Geos 225 - Class and Lab Schedule Spring 2011

Classes: Tuesday 2:00 - 3:00, meets in Room 235 **or** 316 (with local outside work).
Labs: Tuesday 3:15 - 6:15, meet in Room 225 **or** 316 (with fieldtrips and other outside work).
Instructors: **Chris Wyatt**, chris.wyatt@alaska.edu, Rm 308, x7809
Elisabeth Nadin, enadin@alaska.edu, Rm 334, 474-5181
Rainer Newberry, ffrn@uaf.edu, Rm 328 x6895
TA: **Jeremy Davis**, jmdavis6@alaska.edu (Office hours by appointment... contact instructor or TA)
Lab Exercises will take a full 4 hours and build on the class lecture: **PLAN ON BEING ON TIME & READY TO LEARN AT 2:00 pm!!** Labs due Tuesday 1 week after assigned.

	Reading		**Class Topics-Tues 2 to 3 pm**	**Lab Exercises- Tues 3:15 to 6:15pm**
Week 1 Jan 25	C3-11	C	Class overview and mechanics; Computer Lab Basics: Logging On/Off, Printers, Users' Folders, Standard WinXP Desktop.	**Lab 01:** Basic desktop, UAF computer services: email, phone/email directories, geology resources online, UAF library resources. Getting and sending data via email or internet: Zip, Data downloading.
Week 2 Feb 1	G5-20	R	Map projections, coordinate systems, magnetic declination.	**Lab 02:** Map coordinate systems, conversions.
Week 3 Feb 8	TBA	C	MS Excel overview, parsing, simple graphs. Review of Lab 1 (as needed).	**Lab 03:** MS Excel overview, parsing, more complicated graphics, math functions.
Week 4 Feb 15	C34-48	C	Intro to Geographic Information Systems.	**Lab 04:** Intro to ArcGIS
Week 5 Feb 22	G28-32, 60-63	R	Rock and mineral field identification strategies.	**Lab 05:** Review of rock hand specimen identification.
Week 6 Mar 1	G4-6, 52-55,	R	Basics of mapping, meaning of s/d , 'recording conventions'.	**Lab 06:** Room 235 mapping: estimating strike & dip by clinometer.
Week 7 Mar 8	G25-28	E	Intro to geologic cross sections.	**Lab 07:** Geologic Cross sections.
15-Mar			*Spring Break*	*Spring Break*
Week 8 Mar 22	TBA	E & C	Orientation for Lab 8.	**Lab 8:** Topographic maps and Fairbanks area features, driving tour.
Week 9 Mar 29	C12-22	E	Adobe I: Intro Adobe Illustrator.	**Lab 09:** Adobe I--learn to use and then create something relatively simple-- the room cross-section
WK 10 Apr 5	G27-37	R	Geologic Maps and Intro to Lab 10.	**Lab 10:** Pacing, map location, and mapping planar features.
Wk 11 Apr 12	G37-46, 56-58	E & R	Linear elements, geology & topography, general mapping strategies.	**Lab 11:** Map location & measuring data on real stuff exercise, Baylor Quarry area.
Wk 12 Apr 19	C21-33 (review 12-22)	E	Adobe II: Applied Adobe Illustrator.	**Lab 12:** Adobe II: making an illustrator map from a scanned paper copy of the BQ map
week end	**23/24 april**	R	All-day mapping exercise, BB area	**really lab 13..date to be negotiated...**
Wk 13 Apr 26	G53-56	R	Orientation for Lab 14.	**Lab 14:** Geologic map of Approach Hill Quarry area
Wk 14 May 3	C21-33 (review 12-22)	E & C	Adobe III: Adobe Expert!	**Lab 15:** Adobe III: start to Adobe-Illustratorize your Beacon Bald map.

* All readings are from the Geos 225 'Compendium' provided at no additional charge!!!

Grades will be based on Lab Exercises, prelabs, homework, and the final project. Lab exercises are due one week after they are assigned. We will submit an 'instructor-designated drop' if you are missing 2 or more assignments on the 5th week of classes (Mar 1, 2011). More rules & such are on the attached Syllabus.

Geos 225: The attached syllabus

Course Description: Basic field methods, including field notes, topographic maps, measurement of structural elements, field safety, illustration, field mapping and the use of GPS for field work are discussed and practiced. Use of computers for processing geologic field data and analytical data, and integration of field data into a simple Geographic Information System (GIS). Computers are used for the production of reports and technical illustration. This course will fulfill the department requirement for computer literacy. (Prerequisite: GEOS 101X.)

Student Learning Outcomes: By actively participating in this course you will become proficient at:

1. Navigating the Windows Desktop, connecting to remote computers to access data.
2. Simple formula entry and geologic data manipulation in MS Excel.
3. Constructing simple geologic diagrams in Adobe Illustrator.
4. Plotting digital GPS locations on a USGS basemap and interpreting in a GIS.
5. Identifying common rock types and geologic structures in field settings.
6. Using a Silva and Brunton Compass for field measurements and a hand-held GPS unit to locate observations.
7. Identifying locations on topographic maps through topography and geographic coordinates.
8. Recording field geologic data through field notes and field geologic maps.

Instructional Methods: This course is primarily about how to do....stuff. The lectures, PRELABS, and occasional homework exercises, and accompanying notes are to better prepare you to efficiently use your time in lab to learn and practice these skills. Where possible, Lab Exercises will be posted in advance to also help you prepare for the lab on Tuesday. Written assignments accompanying the lab are due a week after the lab exercise. It is vital to complete the weekly lab exercises, as it is essentially impossible to learn the course material without doing so. **It is difficult to catch up if you fall behind in the labs!!!** And since the course topics are broadly cumulative, lack of understanding of one topic will make it very difficult to progress to the next. MANY LABS AND MOST PRELABS WILL BE IN ELECTRONIC FORMAT and will be 'turned in' by electronically placing in the Geos 225 Sp '11 DROP BOX. Prelab exercises will be due **NOON ON the MONDAY BEFORE THE LAB**.

Course Policies: Naturally, we would like you to attend class and to show up on time!! If you know you will miss a class let us know IN ADVANCE and we will try to arrange a way to make up the material. *As routine completion of laboratory exercises is essential to understanding the material in this course, we will submit an instructor-designated drop if you are missing more than 2 lab assignments after the 5th or 9th week of classes (5pm on Feb 22 and 4 pm on Mar. 28).* ***We encourage students to work together—but we want you to be sure to do your own work and not copy from other students.***

Geos 225 Spring '11, continued

Evaluation: We reserve the right to dock points for severely late lab assignments.

Student grades in the class reflect the degree to which student learning outcomes have been achieved. Overall class grade based on: **Weekly lab writeups = 60%, prelab - homework exercises= 20%, Final project = 20%.** Final grades will be normalized to the highest point total among students in the class. A point total within 90% of this will be an 'A':, within 80% = 'B'; within 70% = 'C', within 60% = 'D', < 60% = 'F'. '+' and '-' grades will be awarded for scores within 2% of 90,80,70,60; e.g., 92% = A-, 88% = B+.

Final Project: For the final project you will take your corrected Beacon Bald Field Map on Mylar and prepare a cartographically complete electronic version (Adobe illustrator) with Unit Descriptions and Geologic History (corrected for grammar and Geologic usage) of the Beacon Bald area. This project will represent both the culmination of all the various skills you've learned and an attractive piece of refrigerator art!!!

You will have the lecture and lab time on May 4 (2pm to 6:15pm) as well as this class's assigned Final Exam time (May 10, 10:15am to 12:15pm) to complete this project.

You must electronically turn in (by 5pm on Friday, May 13)

1. A pdf of your electronic geologic map
2. your Unit Descriptions in Microsoft Word
3. A 'summary of the geologic history of the Beacon-Bald area' in MS Word.
4. Your original field notes and original map

Support Services: In several labs we will expect you to be able to perform simple algebraic and geometric manipulations. If you have difficulty with such we encourage you to take advantage of the math lab facilities.

Disabilities Services: The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. UAF is committed to equal opportunity for all students. If you have a documented disability, please let us know within the first two weeks of class, and we will work with the Office of Disabilities Services to make the appropriate accommodation. Please let us know early on if you have a physical disability that will restrict your ability to perform field work. We have accommodated a student in a wheelchair and can modify exercises, but need time to plan for such. If you have a specific undocumented physical, psychiatric or learning disability, you will benefit greatly by providing documentation of your disability to Disability Services in the Center for Health and Counseling, 474-7043, TTY 474-7045.