GEOL 709 – Field Methods in Hydrogeology, Fall 2009

M-W 5:30 - 6:45 PM, Room 104 TEC

Faculty: Dr. Michael Nicholl
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Office Hours: Monday 4:30 – 5:15 PM, Tuesday 6:00 - 6:45 PM, and by appointment

Course Format: Lecture/discussion twice a week
1-3 practical sessions to be scheduled outside of class

Required Textbooks: None

Books on Reserve: Groundwater and Wells by Driscoll
Applied Hydrogeology by Fetter
Field hydrogeology: a guide for site investigations and report preparation by Moore
Manual of applied field hydrogeology by Weight and Sonderegger
Field hydrogeology by Brassington
Earth manual: part 2 by Materials Engineering Branch, USBR
others to be added later

Prerequisites: A previous course in hydrogeology or permission of the instructor

Purpose of this Class: Explore field and laboratory methods that are used in the practice of hydrogeology

Tentative list of topics: Preparing for a site visit
Report generation
Developing a conceptual model
Identifying uncertainty
Water balance measures
Water table mapping
Hydraulic properties in the saturated zone
Well installation
Aquifer testing
Hydraulic properties in the unsaturated zone
Groundwater monitoring
Chemical analysis
Geophysical methods in hydrogeology

Examinations: none

Assignments: Grades will be based on 6 - 12 short projects to be completed by the students

Practical sessions: It is expected that a small number of hands-on sessions will be scheduled outside of normal class hours. Students will be provided with an alternate assignment if their schedule prohibits participation in these exercises.

Grading policy: Final grades will be assigned according to the following schedule. A plus/minus system may be employed at the instructors discretion. The instructor may also elect to employ a curve that favors the students.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Semester average</th>
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<tbody>
<tr>
<td>A- to A</td>
<td>90 to 100</td>
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<tr>
<td>B- to B+</td>
<td>80 to 89</td>
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<tr>
<td>C- to C+</td>
<td>70 to 79</td>
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<tr>
<td>D- to D+</td>
<td>60 to 69</td>
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<tr>
<td>F</td>
<td>Below 60</td>
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Changes to Syllabus:

The list of topics and schedule for this course is tentative. Students will be provided with an updated syllabus if there are significant changes.
The Fine Print

1. Participation
I expect that students will come to this class with very different backgrounds and levels of educational training. As a result, you may find some material difficult, feel that you are already familiar with some of the concepts, or have personal experiences that can inform us all. Whatever your situation, please share your position with us through class participation. Most importantly, however, if you are confused about a concept, please ask questions in class for clarification and further explanation. You will not be alone in your confusion. There are many ways to present this material, and I will attempt to find one that works for you. If you do not feel comfortable asking questions in class, please contact me.

2. Attendance
You are responsible for all material covered in lectures no matter what causes your absence. If you miss a lecture, get the notes from a classmate.

3. Nondiscrimination
The University of Nevada Las Vegas does not discriminate on the basis of race, color, creed, religion, national or ethnic origin, gender, age, sexual orientation, disability, or veteran status.

4. Cheating, Plagiarism, and Academic Dishonesty
You are required to be familiar with university policies and procedures in the current UNLV Catalog. Importantly, we follow the policies on Cheating, Plagiarism, and Academic Dishonesty that are stated in the most recent UNLV Catalog. In the hopes of deterring incidents of cheating and/or plagiarism this class employs a "zero tolerance" policy meaning that if a student commits cheating or plagiarism they receive a grade of F for the class.

5. Learning Environment
The classroom is intended to be a place of learning. As such, and as specified in the UNLV Catalog, no pagers, cell phones, or other potentially disruptive devices are allowed in the lecture.

6. Copyright Issues
The university requires all members of the University Community to familiarize themselves and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The University will neither protect you, nor defend you, nor assume responsibility for employee or student violations of fair use laws. Violations could subject you to federal and state civil liabilities as well as disciplinary action under University policies. To help familiarize yourself with copyright and fair use policies, the University encourages you to visit its copyright web page at: http://www.unlv.edu/committees/copyright.

7. Disability Services (DS)
Disability Resource Center (DRC is the official office to provide Disability Services. If you have a documented disability that may require assistance, you will need to contact DRC for coordination in your academic accommodations. DRC is located in the Reynolds Student Services Complex, suite 137. The phone number is 702-895-0866, or TTD 702-895-0652. You may also visit their website at: http://studentlife.unlv.edu/disability/

If you have a special need/disability, please let me know outside of class sometime during the first week of the course. This helps me to adjust or alter plans so that problems can be minimized and your learning experience can be maximized.

8. Writing Center
Students are welcome to use the UNLV Writing Center free of charge. Consultants can assist students at all stages of the writing process. Students may make appointments by calling the center (895-3908) or in person at FDH-240.

9. Religious Holidays
As a general rule, a student missing a class or assignment because of observance of a religious holiday shall have the opportunity to make up missed work. You must notify me by the last day of late registration if this pertains to you and a clear deadline will be set for completion of work.

10. Official Extracurricular Activity
All students who represent UNLV at any official extracurricular activity have the opportunity to make up an assignment. However, you must provide official written notification to me at least 1 week prior to the missed class(es).