

Geos 225 - Class and Lab Schedule Spring 2006

Class: Friday 11:45-12:45 or 1-2pm Fri, meets in Room 225 or 316 (with local outside work).

Labs: Tuesday 2:15 – 5:15, meet in Room 225 or 316 (with field trips and other local outside work).

INSTRUCTORS: Bill Witte, fnwkw@uaf.edu, Rm. 308, x7809 & Rainer Newberry, ffrn@uaf.edu, Rm. 328 x 6895

TA: Dolores van der Kolk, ftav@uaf.edu, Rm. 312, x7585

Lab Exercises will TAKE A FULL 3 HOURS; PLAN ON BEING ON TIME & READY TO GO AT 2:15 pm!! Labs are due on the Tuesday one week after assignment.

Week	Lab Exercises (& date) TUESDAYS	CLASS TOPICS (& DATE) FRIDAYS
1	classes haven't started yet!	Class overview and mechanics; Computer Lab Basics: Logging On/Off, Printers, Users' Folders, Standard Win2K Desktop. (1/20) BW
2	Lab 01: (1/24) Basic Desktop, UAF computer services: email, phone directories, Geology resources on internet, UAF Library resources. Getting & sending data via email or internet: Zip, data downloading. B	MS Excel overview, parsing, simple graphs. (1/27) BW Review of Lab 1 (as needed)
3	Lab 02: MS Excel overview, parsing, more complicated graphics, math functions. (1/31) B	Map projections, coordinate systems, magnetic declination (2/3). R & B
4	Lab 03: Map coordinate systems, conversions (2/7) R&B	Rock & mineral field identification strategies. (2/10) R
5	Lab 04: Review of Rock hand specimen identification (2/14) R	Basics of mapping, meaning of s/d, 'recording conventions' (2/18). RN
6	Lab 05: Rm. 225 mapping: estimating strike & dip by clinometer (2/21). R & B	Stereonet plotting on paper B . Review lab 5 results (R). (2/24)
7	Lab 06: Stereonet plotting & S/D map using 2/21 data. Prepare map: Rockware & Illustrator. (2/28). B	Intro to Adobe Illustrator (3/3). BW
8	Lab 07: Sketch maps in Adobe Illustrator (3/7) B	Intro to GIS, databases, & geo-data collection. (3/10) B
	Spring Recess – No Lab (3/14)	Spring Recess – No Class (3/17)
9	Lab 08: GIS and Geologic Maps (3/21). B	GIS and Geologic Maps B ; intro to Lab 9 (3/24) R
10	Lab 09: Pacing, map location, and mapping planar features—S of bldg (3/28). R&B	Linear elements, geology & topography, general mapping strategies (3/31) RN
11	Lab 10: Geologic map of Nat Sci bldg area (4/4) R&B	Intro to geophysical tools & mapping (4/7) B&R
12	Lab 11: Geophysics & mapping in the Goldstream area (4/11) B & R	Scanning, georeferencing, digital acquisition concepts (4/14) BW
13	Lab 12: Map location & measuring data on real stuff exercise, Baylor Quarry area (4/18) R&B	Geologic Maps in Adobe Illustrator (4/21) BW
14	Lab 13: Detailed geo map of Beacon Bald area (4/25) R&B	NO CLASS – Nookie SpringFest (4/28)
15	Lab 14: Geologic map of Approach Hill area. (5/2) R&B	Field Safety & field preparation (5/5) BW

(B means Bill's in charge; R means Rainer's in charge; B& R or R&B means sub-equally culpable)

Grades will be based on Lab Exercises, occasional homework, and a 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 or after the 5th week of classes.

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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, 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 given out with lecture on Friday 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.

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 17 and 4 pm on Mar. 24).* **We encourage students to work together—but we want you to be sure to do your own work and not copy from other students.**

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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 write-ups = 70%, Occasional homework 10%, 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'.

Final Project: *For the final project you will pick one of your previous mapping exercises (labs 12, 13 or 14) and from it prepare a complete map in Adobe Illustrator format, accompanied by Unit Descriptions in Microsoft word and your original field notes. This project will represent both the culmination of all the various skills you've learned and an attractive piece of refrigerator art!!!*

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.