

FIELD METHODS AND MAPPING

Fall 2026, GEOG 4170¹

ENV 391: F, 8—10:50 AM

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Office hours: M & W 11-noon, or by appointment via Zoom (<https://unt.zoom.us/j/83108273872>)

Course Objectives and Overview

This course introduces geography students to various techniques used in gathering field data. It aims to provide a foundation for identifying, collecting, mapping, and recording human and environment data in the field. Students interested in human geography, ethnobiology, archeology, ecology, and physical geography, to name a few perspectives, will learn to systematically collect several types of data.

The first part of the course deals with *mapping*, a fundamental geographic activity. Students learn how to collect data with a clearly spatial dimension. Emphasis is placed on mapping small areas because data at this scale are usually what geographers do not already possess, and, therefore, need. Also, working at this scale gives students a first-hand appreciation for the processes involved in *systematically* collecting and *recording* data. Instruction during this part of the course is very focused; students are closely *supervised*.

The *second part* of the course focuses on the collection of various types of *human* and *environmental data*. Instruction during the second half of the semester is less supervised than in the first half. Students are given a great deal of *liberty* to hone their skills at making *professional judgments*.

The focus of this course is on landscapes, especially those that are material and visible. Instruction includes outdoor lectures and exercises. This course involves hands-on experience. **Students can expect to be hot, cold, dirty, and wet.** Research methods, project formulation, laboratory data analyses, and cartography are *not* part of this course. This course deals exclusively with outdoor data collection techniques.

Required Materials

Each student *is required* to have:

1. Two *Rite in the Rain Universal No. 353* [field books](#). **No other hardback or stitched notebook models are acceptable.** The field books should be available at the UNT Bookstore or you can order one from Forestry Suppliers.
2. One small plastic protractor that can also be used as a ruler.
3. One small drafting compass.
4. One smart phone (with camera and calculator), or a camera and a calculator.

¹ The design of this course is derived from an existing syllabus of Dr. Matt Fry. I thank him for generously sharing his materials and advice on pedagogical practices.

Equipment

Various pieces of equipment, such as measuring tapes, Suunto compass/clinometers, and soil corers, will be used in this course. Students will be able to check-out/check-in equipment from the instructor/department during department office hours (8 AM-5 PM). **Any damage should be reported immediately and no later than when the equipment is checked-in.**

Grading

- This is **not** a remote course! **All** students are expected to **attend** every class, *and*, **have read** the Course Notes, and perhaps some Suggested Additional Readings, ahead of time.
- All students are expected to be *active participants*.
- Students will treat this course as though it were professional employment and they will treat each exercise as though it were a professional assignment or task.
- **Every exercise will be due on the on the following class period. But you should aim to complete exercises during the assigned times.**

Exercises will be graded on the following criteria:

1. **Layout:** title and information box, use of tabular pages, use of graphics pages;
2. **Appearance:** legibility, contrast/pencil, lines and lettering, overall neatness;
3. **Data:** sufficiency/extraneousness, accuracy/calculations;
4. **Overall quality.**

This is a course designed specifically for *advanced* geography undergraduate or graduate students who anticipate that one day they may need to gather data first-hand. Accordingly, all students are expected to be *mature, industrious, highly self-motivated, and enthusiastic*.

Assigned work will involve several exercises to be completed in small groups, often outside of class hours, and usually within one week of when they are begun. Each student will be responsible for recording exercise data in their own field notebook. Students will record exercise data in one book while the instructor grades the previously completed exercise recorded in the other. Each student will maintain a photographic record consisting of two photos of each exercise. One photo will be of the student actively working, and one will be of a topical nature, illustrating some aspect of the exercise. *Students should take their own photos as shared photos will be docked a letter grade.* Toward the end of the semester an album will be prepared with complete captions. The albums will be graded as Exercise 14.

Course Notes and Suggested Additional Readings constitute part of this course. A comprehensive final examination covering the Course Notes, material presented in class, and lessons learned during the exercises will be administered at the end of the semester.

15% = Participation (attendance, enthusiasm, and continuous improvement)

75% = Completion of, and performance on, exercises

10% = Final examination

- Grades are calculated as follows:

A	90-100
B	80-89.4
C	70-79.4
D	60-69.4
F	<59.5

ADA Accommodations: UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time, however, ODA notices of 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 accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the ODA website at disability.unt.edu.

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.

Students caught cheating or plagiarizing will receive a "0" for that particular assignment or exam. Additionally, the incident will be reported to the Office of Student Rights and Responsibilities for further penalty. Remember that you have agreed to follow the UNT Code of Student Conduct. "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 Center for Student Rights and Responsibilities 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."

- The Code of Student Conduct can be found at: <https://studentaffairs.unt.edu/dean-of-students/conduct/index.html>

According to UNT's webpage on [AI, Plagiarism, and Academic Integrity](#):

- AI **should not be** used to assist in writing papers, searching for sources, or creating citations. Some citations provided by AI are not reliable.
- AI **can be** used to help students develop an outline for a paper, generate ideas, and learn a citation style.

The "Plagiarism Review" feature in Canvas will be enabled for all essays and project reports. This will automatically generate both the similarity and AI detection rate for each submission. If either the similarity or AI rate is high (above 30%), the flagged sections will be reviewed to determine whether (1) the student should be asked to rewrite and resubmit the assignment, or (2) further action is needed.

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 the UNT Learning Management System (LMS) for contingency plans for covering course materials.

Tentative Course Schedule**

**course schedule is subject to change

Aug 21	Introduction	
	Before Heading Out	
	Base Maps and Aerial Images	
	Recording Data	
	Measuring Distances	Ex. 1
Aug 28	Tying-into a Baseline	Ex. 2
Sept 4	Tying-into a Datum by Triangulation	Ex. 3
Sept 11	Compass/Tying-into a Datum by Azimuth	Ex. 4
Sept 18	Conducting a Traverse	Ex. 5
Sept 25	Hand Leveling	Ex. 6
Oct 2	Vertical Distances (clinometer)	Ex. 7
Oct 9	Sampling Procedures	Ex. 8
Oct 16	Describing Soils	Ex. 9
Oct 23	Measuring Erosion	Ex. 10
Oct 30	Vegetation	Ex. 11
Nov 6	Land Use and Landscape Analysis	Ex. 12
Nov 13	Plotting Past Places Part I	Ex. 13
Nov 20	Research Day	
Nov 27	Thanksgiving – No Class	
Dec 4	Plotting Past Places Part II	Ex. 14
Dec 5	Final Exam	
Dec 11	Make-Up Field Day	