INTRODUCTION TO GIS FOR GEOLOGISTS, SPRING 2010

Geology 111b, Pomona College

Instructor:	Dr. Eric B. Grosfils
Office:	241 Edmunds
Office Hours:	Wed, 9:30 – 11:30 AM (or other times by appointment/happenstance!)
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Class Time:	Tu, 1:15 – 4 PM, Edmunds 248

OVERVIEW OF THE COURSE

The goals of this course are to help you: [1] obtain an introduction to the fundamentals of GIS analysis; [2] gain a hands-on familiarity with 'industry-standard' software package/s and basic field instrumentation; and [3] build experience integrating these skills and using them to explore an array of geologically-relevant tasks and questions.

Since the range of questions to which GIS tools can be applied is so vast, your own future needs will almost certainly require the use of software capabilities we don't address during the semester. Thus, an additional goal of the course, and a key reason for inclusion of the capstone project, is to ensure that you gain practical experience exploring and then tapping into the software packages' considerable depths in order to meet your own needs!

GUIDELINES AND EXPECTATIONS

- CLASS ATTENDANCE -- your attendance at class is expected. If you think you'll be absent, however, please have the courtesy to advise me of this as far in advance as possible, and make up the work as quickly as you can.
- ASSIGNMENTS IN AND OUT -- unless otherwise stated by me, all assignments must be turned in before the beginning of class on the day they are due. If you are late to class, so is your assignment!
- LATE POLICY -- late submissions are penalized 10% of the assignment points for each 24 hr period which has elapsed since the assignment was due. Once I return a graded assignment I no longer accept late submissions of that assignment—so try not to play "procrastinator roulette" too often.
- EXAMS -- one midterm exam is scheduled, a GIS-focused "practical." There is no final exam.
- HWS/PROJECT -- there are 6 homework assignments and a multi-week project to be completed during the course of the semester. These represent a major time investment for the class—expect it!
- SOFTWARE/DATA – you will have access to the ArcGIS system, and if/as needed the ENVI EX image processing software as well. Please assume that data sets used in the course are proprietary unless I indicate otherwise; for software/hardware issues call the department tech (x72956) or me.

COURSE CREDIT

Midterm exam (1 @ 15%)	15%
Six labs (first 4 and 6th @ 8% each, 5th @ 15%)	55%
Project (total of all components)	25%
Class preparedness (Attend! Participate! Seriously!)	+ 5%
	100%

GRADING POLICY

At the end of the semester, your letter grade for the course will be calculated out of 100% as indicated above, and a letter grade will be assigned according to the following distribution:

A+ (98-100%); **A** (94-97%); **A-** (90-93%); **B+** (87-89%); **B** (83-86%); **B-** (80-82%);
C+ (77-79%); **C** (73-76%); **C-** (70-72%); **D** (61-69%); **F** (60% or less)

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[Tentative Syllabus]

DATE	TOPIC	READING	ASSIGNMENT
WEEK 1			
19-Jan	Introduction to the Course & ArcGIS ; Displaying/Manipulating Spatial Data	P: Intro + Ch 1-3	--
WEEK 2			
26-Jan	Thematic Maps & Map Production	P: Ch 1-3	**HW 1 Due**
WEEK 3			
2-Feb	Selecting & Displaying Features ; Displaying/Manipulating Attribute Data	P: pg. 462, Ch 4, 5	**HW 2 Due**
WEEK 4			
9-Feb	Other Data, Editing, Projection ; Geoprocessing	P: Ch 7, 12, 13	**HW 3 Due**
WEEK 5			
16-Feb	**EXAM (GIS Practical, Due Feb 23)**	see exam	**HW 4 Due**
WEEK 6			
23-Feb	Basic Raster Analysis	P: Ch 8, 10 + TBD	**EXAM 1 Due**
WEEK 7			
2-Mar	Guest Lecture or Work Time (EBG may be away)	TBD	--
WEEK 8			
9-Mar	GPS	P: Ch. 11	**HW 5 Due**
WEEK 9			
16-Mar	**SPRING BREAK, NO CLASS OR LAB**		
WEEK 10			
23-Mar	Introduction to the Project	Handouts	**HW 6 Due**
WEEK 11			
30-Mar	Project		
WEEK 12			
6-Apr	Project		
WEEK 13			
13-Apr	Project		*progress report*
WEEK 14			
20-Apr	Project		
WEEK 15			
27-Apr	Project		
WEEK 16			
4-May	Project Presentations		**Project Due**
	NO FINAL EXAM!!		

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INITIAL QUESTIONNAIRE

GIS is a powerful tool, and the reasons for acquiring skill using it can be quite diverse. To help give me a feel for your backgrounds and goals, please answer the following questions as completely as possible.

NAME: _____

EMAIL ADDRESS & PHONE #: _____

YEAR (sophomore, etc.): _____

MAJOR (actual or intended): _____

Please describe your background and amount of preparation in the following areas:

Geology:

Math:

Others you think might be pertinent to this class:

What do you hope to get out of this course? Are there particular places or special topics that you would like to see covered during the semester (try not to refer to the syllabus when answering!):

Tell me something you think is interesting or unusual about yourself! *[I'll start… while I'm a bit rusty at present, I enjoy playing hackey-sack – so let me know if you want to kick one around sometime!]*