Mammalian Evolution and Ecology Lab

BIOL 4057-301 / 5057-301
Fall 2023 Syllabus

INSTRUCTORS

Instructor: Dr. Jaime E. Jiménez, *Wildlife Ecologist*, UNT, Dept. Biological Sciences, ENV 310V; email: Jaime.Jimenez@unt.edu (www.jaimeejimenez.com)

Teaching Assistant: Deborah Wheeler, Environmental Science Ph.D. student, Office: ENV 373; email: DeborahWheeler@my.unt.edu

TA Office Hours: Office hours will be held in person (or online) by appointment from 4:00-5:30 PM on Mondays, or students may email the TA to schedule a private meeting at a different time.

COURSE DESCRIPTION

Description: This course exposes students to the diverse Mammalian Class in a laboratory-style and hands-on format. Emphasis is on diversity, morphology, ecological roles, and contemporary field and analytical techniques. Students will acquire skills to identify mammals to different taxonomic levels through skulls, tracks, scats, pictures, and live individuals to species. In addition, students will interpret and estimate the diet and abundances of representative Texas mammals through various techniques.

Class Schedule: Fall semester. Mondays, 1:00-3:50 PM, EESAT 358 for classes. Unless otherwise stated, all class activities will be held in person. There will be a Saturday field trip.

COURSE MATERIALS

Required Text: Field Guide to Animal Tracks and Scats of California, by Mark Elbroch et al. 2012, University of California Press, Berkeley. ISBN 978-0-520-27109-8.

Optional Texts: See Canvas for how to access some of these texts free online through the UNT Library system. Excerpts from the Martin et al. 2011 Manual of Mammalogy will be provided for your use in this class only and may not be copied or redistributed according to federal copyright law.

Suggested Texts:
Field and Reference Guides:

- Elbroch, M. 2006. *Animal Skulls, a Guide to North American Species*. Stackpole Books, Mechanicsburg, PA. ISBN 978-0811733090.
- Kays, R.W. & D.E. Wilson. 2009. *Mammals of North America*. 2nd ed. Princeton Field Guides,

Princeton University Press, NJ. ISBN 978-0691140926.

- Elbroch, M. & Rinehart, K. 2011. *Peterson Reference Guide to Behavior of North American Mammals*. Houghton Mifflin Harcourt. Boston MA, New York, NY. ISBN 978-0618883455.
- Elbroch, M. 2019. *Mammal Tracks & Sign – A Guide to North American Species*, *2nd edition*. Stackpole Books. Mechanicsburg, PA. ISBN 978-0811726269.
- Reid, F.A. 2006. *Mammals of North America*. 4th ed. Peterson Field Guides. Houghton Mifflin Co., New York, NY. ISBN 978-0395935965.
- Schmidly, D.J. 2004. *The Mammals of Texas*. 6th ed. University of Texas Press, Austin, TX. ISBN 978-0292702417.
- Tekiela, S. 2009. *Mammals of Texas, a field guide*. Adventure Publications, Cambridge, MN. ISBN 978-1591932147.
- Liebenberg, L., Louw, A., & Elbroch, M. 2010. *Practical tracking: A guide to following footprints and finding animals.* 1st ed. Stackpole Books. ISBN 978-0811736275.

Textbooks:

- Martin, R.E., R.H. Pine & A.F. DeBlase. 2011. *A Manual of Mammalogy with Keys to Families of the World*. Third Edition. Waveland Press Inc., Long Grove, IL. ISBN 1577667689.
- Ryan, J.M. 2018. *Mammalogy Techniques Lab Manual*. Johns Hopkins University Press, Baltimore, MD. ISBN 1421426072.

ACTIVITIES AND GRADING

Course structure, requirements, and activities are dependent upon the local public health situation. Therefore, the instructors have plans for adjusting the lab to meet the needs of various public health situations and will inform students of any changes should the need arise.

Field Trips: There will be three field activities: two field trips during the scheduled class time (one on-campus, and one off-campus) and one WEEKEND field trip. Detailed instructions for the field trips will be provided by the TA ahead of time.

Group Projects: By the fourth week of class, students will be divided into groups (about four students per group), who will give a short poster or an oral presentation at our Mammal Research Conference. The contents of your presentation will be the results of one of the several research projects developed in groups during the semester.

Graduate Student Project: Graduate students will prepare a review essay on a Texas mammal. Each graduate student will present a synthesis of their review to the class as part of this assignment. Details on this assignment will be provided separately.

Late Work Policy: There may be a penalty for late assignments depending on whether students contact the instructor in advance to discuss alternatives and on the importance of the assignment. For example, late final project submissions may or may not be permitted on a case-by-case basis. In the case of a technical problem that prevents you from submitting work on time, (1) contact the TA immediately and (2) contact the UNT Student Help Desk: helpdesk@unt.edu or 940-565-2324 and obtain a ticket number.

Attendance: Attendance is required for all class meetings, activities, and field trips. If you test positive for COVID-19, please follow current CDC guidelines for quarantine/isolation. Students, faculty, and staff should handle COVID-19-related absences the same way they handle any other health-related absence. All requests for excusal will be made on a case-by-case basis. Unexcused absences may impact the participation grade, and three or more unexcused absences may result in an automatic failing grade in the course.

Extra Credit: You may choose to complete one of two optional extra credit assignments that can provide points worth up to 5% of your final lab grade. Extra credit submissions are due by the final exam date. Detailed information on the assignments will be provided later in the semester.

Participation Grade: This grade encompasses active participation in lab activities, homework assignments, and group activities.

Grading:

BIOL 4057		BIOL 5057	
Field trip report	20%	Field trip report	15%
Exams (2) @ 20% each	40%	Exams (2) @ 15% each	30%
Group Presentation	20%	Group Presentation	20%
Participation	20%	Participation	20%
		Review Essay/Presentation	15%

Letter grades will be calculated as A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, and F = below 60%.

Be aware that you will receive a single combined grade for the Lecture and Lab components of this course. Therefore, your final grade for Mammalogy will be a weighted combination of your lecture grade (75%) and your lab grade (25%). **You must pass both lab and lecture to pass the course.**

Drop/Withdrawal Information: Drop/Withdrawal Information and other important Academic Dates can be found here. Before dropping the course, please discuss this with the instructors.

Cell phones will not be accepted during tests. Be respectful with others, use cells phone only to look up information relevant to the class and turn them off otherwise. Any other wireless communication devices must be turned off or set to silent mode during class time.

ACADEMIC CONDUCT AND INTELLECTUAL PROPERTY

Academic Integrity Policy: Students are responsible for reading, understanding, and knowing UNT's Academic Integrity Policy that can be found here. Academic dishonesty in this class is unacceptable and will not be tolerated in any form.

ADA Policy

The University of North Texas makes reasonable academic accommodations 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 at https://studentaffairs.unt.edu/office-disability-access. You may also contact ODA by phone at (940) 565-4323.

DETAILED COURSE SCHEDULE

University Add/Drop Dates (click here for details)

Sept 2-Nov 10	Student may drop a course with a grade of W by completing the Request to Drop Class form and submitting it to the Registrar's Office.
September 29	Last day for change in pass/no pass status (undergrads)

Tentative Course Schedule & Due Dates (subject to change)

DATE	LAB	LAB TOPICS
21 Aug	1	Syllabus and lab safety. Anatomy: skulls and teeth, use of keys. **HW #1 assigned (due Aug 27)**
28 Aug	2	Anatomy: Skulls, teeth, and postcranial skeleton. Integument: skins horns, antlers, and hair identification. Preparation of a key. **HW #2 assigned (due Sep 3)**
04 Sep	-	**No class because of Labor Day**
11 Sep	3	Review of Texas mammals. Field Techniques: observations, species identifications, track and feces, field notes, GPS use. Texas ecosystems networking exercise. **Invited Speaker 1**: TBD **HW #3 assigned (due Sep 17)**
18 Sep	4	Data Analysis: Abundance estimates through trapping, camera traps, etc. **HW #4 assigned (due Sep 24)**
25 Sep	5	Squirrel monitoring as a case study. Activity outdoors on the UNT campus and online data analysis. **HW #5 assigned (due Oct 01)**
02 Oct	6	**FIELD TRIP**: Clear Creek Natural Heritage Center. We will leave and return within the regular class time and will use data from this activity in the homework. **HW #6 assigned (due Oct 08)** ***Graduate-only review essay* draft is due today.**

09 Oct	7	**Midterm Exam.** How to write a research report. Choose your LLELA report group.
14 Oct	8	**WEEKEND FIELD TRIP: LLELA Lewisville Lake Environmental Learning Area** (Field data collection; trapping, camera trapping, tracks searches, feces collection). **No class on Monday the 16th due to the field trip on the previous Saturday the 14th.** **HW #7 assigned (due Oct 22)**
23 Oct	9	Ecology: Diet analysis (carnivore feces and owl pellets). Trophic overlap exercise. **Invited Speaker 2**: TBD **HW #8 assigned (due Oct 29)**
30 Oct	10	Data analysis and preparation for conference presentations. **LLELA trip report due today.** **HW #9 assigned (due Nov 3)**
06 Nov	11	Discussion of papers on techniques and poster/presentations preparation. Graduate presentations on their essays. **HW #10 assigned (due Nov 10)**
13 Nov	12	Finalizing presentations and posters for the Mammal Research Conference. **Presentation and poster files due by noon on Thursday, Nov 16.**
20 Nov	-	**No class because of Thanksgiving Break.**
27 Nov	13	Mammal Research Conference: orals and posters. Final Review **Extra Credit due today. Graduate-only review essay due Nov 28 (Tuesday midnight).**
04 Dec	**Final Exam**	**Final Exam (Cumulative)**