

# Envs 305 — Hydrology

Instructor: Dr. Chip Fox  
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**Class Meets:** Lecture 8:00 — 8:50 M, W, F — Sci 135  
Lab 1:00 — 2:50 Monday

**Required Text:** Fetter, C.W. (2001) Applied Hydrogeology, 4th ed.  
Englewood Cliffs, NJ: Prentice Hall.

**Catalog Description:** **Hydrology** Essentials of fluid mechanics. Flowing rivers, streams, and diverse surfaces; motions in lakes and reservoirs and ground water movement of various contaminants. Properties of rocks and soils as related to ground water diffusion and problems of concern to water resources.

**Practical Description:** This course will present an overview of nearly all aspects of the field of hydrology, including the hydrologic cycle, surface water (rivers and glaciers) and groundwater. The bulk of the course will concern groundwater and will focus on practical methods for ascertaining aquifer characteristics, the understanding of which is paramount to evaluating groundwater supplies and groundwater contamination problems and remediation.

**Expectations:** Attend all sessions. More than four unexcused absences may result in a drop of one letter grade. Five or more absences may result in being dropped from the course. Actively participate in and complete all lab assignments and exercises and all homework assignments. Successfully pass two mid-term exams and a comprehensive final. Complete an individual research project on some aspect of hydrology. The project is to consist of a 10 page (minimum), well referenced paper and an approx. 15 minute oral presentation.

<b>Evaluation:</b>	2 Mid-term Exams	200 Points
	Comprehensive Final Exam	100
	Paper and Oral Presentation	100
	Total	400 Points

**Evaluation of paper:** 100 points (Do not use a report cover)

- Paper in on time, Proper format (10 pg, typed, etc) (20 points)
- Properly referenced or Adequate Field Work (20 points)
- Ability to communicate clearly (20 points)
- Looks like a “Semester” Project or not an overnight (20 points)
- Presentation (20 points)

**Topical Syllabus:**

**Week**

- 1 Overview of Hydrology, Hydrologic Cycle
- 2 Overview of Hydrology, Hydrologic Cycle
- 3 Stream Hydrology
- 4 Glaciers
- 5 Groundwater Flow
- 6 Groundwater Flow, **Exam I**
- 7 Regional Hydrogeology, Groundwater Mapping
- 8 Well Design
- 9 Aquifer Characterization
- 10 Aquifer Characterization
- 11 Groundwater Contamination
- 12 Groundwater Contamination **Exam II**
- 13 Groundwater Management
- 14 Environmental Regulations
- 15 Student Presentations
- 16 **Final Exam**

Caveats Box

**Disabilities** — Requests from students with disabilities for reasonable accommodations must go through the Academic Support Committee. For more information, please contact the office of Advisement Services, BA 314, 903-886-5133.

**Behavior** — All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. Students who are disruptive to class activities will be dropped from the class and may face further disciplinary action.

**Plagiarism** — Plagiarism is a criminal activity. You must cite all sources of information. Unreferenced copying of material, whether parts of sentences, whole sentences, paragraphs, or entire articles can result in a score of zero for your assignment and may result in further disciplinary action.