Geology 4182: Physical Hydrogeology
Spring 2009
TTH 9:00-10:30 AM
E207 Howe-Russell

Prof. J. A. Nunn	Office Hours M 2:30-4:30 PM
Howe-Russell E339	578-0081
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C. W. Fetter, Applied Hydrogeology, 4th Edition

http://www.geol.lsu.edu/jnunn/gl4182/

Schedule of Lectures

January	13	Hydrologic Cycle	Ch. 1 & 2
	15	Porosity and Permeability	Ch. 3
	20	Compressibility & Specific Storage	
	22	Hydraulic Head	Ch. 4
	27	Darcy's Law	
	29	Equations of Groundwater Flow	
February	3	Equations of Groundwater Flow	
	5	Physical Properties of Fluids	Handout
	10	Physical Properties of Fluids	
	12	**Exam 1**	
	17	Well Tests	Ch. 5
	19	Well Tests	
	24	**Mardi Gras**	
	26	Well Tests	
March	3	Unsaturated Flow	Ch. 6
	5	Regional Flow Systems	Ch. 7
	10	Topographic Recharge	
	12	Buoyancy and Free Convection	Handout
	17	Compaction/Abnormal Fluid Pressures	Handout
	19	Ground Water Management	Ch. 11
	24	**Exam 2**	
	26	Geophysical Field Methods	Ch. 12
	31	Geophysical Field Methods	
April	2	Well Logs	Handout
	7	**Spring Break**	
	9	**Spring Break**	
	14	Well Logs	
	16	Salt Water Intrusion	Ch. 8
	21	Contaminant Transport	Ch. 10
	23	Contaminant Transport	
	30	Subsidence/Faulting	Handout
May	**6**	**Final Exam (10-12)**	

Grading

4 problem sets (140 points), 4 Projects (200 Points), 1 Group Project (100 Points), Blog Participation (60), Three Exams (300 points)

This course is certified as a "Communication-Intensive Course" and meets all of the requirements explained on the CxC Web site: http://cxc.lsu.edu., including the following: Emphases on formal and informal assignments in written communication and technological communication, class time spent on communication, 40% of the final grade based on communication projects, revisions after faculty feedback on 2 formal projects (one for each emphasis), and a student/faculty ratio of 35:1. Because it meets these requirements, students may count it toward "Distinguished Communicator" certification on LSU transcripts.

Individual Projects

- **Excel Program of Laplace's Method**
- **Well Test Software**
- **Basin 2 simulations of driving forces**
- **Louisiana Groundwater Usage (with graphs using google application)**

Group Project – Environmental Consulting Firm Video