FIELD METHODS FOR LANDSCAPE CHARACTERIZATION GRG 373K

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Office: CLA 3.418

Office hours: TH 8:30-9:15 AM Class time: T-TH 9:30-11AM

Class Room CLA 3.102

Description

Landscape is a fundamental concept in Geography and Environmental Sciences. Landscape analysis encloses techniques and methods from a complex body of sciences and disciplines such as geographers, ecologists, geoscientists, hydrologists, socio-economists, planners among others. The identification and mapping of land units is a main objective in landscape analysis and fluvial watersheds are the more versatile unit to consider because of different reasons: a) it is easily delimited in the space, b) the limits are "natural; 3) it can be modeled as an open physical system whit inputs and outputs of matter and energy. For those and other reasons, fluvial basins have been a key unit for management of natural resources and environmental planning.

In this course the students are trained on several field and laboratory methods and techniques used to characterize the flux of matter (water and sediments) through a fluvial basin and on the application of these methods in landscape analysis. Specific topics include field methods and lab techniques on water discharge estimations, sampling, sediment characterization, sediment transport, hydrochemistry, vegetation cover, land use trends data, etc. Students have the

Format:

Each week we will discuss a different method or technique intercalated in between five field trips to be developed close to Austin. Labs are a main component of the course as well as exercises. The students will generate a report on the measurements and analysis from field surveys and labs. Students must have their article approved by the professor.

opportunity of participating of field surveys and laboratory practices.

Text, Readings, and Lectures

This is a field/lab combined course. As field work is the core of this course, the participation in field and lab classes is *fundamental* and will happen on standard class days and a long field trip will happen a Saturday (to be defined by the Professor) at morning time. Course readings will include the text from the course web site, and brief readings and figures distributed in class. Students are expected to have read before class and will be held responsible for readings on examinations.

Policies

a) Attendance

This course is intensive and relatively complex. This is due, primarily, to the amount of topics and material to be covered during the semester. You are required to attend all classes and arrive on time. It is, therefore, my philosophy that your success in this course will surely vary directly with your class attendance. Be aware of the fact that attendance will be taken on a daily basis and this information can be used in the computation of your final class grade (see Grading policy below). Do not routinely arrive 5 minutes late to class with the excuse that parking was a problem (the obvious solution is to routinely depart 5 minutes earlier).

Lateness: Late labs and papers will be assessed as part of your participation and commitment. Laptops are NOT allowed except with prior permission and in exceptional situations.

b) Academic Integrity

The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility.

Each member of the university is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community. Each student in this course is expected to abide by the University of Texas Honor Code (see University guidelines on Academic Dishonesty (section 11-802).

In this class, there is zero tolerance for students who violate university rules on scholastic dishonesty with all suspected cases turned over to the University's Dean of Students office. Penalties for scholastic include possibility of failure of course and dismissal from the University. Since dishonesty harms the individual, fellow students and the integrity of the University, policies on scholastic dishonesty will be STRICTLY ENFORCED in this class. Any work submitted by a student in this course for academic credit will be the student's own work. Using other person's work without appropriate citation is plagiarism.

c) Disabilities

The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. Present the letter to the professor at the beginning of the semester so that needed accommodations can be discussed. The student should remind the professor of any testing accommodations no later than five business days before an exam. For more information, contact the Office of the Dean of Students at 471-6259, 471-4641. http://www.utexas.edu/diversity/ddce/ssd/.

Course management

Course materials and grade will be posted on Blackboard. Students are required to consult this website frequently. Selected materials from different textbooks and pdf versions of power points presentations will be provided through Blackboard.

Grading

1 exam (45%), 1 term paper+ presentation (40%) and (15%) participation at class (field, labs)

The exam will be a traditional test with questions

Report/paper: One short (3000 word maximum) on field and labs results and their application in landscape analysis.

Plus and minus grades will be used for final course grades.

Examination Absence Policy

Lab and field classes are fundamental components of the course. If you miss any field or lab activity without a valid justification it will affect your final grade as you will be not able to complete the final report and will affect the 15% grade for your participation at class. If you miss an exam lab of field activity, and you have a valid written excuse, you will be given an opportunity to make up a similar exam or some activity but with different questions or approach that previously applied. In order to be allowed to makeup the exam you will need to present to Prof. Latrubesse a copy of a valid written excuse. If you miss more than one exam due to valid written excuses, you may be asked to take an incomplete and to complete the course requirements the following semeste.

What is a valid written excuse?

- Doctor's note. This note should specifically say that you were unable to come to class because of a verified illness. It must be signed.
- Note from athletic department, music department, etc. asking for an excuse due to a university function. These notes need to be presented well before the exam.
- Military Service activation note.
- Trial or jury duty note.
- Religious holy day. Religious holy day conflicts must be brought to the attention of Prof. Latrubesse in advance. Please check the syllabus calendar to be sure that your religious holy days don't conflict with exams. If there is a conflict: please provide a written, signed request before the end of the second week of class.
- If you do not have a valid excuse, you will receive a zero for that exam.
- ▶ All notes must be on letterhead, signed, include a contact name and phone number.

UT policy on email notification

Instructor to student email is a recognized and accepted form of official communication here at the University of Texas. For the University policy, read this. It is critically important that (1) you make sure to have your current and most frequently checked email address on file in UT Direct and (2) you check it on a daily basis. I will send class email frequently during the semester and you'll be given updates and notices in references to lectures as well as exams.

Religious Holidays

By UT Austin policy, students must notify the professor of a pending absence at least fourteen days prior to the date of observance of a religious holy day in special if it is coincident with the date of a test.

CALENDAR

January	Topics	Activities
15 T	Intro	
17 TH	Lab 1 Maps- and Google	
22 T	Rocks and minerals	
24 TH	Lab 2 Rocks	
	Lab 3 Rocks	
29 T	The Brunton compass-Field surveys	
	with compass and level	
31 TH	Field 1	The use of the Brunton compass
February		
5 T	Drainage networks and Basin	
	Morphometry	
7 TH	Lab 5 Basin Morphometry	
12 T	Hydrology-Basins	
14 TH	Channels- Geometry-Discharge	
19 T	Discharge measurement-techniques	
21TH	Field 2	We will use current meters, tape
		and a Brunton compass. Always
		bring a notebook, ruler and
		camera.
26T	Sediment transport- Methods to	
	estimate sediment transport	
28 TH	Sediments Classification-Grain Size	
	Methods	
March		
5T	Water Quality	
7TH	TEST	
12T	Spring Break	
14 TH	Spring Break	
19-T	No class	Use this time to work on the final
		report!!!!!!
21 TH	Field work 3	Bed Sediments and SSC
26 T	Lab 6 Sieving (Group1 and Group 2	
28 TH	Lab 7 Sieving	
April		
2 T	Lab 8 Hydrometer- (Group 1 and	
	Group 2)	
4 TH	Group 2) Lab 9 Hydrometer-Laser	
4 TH 9 T	Group 2)	
	Group 2) Lab 9 Hydrometer-Laser	

16 T	Lab 11- Hornsby Bend	
18 TH	No Class	Use this time to work on the final
		report!!!!!!
20 Saturday	Field - Hornsby bend	
23 T	No class	Use this time to work on the final
		report!!!!!!
25 TH	Filtering SSC	
30 T	Filtering SSC-Data review	
May		
2 TH	Presentations	