW problems			
Oct. 7 (T)	**Exam 2** (Chapters 5-8)		**Exam 2** (due at end of class period)	**100 pts.**
Oct. 9 (Th)	Adaptation: Studying Form and Function	Chapter 10		
Oct. 14 (T)	Adaptation (continued)			
Oct. 16 (Th)	Sexual Selection	Chapter 11, pg. 407-423	**Writing Assignment 1** (due by midnight)	**50 pts.**

Oct. 21 (T)	Sexual Selection (continued)	Chapter 11, pg. 423-441		
Oct. 23 (Th)	Social Behavior	Chapter 12		
Oct. 28 (T)	**Exam 3** (Chapters 10-12)		**Exam 3** (due at end of class period)	**100 pts.**
Oct. 30 (Th)	Fossil Record	Chapter 18, pg. 691-709		
Nov. 4 (T)	Speciation	Chapter 16		
Nov. 6 (Th)	Speciation (continued)			
Nov. 11 (T)	Macroevolution	Chapter 18, pg. 709-730		
Nov. 13 (Th)	Macroevolution (continued)			
Nov. 18 (T)	Intimate Partnerships: Coevolution	See material on Canvas.		
Nov. 20 (Th)	Video: *The Evolutionary Arms Race*	See link on Canvas.		
Nov. 25 (T)	THANKSGIVING BREAK (No class.)			
Nov. 27 (Th)	THANKSGIVING BREAK (No class.)			
Dec. 2 (Tu)	Human Evolution and Disease	Chapter 20		
Dec. 4 (Th)	Pre-Finals Day.	***Optional*** in-class exam review session at regular class time.		
Dec. 5 (F)	Reading Day (No classes.)		**Writing Assignment 2** (due by midnight)	**100 pts.**
Dec. 5 (F)	Reading Day (No classes.)		**Evolution Review Paper (GRADUATE STUDENTS ONLY!)** (due by midnight)	**150 pts.**
Dec. 9 (T)	**Final Exam** (Chapters 16, 18, 20, and coevolution materials) Time: 8:00 a.m. – 10:00 a.m. Location: MATT 312		**Exam 4 (Final Exam)** (due at end of exam period)	**100 pts.**
	Participation Points (iClicker)		**iClicker quizzes will be given periodically throughout the semester.**	**50 pts.**
			TOTAL	**Undergrad (650) Grad (750)**

**This schedule is tentative and subject to change when necessary.*