

Geography 650: Field Methods in Geography Spring 2009

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Class time: Tues 11-12.30p & Thurs 11-2p

Locations: Kingsbury N134, UNH Campus, College Woods, off-campus locations

Course Description

This is a course for geography majors and those who have interests in natural resources management and environmental science *past the freshmen level*. This course is a survey of selected geographical field methods and the application of these methods – both qualitative and quantitative. It is designed around a series of field techniques, research and lab exercises, and the classroom setting which will introduce students to techniques widely used in gathering and analyzing spatial data in the geographical context.

Students will gain their knowledge from direct field measurements, landscape interpretation, on-site presentations, and library research. Students will learn to address scientific questions through data collection in the field, data management, and analysis using techniques learned throughout the course. A final research project will provide students an opportunity to apply the skills learned throughout the semester. Satisfactory writing and computer skills are expected of all students at the time the course begins. At the end, student will present a research project based on data collected in the field.

Texts

- Burt, J.E. and G.M. Barber. 2009. *Elementary Statistics for Geographers*. 2nd Ed. The Guilford Press (ISBN: 9-7815-7230-4840)
- Montello, D.R. and P.C. Sutton. 2006. *An Introduction to Scientific Research Methods in Geography*. Sage Publications (ISBN: 1-4129-0287-8)
- Coursepack – developed specifically for this course, available on Blackboard, located at: <http://blackboard.unh.edu>.

Software and Applications

- MS Excel (including Data Analyst extension)
- MS Word
- MS Powerpoint
- Blackboard

Note: All of these applications will be used to complete assignments in this class. You may use open-source software or other similar applications. This class will not provide a tutorial in these applications. It is expected that students are familiar with this applications.

Office hours and assistance:

My office hours in 102B Huddleston Hall (next to the big ballroom) are: W: 1-3p and by appointment

Note: I am also available at all times by phone and e-mail, so please don't hesitate to call me or e-mail at the above address me if you have a question or would like to discuss something.

Note: If you email me, please remember to include GEOG 402 in the header so that your message is not treated as junk mail.

Recommended equipment

- Notebook. "Rite in the Rain" notebooks (or similar) are great (available at UNH Bookstore)
- Clipboard
- Calculator
- Digital camera - optional (You may include photos in your assignments)
- Rain and/or cold weather gear
- Backpack or field pouch/bag
- Closed-toed shoes/boots, pants (mandatory – no exceptions. No participation without them)
- Bug spray, Tecnu (<http://www.teclabsinc.com>). Note: check the Tecnu website for medical and allergy information

Format

The class will meet two times per week on Tuesdays and Thursdays. The class will be conducted with lectures, in-class discussions, and excursions on and off campus (after all, this is a "field methods" course). Students are expected to have done all assigned reading before coming to class, and to be prepared to discuss it.

- Tuesdays will be in-class lectures (1.5 hours).
- Thursdays (3 hours). For the most part, Thursdays are reserved for labs that will last the entire 3 hour block. Other times, there may be a 30 minute or 1 hour lecture and then shorter labs. Labs will be conducted both indoors and outdoors. Students must come properly dressed (closed-toed shoes and pants are mandatory. You will get dirty and wet) and be ready to work at the **START of class period at the assigned location.** Those who do not come properly dressed will not participate in the lab and will receive no credit for that lab. Lab locations will be provided as the semester progresses. Labs will take place rain or shine. Please be advised of any updates on Blackboard.

Assignments & Labs (50%, all weighted equally)

The first 4 assignments will be completed in the computer laboratory. A portion of labs 1-3 will be conducted indoors and outdoors. Labs 4-7 will be conducted outdoors. For outdoor labs, you will work in groups of 2-3 and each of you will learn and practice the news skills and uses of equipment. I want you all to be familiar with all of the techniques by the end of the semester.

All assignments and labs are assigned on Thursday and they are due at the start of class the following Thursday. No late assignments accepted.

Plan accordingly to complete these labs. Allow 5-8 hours minimum to complete each assignment. Poor organization and time management are not excuses for late assignments or deadline extensions.

Students must turn in their own lab report. Students may work together, but individual lab reports are mandatory. Simply copying your friend's lab report and putting your name on it will not earn you credit. See section on academic honesty. If I do not hear from you, I will assume that you understand this UNH policy.

Homework 1 – research design, scale, descriptive statistics

Homework 2 – hypothesis testing

Homework 3 – two sample tests

Homework 4 – sample size calculation

Lab 1 – Measurements and equipment

Lab 2 – GPS, clinometer, compass, topo map use

Lab 3 – aerial photo and satellite image interpretation

Lab 4 – landscape classification

Lab 5 – vegetation sampling

Lab 6 – vegetation sampling

Lab 7 – survey techniques

Field Notes (5%)

Students are required to turn in their field notes following labs in the field. The appropriate format will be discussed in class. Make photocopies of your field notebook and submit them on Tuesday, following the Thursday lab.

Group Project (30%)

There will be a group project that will be worth a major portion of your semester grade. Students will form groups of 3 or 4 individuals. Students will design and undertake a research project that applies the skills that they have acquired through the semester (i.e. vegetation sampling, interviews, remote sensing, and others). You will can choose from a list of topics (TBD) or submit your own proposal. Some laboratory time may be allocated for initial planning and/or fieldwork. However, it is expected the bulk of the fieldwork and analysis will be conducted on your own time. Since this is a major portion of your time, please allow ample time to organize your ideas, write your proposal, carry out the field work, and report the results. More details about the project will be discussed in class as the semester progresses.

Students will turn in one (1) project proposal (5%) and (2) written report (20%) and (3) present their findings in a 20 minute Powerpoint presentation to the entire class (5%). All group members must share equal time in the presentation. All components must be completed to receive a grade for the project. Failure to complete any of the three components will result in failure of the assignments. No late components of the project accepted.

Final Exam (15%)

There will be one final exam which is closed book/note. The final exam will be a short answer-type format that will cover all of the concepts we have learned throughout the semester.

Grading

	<i>Grade ranges:</i>	
Labs (50%)	95-100% A	77-79% C+
Field Notes (5%)	90-94% A-	73-76% C
Final Exam (15%)	87-89% B+	70-72% C-
Group Project (30%)	83-86% B	60-69% D
	80-82% B-	below 60% Fail

Tentative Schedule

Wk	Date	Tuesday	Thursday
1	Jan. 20, 22	Introduction to Geography and course What is geography Overview of spatial techniques Research design, Scale	Intro to Stats Descriptive stats HW 1
2	Jan. 27, 29	Hypothesis testing	Hypothesis testing, HW2
3	Feb. 3, 5	Two sample tests Confidence intervals	Two sample tests HW3
4	Feb. 10, 12	Sample size calculation Sampling Units: point, area, linear, plotless Sampling	Sampling HW4
5	Feb. 17, 19	Research design Tools for data collection	Lab 1 Outside, UNH campus
6	Feb. 24, 26	Tools for data collection GPS, clinometer, compass, topo maps	Lab 2 Outside, UNH College Woods
7	Mar. 3, 5	Introduction to remote sensing concepts	Lab 3 Outside, UNH Campus/College Woods
8	Mar. 10, 12	Land Use and Land Cover change	Lab 4 Outside, Off campus - Wagon Hill Farm
	Mar 16-20	Spring break	Spring break
9	Mar. 24, 26	TBD	
	Mar. 31, Apr. 2	Vegetation sampling I	Lab 5 Outside, UNH College Woods
10	Apr. 7, 9	Vegetation sampling II	Lab 6 Outside, UNH College Woods
11	Apr. 14, 16	Human sampling Survey design	Lab 7 Off Campus
12	Apr. 21, 23	Research ethics, impacts	Project work – Off Campus
13	Apr. 28, 30	TBD	TBD
14	May 5, 7	Project presentations	TBD
	May 7	Turn in final written project	
	TBD	Final Exam	

Attendance and Class Policies

Students are expected to be punctual, decently dressed, and to turn their cell-phones off prior to the commencement of lectures. Students are expected to attend every class. Labs will be conducted rain or shine and students should come appropriately dressed and ready to participate.

We have a short amount of time to complete the lab assignments away from the classrooms. Therefore, class will start on time at the location of the week's lab, so arrive on time at that destination.

Classroom etiquette

The rules for appropriate behavior in a large class, such as this one, are exactly the same as they are in a small class. These rules are designed to create an environment in which those who want to learn can do so. Please remember to be courteous at all times to those around you.

- Talking makes it harder for those nearby to hear the lecture and is distracting to me and other students.
- Please remember to turn off your cell phone.
- No texting
- No newspapers
- No laptops
- Walking out in the middle of a lecture is especially disruptive and rude. If you have an appointment it is better that you not attend class that day or sit in the front row, inform me in advance that you have to leave, and slip out the front door.
- Rude behavior of any sort will not be tolerated and will result in your ejection from the room.

Cell Phone/PDA/Pager/Digital Music Player/Laptop/Other Electronic Device Use During Class

Students may not use cell phones, PDAs, pagers, digital music players (like IPODs), laptops and other electronic devices during class **unless** designated by course instructor. If use of any of these items is permitted by the course instructor, these items are not allowed to be used for non-class activities. Course instructors have the right to temporarily confiscate any of these electronic devices or require the student to leave for the remainder of class in the event of a violation of set policy.

If you, the student, have a learning disability that requires the use of one of these items, you must inform the course instructor of this situation so they can accommodate your use. If you feel you need to audio record a lecture, inform the instructor of this, again, so they can accommodate your learning needs. Also, if you need to leave a cell phone on for an emergency situation you should inform the course instructor as well as keep the phone on in a silent mode so as not to disrupt the course.

Participation

Participation by each student in the classroom is extremely valuable. I encourage you to participate and ask questions during the lectures. This is your education, so do your part to get the most out of it. Always be courteous and respectful to your fellow students.

Dissemination of Information

Information will be posted regularly to Blackboard. It is your responsibility to check the course site regularly for any changes to the course schedule, and for updates on labs and exams.

Disabilities

If you are a student with a documented disability who will require accommodations in this course, please register with Disability Services for Students in the Memorial Union building, Room 118 (862-2607) for assistance in developing a plan to address your academic needs.

Academic Misconduct

Please note the University has no tolerance for students who break the University Academic Honesty Policy. Please see the Students Rights, Rules, and Responsibilities Handbook for a full description (<http://www.unh.edu/student/rights/srrr0708.pdf>). All students are expected to abide by these rules.

Plagiarism, misrepresentation, and cheating are academic crimes. Never (1) turn in an assignment that you did not write yourself, (2) turn in an assignment for this class that you previously turned in for another class, or (3) cheat on an exam. If you do so, any of these actions may result in a failing grade for the class, and further ramifications at the University level. Please see me if you have any questions about what constitutes academic honesty and cheating. Do not test me. I take this very seriously.

This is your class!

This is your class, and I want to know how it's going. Please let me know if you would like to see changes or if you have comments about the class. You are welcome to speak with me after class or to visit me in my office. The surest way to contact me is to send me an email.