

Marshall University
GLY 455L/555L: Hydrogeology Laboratory – Spring 2015
Syllabus

Course Title/Number	GLY 455L/555L
Semester/Year	Spring 2015
Days/Time	W, 2:00-4:00 pm
Location	COS 165/170
Instructor	Bill Niemann
Office	S171
Phone	304-696-6721
E-Mail	niemann@marshall.edu
Web	http://www.science.marshall.edu/niemann/
Office Hours	MWF: 11:00-11:30am; TR: 10:30-11:00am; R: 12:30-1:00p; M: 2:00-4:00pm
University Policies	By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to www.marshall.edu/academic-affairs and clicking on "Marshall University Policies." Or, you can access the policies directly by going to www.marshall.edu/academic-affairs/policies/ . Academic Dishonesty/Excused Absence Policy for Undergraduates/Computing Services Acceptable Use/Inclement Weather/Dead Week/Students with Disabilities/Academic Forgiveness/Academic Probation and Suspension/Academic Rights and Responsibilities of Students/Affirmative Action/Sexual Harassment

Course Description

Hands-on, experimental approach to observing and understanding principles of groundwater. Although not required, this laboratory supports lecture class, Hydrogeology: GLY 455.

The table below shows the following relationships: How each student learning outcome will be practiced and assessed in the course.

Course student learning outcomes	How students will practice each outcome in this course	How student achievement of each outcome will be assessed in this course
Students will conduct laboratory experiments to determine hydrogeologic properties of earth materials.	Weekly lab exercises	Weekly lab assignments, lab-midterm, and lab final
Students will process and analyze hydrogeologic field data collected by others to determine basin and aquifer properties	Weekly lab exercises	Weekly lab assignments, lab-midterm, and lab final

Course student learning outcomes (cont.)	How students will practice each outcome in this course	How student achievement of each outcome will be assessed in this course
Students will collect and analyze hydrogeologic field data in order to map a potentiometric surface.	Field trip	Weekly lab assignments, lab-midterm, and lab final

Required Texts, Additional Reading, and Other Materials

Fetter, C.J., K. Lee, and D.E. McCray 2002, *Hydrogeology Laboratory Manual*, 2th edition, Pearson Education / Prentice Hall, Inc.
 ISBN-13: 978-0130465498 ISBN-10: 0130465496

Course Requirements/Due Dates

The lab midterm and final are currently scheduled for March 11th and April 29th, respectively.

Grading Policy

Weekly Assignments = 40%, Lab final = 35%, Lab Midterm = 25%

Attendance Policy

Attendance at all laboratory sessions is expected. Make-up labs will be given only if students have an university-approved excused absence.

GLY 455L/555L : HYDROGEOLOGY LABORATORY -- SPRING 2015

COURSE SCHEDULE

WEEK	DATE	DAY	TOPIC	FORMAT	ASSIGNMENTS
					LFM = Lee et al. (2002)
1	14-Jan	W	Mono Lake: Performing a Water Balance I	Lab	LFM: Lab 1
2	21-Jan	W	Mono Lake: Performing a Water Balance II	Lab	LFM: Lab 1
3	28-Jan	W	Stream Gaging	Lab	LFM: Lab 6
4	4-Feb	W	Measuring Porosity	Lab	LFM: Lab 7A
5	11-Feb	W	Measuring Hydraulic Conductivity I	Lab	LFM: Lab 7B
6	18-Feb	W	Measuring Hydraulic Conductivity II	Lab	Handout
7	25-Feb	W	Measuring a Storage Coefficient	Lab	Handout
8	4-Mar	M	Measuring a Storage Coefficient (cont.)	Lab	Handout
9	11-Mar	W	Lab Midterm		
	18-Mar	W	Break		
10	25-Mar	W	Modeling Flow I	Lab	Fetter: 13, 519-523 / Handout
11	1-Apr	W	Modeling Flow II	Lab	Fetter: 13, 528-530 / Handout

12	8-Apr	W	Field-Testing Aquifer Properties I	Lab	LFM: Lab 9
13	15-Apr	W	Field-Testing Aquifer Properties II	Lab	LFM: Lab 10
14	22-Apr	W	Mapping Potentiometric Surface	FIELD TRIP	
15	29-Apr	W	Lab Final	Lab	

Grading Rubric

Weekly lab assignments will generally be scored by use of a v+, v, or v-, indicating above satisfactory (105%), satisfactory (90%) and less than satisfactory (75%), respectively. Significantly incomplete or sloppy work will receive a grade of v-- (50%). A detailed matrix describing this grading method is shown below.

Grade →	v - - (50%)	v - (75%)	v (90%)	v + (105%)
Criterion ↓				
Timeliness	Submitted significantly after due date/time	Submitted after due date/time	Submitted by due date/time	Submitted by due date/time
Completeness	Repeated missing answers/elements	Missing answers/elements	Complete answers/elements	Work product beyond assignment
Neatness	Illegible and/or sloppy	Difficult to read	Easy to Read	Easy to Read
Care	Obvious lack of care	Lack of care	Obvious care	Extraordinary care
Achievement	Multiple missing / incorrect answers	Incorrect answers	Reasonable answers	Correct and thorough answers
Evidence of Learning	No evidence	Lack of evidence	All objectives met	Exceeds objectives