Geology 255 -- Geohydrology
4 credits – 2003
300 PERKINS

http://geology.uvm.edu/geowww/morphwww/classes/hydro/

1:25 to 03:20 M
1:25 to 05:30 W

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Water is an important driving force in many geologic processes, particularly those occurring at and near Earth's surface. During this semester, we will study water and the geologic implications of its movement from several different perspectives including: lakes and ponds, water and its movement over and into the ground, and the importance and behavior of snow.

The course will be structured differently from many that you have taken at UVM. Emphasis will be placed on learning by doing rather than learning by lecture. Each week there will be a one to two hour lecture/discussion/activity session on Monday followed by a four-hour discussion/ laboratory/field excursion on Wednesday. The exercises will vary and will include spread-sheet modeling of hydrologic phenomena, use of experimental apparatus, reduction of field data, and the use of Macintosh computers. We will be using the computer facilities in room 300 Perkins and the equipment in the Lake Lab (Perkins 101).

One Saturday and several Wednesdays, we will go into the field as a class and gather geologic and hydrologic data. These data, difficult to acquire and uncertain as they will likely be, will become the basis of several short reports. These reports will involve the presentation of field data, calculations reducing these data, and a summary giving your conclusions. The reports will be limited to a maximum page length and will be edited critically. One will be done alone, another done in teams, and one done as a poster.

Each report should contain an abstract, an introduction, a methods section, data and discussion. Your figures, tables, references and calculations must be included but do not count in the page limit.

EXPECTATIONS

This is a junior/senior level/ graduate course and I expect each of you to take the initiative in both learning and project completion.

It is expected that you will have *done the reading prior to the class* for which it was assigned. It is expected that you *will come to every class*. It is expected that you will *arrive on time* so as not to disturb the learning of others. Attendance and participation

will weigh heavily in your grade. The will be no tests or exams in the course. On the flip side, Joanna and I will come to class prepared to teach, will stick to the syllabus (except if cool geologic/hydrologic things happen then all bets are off!), and get reports back to you in a timely fashion.

Projects are due at the beginning of class on specified days and lab assignements are due at the start of class a week following the session when they were given out. Projects and labs will lose a letter grade for each day that they are late and no extensions will be considered the day an assignment is due. This includes computer and printing failures. Please plan ahead and pleases back up your work; computers, disks, and hard drives are flaky!

If you know in advance that there will be a conflict or difficulty with completing an assignment in a timely manner, see me before the assignment is late and we'll try to work something out. Your grade in the class will reflect the following:

1. Attendance and participation in discussion and laboratory.
2. Quality, completeness, and timeliness of laboratory assignments.
2. Quality, completeness, and timeliness of project reports.
3. Quality and completeness of poster presentation
4. Participation on field trips.

Because we have lots of informal time together in class and lab, I have no formal office hours but will respond promptly to email and set up a meeting within a day or two usually. Joanna Reuter is the TA for the class and can also answer many of your questions. You may schedule appointments with her, too.

On that note...I require that each of you obtain an email account and check it regularly. Much of our communication as a group happens over email and over the web.

There are two required texts for the course. The required texts are: *Water in Environmental Planning* by Dunne and Leopold, a classic, well-written and predominately qualitative overview of hydrology and geology and *A Manual of Field Hydrogeology*, a book that you will find quite useful for fieldwork and groundwater.

SPECIAL NOTE FOR 2003 --- We (OK, Christine) is due to deliver our second child on March 2, 2003. This could make life (and this class) really interesting for a couple weeks when I'll be getting even less than my normal few hours of sleep every night. The birth (depending on when it happens) might also necessitate a change or two on the syllabus if I miss a class…it might be that you only see Joanna for a few days. In any case, I ask for your flexibility and understanding over the semester! But hey, kids are great fun and do change your life.

-P.