

9-2014

GEO 420.01: Hydrogeology

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FALL 2014 Schedule
 GEOSCIENCES 420, 4 CREDITS T-Th 8:10 to 10:00
 HYDROGEOLOGY

Instructor: William W. Woessner (SC307)
 Text: Required - *Applied Hydrogeology fourth edition Fetter*

Course goals and objectives: Prepare students in environmental geology and related fields to successfully evaluate and quantitatively analyze hydrogeologic problems.

Professor Woessner's travel schedule in the Fall will result in some conflicts that will be resolved by cancelling class meetings, substituting class work with assignments or scheduling evening classes. All attempts will be made to cover necessary course material.

CLASS DATE			CHAPTER READINGS
August	26	Intro-Hydrogeology	
August	28	Hydrologic Budget	1, 2,
September	2	Hydrologic Budget	2, 11.3
September	4	Properties of Porous Media	2
September	9	Properties of Earth Materials	2
September	11	Earth Material and Aquifer Properties	3
September	16	Aquifer Properties	3
September	18	Head and Fluid potential	4
September	23	Governing Equations	4
September	25	Steady State Flow	4
September	30	Problem Set 1 Due Steady State Flow	4
October	2	Vadose Zone Properties	6
October	7	Vadose Zone Properties GW flow maps	6
October	9	no Class, 2014 MONTANA AMERICAN WATER RESOURCES CONFERENCE will be held October 9-10 at the Kalispell Hilton Garden Inn http://www.montanaawra.org/conference/	
October	14	Exam I	
October	16	Regional Groundwater Flow	7
October	21	Regional Groundwater Flow Guest Lecture	7
October	23	Regional Groundwater Flow	8

October	28	Geology and GW Occurrence	8
October	30	Geology and GW Occurrence	8
November	4	Holiday election day	
November	6	Problem Set II Due	
		Well Drilling	5
November	11	Holiday Veterans Day no class	
November	12	Wednesday Night 6 to 8 class is needed	
November	13	Groundwater flow to wells	5
November	14	12 to 4:00 FIELD TRIP (Missoula Valley)	
November	18	EXAM 2	
November	20	Aquifer Tests	5
November	25	Term Paper Due	
		Water Quality	10
November	27	Holiday no class	
December	1 Monday	Tues class schedule last day of classes	Water Law and Management

FINAL EXAM: Tuesday December 9 10:10 to 12:10 (using the TR 8:10 meeting time for scheduling)

You are being notified the first day of class that this is the time for the exam!

COURSE ASSESSMENT: Weighting of problem sets. Exams and term paper.

GRADING:	2 Problem Sets	30%
	2 Exams	40%
	Term Paper	8%
	Final Exam	22%

Grading is 100-90 A, 89-80 B, 79-70 C, 69-60 D, 59 or less F

TERM PAPER:

The term paper will be a research report on the Hydrogeology of the city or county in which you grew up or a topic assigned by the Professor. All reports will be assigned no later than September 30. All reports will be no longer than 10 pages of text (excluding figures) and will clearly describe the location, geology, and hydrogeology of the area. It will include information on the hydrostratigraphy, occurrence, movement, quantity, and quality of groundwater as well as its uses in the area. All papers will follow a format of the USGS Water Resources Investigations and include full cited references. Sources of information include professional journal articles, State Geological Survey and Water Survey reports, USGS Water Supply Papers, Professional Papers and Water Resources Investigations, and consulting reports.

All assignments given are expected to be turned in on time for grading in neat and edited form. Problem set assignments are due at the beginning of class on the day due with no exceptions. If you cannot make it to class, give the work to someone who can turn it in for you.

I will post office hours for questions, and you may see me any other time I am in my office if it is convenient.

Outside reading for this class is strongly suggested. The library contains a number of general hydrogeology textbooks which I feel will give additional depth to parts of the course I can only summarize.