UVM Geography 081: Introduction to GeoTechniques Spring 2016
Instructor: Joanna Grossman (joanna.grossman@uvm.edu)
Class Times: Mondays & Wednesdays 9:40am-10:30am in LAFAYETTE HALL L210
Friday Labs: Section 1 (9:40-10:30am); Section 2 (10:50-11:40am) in Lafayette L203

**Faculty Office Hours: ***Fridays, 1-3pm or by appointment, in Old Mill Office #215

TA Lab Hours: Sunday in the GeoTechniques Lab in Lafayette L203 Sunday 2:15-4:15

*(Feb 19, Mar 25 and April 8 office hours will be on Wednesday Feb 17th, Mar 23rd, & Apr 5th instead.)

Course Overview

Intro to GeoTechniques (Geo 81) is a required for all UVM Geography majors. The course introduces spatial techniques and technologies that geographers commonly use in their professional lives. Geo81 students will learn how to read and interpret maps and to use GIS (geographic information system) software to produce maps, analyze geographic datasets, and interpret remotely sensed data.

Course Format

Geo 81 is divided into 3 skill units/skill sets:

1) Map Use & Analysis
2) GIS (Geographic Informations Systems)
3) Remote-Sensing

Monday / Wednesday lectures and discussions will be accompanied by Friday lab sessions. Lecture time slots are occasionally be used for additional lab-based instruction. Course location will be on BB. Each week will include readings, assignments, and Friday lab exercises.

Lecture notes, help forums, help resources, all the lab assignments and readings can all be found on the course Blackboard page. **To reach me please send me messages via Blackboard**. **If you need help with an assignment, please post your question on the discussion forum in Blackboard**. I'd encourage you to also respond to other classmates questions. All engagement on Blackboard forums with count positively toward your participation grade.

Participation is crucial to making this class a positive learning experience. Students are expected to participate actively in class and in the class online discussion forum. Lab exercises will be graded and must be submitted prior to stated due date. A final map project will be due on the last day of classes (May 4th.) Short quizzes on the reading materials will be held in class every Monday. Final class grades will be calculated using the following weightings:

Attendance, Class Participation, & Blackboard Discussion Forum Participation (10%);

Students are expected to attend class and be on time. Students get three excused absences that will not count against your grade. The reason for these absences is that people get sick, get in car accidents, grandparents die. Other bad things happen. These instances are the time to use these excused absences. These instances will not allow students additional excused absences.

Students are expected to be *on time* to class. The instructor takes attendance at the beginning of class. If you are present during attendance you will be marked as present. If you arrive in class after attendance you will have been marked absent. The onus is on the student to let the instructor know you arrived late, after class, at which point you can be counted 75% present. Present = 1. Absent = 0. Late = .75.

Students who routinely ask and answer questions and attend class on time will easily achieve the full 10% towards their final grade.

Lab Exercises (40%);

Labs will usually be assigned on Fridays and students will have a week to complete them.

Sometimes labs will be assigned as groupwork and sometimes independent work. The expectation for group work is that all members of a group contribute equally. Labs should be turned in on time for full credit. Five points are dropped off the final score of a lab for every day late. The reason only 5 points are dropped is so that illness and other disruptions do not prove detrimental to a student's grade. However for this same reason, extensions will not be granted.

If help is needed on labs students should first post questions to the blackboard forum. Students can also go to the TA's lab hours and the instructor's office hours (which will be held in the lab). Before asking for help students will be expected to have done considerable research to answer the question on their own and be clear about what exactly their question is.

Monday Reading Quizzes & Exams (20%);

On Monday mornings student engagement in the material will be evaluated. Sometimes this will be through written quizzes. Sometimes this will be through pop-presentations. The purpose of these quizzes is for students to prove that they read the material thoroughly enough to be able to engage effectively in the lecture. Exams will be worth three quizzes.

Final Project (30%).

The Final Project will be an extensive summation of a student's learning applied to an interest of their own. Students will choose a problem to study. They will identify a pre-existing map related to the subject and analyze it for the class. They will do a GIS project illustrating the problem and/or solutions. They will use remote-sensing to understand the project. All three of these components will be presented to the class in 5-7 minutes and submitted to the instructor in a document no longer than 3-5 pages. A point will be deducted for every additional page.

Grades will be posted on Blackboard as soon as the instructor is able to post them.

Texts, Equipment, Readings, and Online Resources

The class website on the UVM Blackboard (bb.uvm.edu) will be used to access all course readings, lectures slides, lab exercises, and assignment materials. The class blackboard site will be updated on a week-to-week basis. If you encounter difficulties accessing the class blackboard website, contact UVM Computing Helpline **(802) 656-2604**; email: helpline@uvm.edu) regarding connectivity. Contact the instructor (Joanna Grossman) via Blackboard regarding content.

Class Communications

The class instructor (Joanna Grossman) will be available during the office hours listed at the beginning of this document. Alternatively, students can contact the instructor by blackboard. The instructor will be sending email communications to student UVM email address to provide reminders or announcements. Please make sure that you check your UVM email regularly during the semester. If you use another email account (gmail, yahoo, etc), make sure to forward your UVM email to that account.

Class Expectations

1. Attend class and, participate in class discussions. Take class notes and ask questions.
2. Let the instructor know as soon as possible, in writing, if classes will be missed due to special reasons including athletics, university-sponsored activities, religious observances, or healthcare appointments.
3. Following any absences from class sessions, students must take necessary actions to catch up, such as getting class notes from another student. Absence is not justification for extensions or quiz excusals.
4. During classes and labs, **turn off all electronic devices** that are not involved in note taking (**phones**, pagers, iPods, etc.).
5. During classes and labs, refrain from disruptive activities such as chatting with friends, texting, web surfing, checking email, or reading magazines.

6. Due dates for assignments, lab exercises, and the final project are not flexible. Grade deductions will be assessed if assignments, exercises, or final project are handed in late.
7. **No make-up quizzes or exams will be given.** Exceptions will only be made for prearranged absences due to university-sponsored events or documented illnesses or emergencies (must be documented through your Dean's office).

Code of Academic Integrity

The principle objective of The University of Vermont Code of Academic Integrity (http://www.uvm.edu/policies/student/acadintegrity.pdf) is to promote an intellectual climate and support the academic integrity of the University. Academic integrity is an essential part of learning at UVM, thus faculty, staff and students are expected to conduct themselves in an ethical way while at the University and abide by the behavior written in Our Common Ground (http://www.uvm.edu/~presdent/?Page=miscellaneous/commonground.html).

Violations of the Code of Academic Integrity are any acts which would have the effect of unfairly promoting or enhancing one's academic standing within the entire community of learners. Such acts are serious offenses and will not be tolerated. Any suspected violations of the Code will be forwarded to the Center for Student Ethics & Standards.

To read the Code of Academic Integrity and learn more about the Center for Student Ethics and Standards, visit their website at:
http://www.uvm.edu/cses/

Learning Assistance

The UVM Learning Co-Op (www.uvm.edu/~learnco) is available to help students improve study and writing skills. Use this resource if needed.

Students with learning and/or physical disabilities should alert the instructor (Joanna Grossman) during office hours or via email. She will work individually with students to foster success. Students must provide a letter from UVM-ACCESS (http://www.uvm.edu/access/) if special exam situations or other appropriate accommodations need to be made.

Geo 81 Topics

Map Use & Analysis Unit

Week 1: Course Introduction, Mapping Relevance (1/20, 1/22)

Week 2: Map Use & Interpretation (1/25, 1/27, 1/29)

Week 3: Process, Color, Classification (2/1, 2/3, 2/5)

Week 4: Projections, Coordinate Systems (2/8, 2/10, 2/12)

Week 5: Map Use & Analysis Review & Exam (2/17, 2/19)

Basic Desktop GIS Unit

Week 6: What is GIS? What is Data? (2/22, 2/24, 2/26)

Week 7: Geoprocessing, Geoprocessing, Spatial Analytical Methods (2/29, 3/2, 3/4)

Spring Break

Week 8: Elevation (3/14, 3/16, 3/18)

Week 9: Guest Lecture, Project Planning, GIS review & exam (3/21, 3/23, 3/25)

Remote-Sensing Unit

Week 10: Remote-Sensing: What is it?, Resolution, Optics, Color Theory (3/28, 3/30, 4/1)

Week 11: Sensors & Imagry (4/4, 4/6, 4/8)

Week 12: Image Classification (4/11, 4/13, 4/15)

Finals

Week 13: Emergent Topics, Final Projects Tips, Discussion & Q&A (4/18, 4/20, 4/2)

Week 14: Final Project Presentations (4/25, 4/27, 4/29)

Stand-up presentations of final project maps and visuals.

Week 15: Exam Prep & Exam (5/2, 5/4)

* Printed & digital versions of final project, which combine flash presentation maps/visuals with a written report due on last day of class.