Spring 2003

Syllabus for GEOL 360

Principles of Hydrology

Subject Matter

Hydrology is the branch of science that asks “What happens to rain after it falls?” This course will be structured around the hydrologic cycle and will cover land-atmosphere interactions, surface water hydrology, groundwater, water chemistry, and water pollution.

Prerequisites

This course is intended for upper-division students with previous background in the earth sciences. Some of the work in this course will involve word problems, units conversion, and evaluation of mathematical formulas (involving addition, multiplication, numbers taken to a power, etc.) using calculators and spreadsheets. It is assumed that students have taken an introductory writing course, and know how to use the library and a word processor. It is further assumed that students have basic computer skills and can access information on the internet.

Instructor:

Dr. Jené Michaud
office CH 203; phone 974-7411, e-mail jene@hawaii.edu
office hours MW 2-3 and T 1-2

Texts:

Required: Hornberger et. al, Elements of Physical Hydrology, 1998
Other: Handouts taken from various sources will fill gaps in the textbook.

Learning Objectives:

1) Students will become familiar with some of the current issues in hydrology and water resources.

2) Students will acquire a working knowledge of the hydrologic cycle and water quality. A “working knowledge” will encompass a basic understanding of processes, awareness of how measurements are made, and the ability to use observations and hydrologic concepts to address a variety of problems.

3) Students will become sufficiently familiar with hydrologic vocabulary and concepts that they will be capable of reading and interpreting professional-level reports.

4) Assignments are intended to help students develop and polish skills that are expected of working professionals. These skills include:
   i. Writing, both formal and informal
   ii. Accessing and interpreting information (both standard data sets and the scientific literature)
   iii. Quantitative analysis
iv. Showing up regularly and completing assignments within deadlines
v. Working in groups

Writing
Assignments: This is a writing intensive course. Students will write a literature review (feedback will be provided on rough and penultimate drafts), and a report on a group project (feedback will be provided on the first draft). In addition, some of the homework assignments will be writing-based.

Evaluation:

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CR/NC grading: 70% or greater merits a CR.

Some of the homework will be graded on a ✓✓- basis. These will not be averaged into the final grade.

Student Responsibilities and Class Policies:

1) Consistent class attendance is expected. If you are absent from class, you are responsible for obtaining notes and information from other students, not the instructor. You can pick up missed handouts from an appropriately labeled bin in the hallway leading to CH 118-120.

2) Students are expected to do the reading and to do it on time. Really.

3) Students are expected to turn in assignments on time. On time means at the beginning of class. Penalties for late assignments are 20%, rising to 50% if turned in after the instructor has finished grading. Late assignments should be placed in the box labeled “Michaud” in the CH118-120 hallway my box in the hallway. Late assignments must be clearly labeled with the date they are turned in or else the penalty will be determined by the date that the assignment is received by the instructor.)
4) Exams and some quizzes may contain questions designed to test your capacity for synthesis or original thinking. The final is comprehensive. Quantitative problems on homework and quizzes will be similar to homework problems.

5) Students who are absent from a quiz or exam will receive a grade of zero unless (i) the absence was due to a legitimate emergency, or (ii) the student has a legitimate reason for being absent and has made PRIOR arrangements for a make-up exam. Students who miss exams due to legitimate emergencies must inform the instructor of the situation as soon as possible. (Leave a message on my answering machine 974-7411.)

6) Field work is required. Speak with the instructor in advance if missing a field trip is unavoidable.

Access: Any student with a documented disability who would like to request for accommodations should contact the University Disability Services Office (933-0816 (Voice), or 933-3334 (TTY), shirachi@hawaii.edu, Campus Center Room 311), as early in the semester as possible.