

GEOL 485/685 – Engineering Geology Fall 2017

T-TH 5:30 – 6:45 PM, LFG 202

Faculty: Dr. Michael Nicholl
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Office Hours: Monday 1:00 - 2:00 PM, Tuesday 1:00 - 2:00 PM, and by appointment

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

Required reading: Various handouts, downloads, and books on library reserve
Specific reading assignments will be announced in class, and through WebCampus

Learning outcomes

After successfully completing this course, students will be able to: 1) explain the scope of responsibilities for an Engineering Geologist and differentiate them from those of a Geological Engineer; 2) clearly state the ethical responsibilities of an Engineering Geologist; 3) estimate the basic engineering properties of rocks (density, porosity, permeability, unconfined compressive strength, elastic modulus) and explain how they are used in engineering calculations; 4) differentiate between rock properties and rock mass properties; 5) employ stereographic analysis to estimate the stability of rock slopes; 6) explain soil strength and how it relates to slope stability analysis; and 7) plan a site investigation suitable for engineering design.

Grading policy:

Final grades will be assigned according to the following schedule. The instructor may also elect to curve grades in the students favor.

<u>Grade</u>	<u>Semester average</u>
A- to A	90 to 100
B- to B+	80 to 89
C- to C+	70 to 79
D- to D+	60 to 69
F	below 60

Final Grades will be computed as follows:

Exam 1	(9/28/17)	20%
Exam 2	(11/2/17)	20%
Final Exam	(12/14/17 starts at 6:00 PM)	20%
Assignments		40% (see note below)

Note: Assignments will include a mix of problem sets, graphical calculations, and design analyses. Depending on the nature of the assignment you will work on them either individually, or in groups assigned by the instructor. For group assignments, all members will get the same grade regardless of participation.

Changes to Syllabus:

The syllabus is tentative, adjustments will be made in accordance with the rate of progress in the classroom. The instructor also reserves the right to change a lecture topic to reflect world events. Students will be provided with an updated syllabus if significant changes are necessary.

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Logistics and Policies

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

It is important that you attend class daily because we cover a lot of material, and I will provide guidance for reading assignments and exam questions regularly. 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. If you are absent from a scheduled exam without a written medical, military, or university excuse, you will receive a zero for that exam. If a make-up exam is required due to the excuses listed above, the nature of the make-up exam will be at my discretion. The final exam is required of all students.

3. 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).

4. Religious Holidays

Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The make-up will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor within the first 14 calendar days of the course for fall and spring courses (excepting modular courses), or within the first 7 calendar days of the course for summer and modular courses, of his or her intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit:

<http://catalog.unlv.edu/content.php?catoid=6&navoid=531>.

5. Academic Misconduct

Academic integrity is a legitimate concern for every member of the campus community; all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility, and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy and are encouraged when faced with choices to always take the ethical path. Students enrolling at UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's function as an educational institution. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another, from the Internet or any source, without proper citation of the sources. See the *Student Academic Misconduct Policy* (approved December 9, 2005) located at: <https://www.unlv.edu/studentconduct/student-conduct>.

6. Administrative Drops/Classroom Conduct

You are required to be familiar with university policies and procedures in the current UNLV Undergraduate Catalog. Importantly, we follow the policies on Administrative Drops/Classroom Conduct that are stated in the most recent UNLV Undergraduate Catalog. If a student does not comply with these requirements and conducts themselves in a manner that is disruptive and interferes with the right of other students to learn or of the instructor to teach will be administratively dropped from the course.

7. Learning Environment

The classroom is intended to be a place of learning. As such, and as specified in the UNLV Undergraduate Catalog, no pagers, cell phones, or other potentially disruptive devices are allowed in either lecture or laboratory. Student usage of recording devices, laptop computers or similar devices is only allowed with explicit permission of the instructor, and is restricted to taking notes for this course. Disruptive behavior such as those described above, chatting, sleeping, watching video, playing games or texting may result in an administrative withdrawal from the course.

8. Bringing guests to class

Students are not allowed to bring guests, including children to any class session.

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9. Disability Resource Center (DRC)

The UNLV Disability Resource Center (SSC-A 143, <http://drc.unlv.edu/>, 702-895-0866) provides resources for students with disabilities. If you feel that you have a disability, please make an appointment with a Disabilities Specialist at the DRC to discuss what options may be available to you. If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to the instructor during office hours so that you may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach the instructor in front of others to discuss your accommodation needs.

10. Writing Center

One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, located in CDC-3-301. Although walk-in consultations are sometimes available, students with appointments will receive priority assistance. Appointments may be made in person or by calling 702-895-3908. The student's Rebel ID Card, a copy of the assignment (if possible), and two copies of any writing to be reviewed are requested for the consultation. More information can be found at: <http://writingcenter.unlv.edu/>.

11. Copyright

The University requires all members of the University Community to familiarize themselves with 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 nor defend you nor assume any responsibility for employee or student violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional information can be found at: <http://www.unlv.edu/provost/copyright>

12. 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.

13. Tutoring

The Academic Success Center (ASC) provides tutoring and academic assistance for all UNLV students taking UNLV courses. Students are encouraged to stop by the ASC to learn more about subjects offered, tutoring times and other academic resources. The ASC is located across from the Student Services Complex (SSC). Students may learn more about tutoring services by calling (702) 895-3177 or visiting the tutoring web site at: <http://academicsuccess.unlv.edu/tutoring/>.

14. Rebelmail

By policy, faculty and staff should e-mail students' Rebelmail accounts only. Rebelmail is UNLV's official e-mail system for students. It is one of the primary ways students receive official university communication such as information about deadlines, major campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the university. Students' e-mail prefixes are listed on class rosters. The suffix is always @unlv.nevada.edu. Emailing within WebCampus is acceptable.

15. Incomplete Grades

The grade of I—Incomplete—can be granted when a student has satisfactorily completed three-fourths of course work for that semester/session but for reason(s) beyond the student's control, and acceptable to the instructor, cannot complete the last part of the course, and the instructor believes that the student can finish the course without repeating it. The incomplete work must be made up before the end of the following regular semester for undergraduate courses. Graduate students receiving "I" grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the time indicated, a grade of F will be recorded and the GPA will be adjusted accordingly. Students who are fulfilling an Incomplete do not register for the course but make individual arrangements with the instructor who assigned the I grade.

16. Transparency in Learning and Teaching

The University encourages application of the transparency method of constructing assignments for student success. Please see these two links for further information: <https://www.unlv.edu/provost/teachingandlearning>