

ENVIRONMENTAL AND ENGINEERING GEOLOGY

GLY2030C, SECTIONS 01AD AND 01A2, 3 CREDIT HOURS, SPRING 2015

INSTRUCTOR: *Dr. Matthew Smith*

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OFFICE HOURS: In-Office Office Hours: Mon period 4, Wed. Periods 4 and 8, Fri. periods 4 and 7. *Virtual Only office hours: Tuesday and Thursday 2:00 to 3:00 pm (~Period 7).* Additionally students can contact the instructor by e-mail to schedule an appt. outside of the regularly schedule office hours.

Note: I will monitor my phone/email and the course website during my In-office hours, but I teach 4 courses and am the Undergraduate coordinator so I may need to take a message if I have someone in my office.

COURSE TA: *Daphne Douglas; Office: Wm 268
Office hours: Tues. and Thurs. 9:00-10:00 am, Mon. 6:30-7:30 pm
E-mail address: djdouglas@ufl.edu*

COURSE WEBSITE: <http://lss.at.ufl.edu>

COURSE COMMUNICATIONS: For any class-related questions, students should use the **Course Questions Discussion Forum**. This will benefit all students that might have similar questions. The instructor and/or TA will regularly answer all questions and participate in this forum. Students should check if the question they have has already been answered in the forum before posting. *Private questions should be sent to the instructor through the course management system, or to her personal e-mail address (this would include questions about grades, late work, etc.).*

REQUIRED COURSE MATERIALS: 1. Textbook: Environmental Geology 9th Ed. by Edward Keller, Prentice Hall publishing (either the physical text or E-Text). 2. Web access to the Pearson Mastering Geology Site for this course. Note that this is a course specific site and when purchasing access one must purchase the access to this course site in particular. 3. The Wards Scientific UF Rock and Mineral Lab kit designed for this course.

Notes on Acquiring required materials: Textbook/Mastering Geology Access

Section 01AD: Access to the Pearson Mastering Geology site for this course can be purchased as a bundle with the textbook, or individually for those that already have access to the textbook. For textbooks bundles there is an ISBN that is specific to the bundle for this particular course (see below). Purchase of independent access **MUST BE DONE** through the Canvas Site for this course.

Bundle with Physical Textbook: ISBN 1269972804 (this can be purchased from the UF bookstore)

Bundle with E-Textbook: ISBN 1269993933 (this must be purchased from the course Canvas website)

Section 01A2 (the UFO section): Textbook and online lab access for this course will be available through your online course web site in Canvas. You will receive an access code from your UF Program Coach. You do not need to purchase any additional textbooks or access codes.

Notes on Acquiring required materials: Lab Kit (UF Rock and mineral Kit)

You will need to purchase a rock and mineral kit for this course. You may purchase the kit from the UF bookstore or by calling the Wards Scientific Customer Service line at 800-962-2660 between 7:30am and 7:00pm EST (Monday through Fridays only). It will be available after December 10th, 2014. Be sure to order your kit as soon as possible so that it can be shipped to you before you need to begin lab 3! The part number for the lab kit is WARD470122-540, and the kit is called U OF FL ROCK AND MINERAL KIT.

COURSE DESCRIPTION:

The focus of this course is investigating human interactions with our environment as an introduction to issues relating to modern environmental and engineering geology. To accomplish this we must investigate some fundamental aspects of the geology and learn how scientific investigation can help us understand processes that shape Earth's surface environment and influence the evolution of systems operating within the Earth System. Given a basic understanding of the geology, we can then investigate how geologic process impacts us (as a society or individuals) and vice versa. Particular emphasis is placed on investigating concerns regarding geohazards, natural resource utilization and environmental degradation.

This course is broken up into 12 topical modules. In each module effort will be devoted into developing a basic understanding of relevant underlying geologic principles

and issues of relevance to our society. Each module will be comprised of some combination of reading assignments, lab assignments, quizzes and discussions. Additional detail is provided below in the course policies sections. Students should reference the course calendar for due dates of individual course assignments, discussions and assessments. Module Titles and start/end dates are detailed below.

Module	Subject/Title	Dates of Module
1	Introduction to Philosophy and Overarching Concepts of Environmental Geology	1/6/15-1/18/15
2	Earth Structure and Plate Tectonics	1/19/15-1/28/15
3	Earth Materials and Processes 1: Rock Cycle, Minerals, and Mineral ID.	1/29/15-2/8/15
4	Earth Materials and Processes 2: Classification and Identification of Igneous, Sedimentary and Metamorphic Rocks	2/9/15-2/18/15
5	Introduction to Rock Structures, Surface Processing, and Using Maps	2/19/15-2/25/15
6	Rock Weathering, Soils, and the Environment	2/26/15-3/11/15 (includes spring break)
7	Introduction to Ecology and Geology	3/12/15-3/18/15
8	Natural Hazards Intro, Volcano and Earthquake Hazards	3/19/15-3/25/15
9	Slope Stability and Mass Movements of Earth	3/26/15-4/1/15

10	River Processes, Flooding, and Human Impact on River Systems	4/2/15-4/8/15
11	Coastal Geology and Hazards	4/9/15-4/15/15
12	Groundwater Processes and Water Resources	4/16/15-4/22/15

GENERAL EDUCATION: GLY2030C, Environmental and Engineering Geology, is a GenEd physical science (P) course. The course covers not only the major concepts in Environmental and Engineering Geology – geohazards, interactions between society and our physical environment, environmental degradation, etc. -- but also how we know about those things, making use of our understanding of the fundamental underlying geologic processes and methodologies of scientific investigation. Accordingly, the course will also address some of the major scientific developments in Geology (Plate Tectonic Theory, in particular) and the impact of this understanding has on our society.

PREREQUISITE KNOWLEDGE AND SKILLS: Although this is essentially a non-mathematical science course, a very basic knowledge of mathematics is required. Middle School arithmetic and pre-algebra is sufficient.

COURSE GOALS

- To learn about the materials, processes and events that comprise and shape the Earth in order to better understand the environment in which you live and provide a foundational knowledge that facilitates further exploration of issues relating to environmental and engineering geology.
- To investigate how the intersection of society (human activity) and geology relates to and affects modern engineering and environmental issues including natural resource utilization, environmental degradation and geohazards.
- To further understanding of the process of scientific inquiry as a means to refine critical thinking skills (about all things, not just science).
- To improve scientific literacy. Literacy in the basic concepts and terminology of science is necessary if they wish to follow science stories in the news or make informed decisions (such as voting) on issues that pertain to science.
- To help students learn to communicate scientific ideas clearly and effectively using written or graphic forms. This will be done through discussions and as the written component of the project.

COURSE POLICIES:

This is a full semester online course comprised of 12 different modules. Modules will last between 1 and 1.5 weeks depending on the module (Modules 1-4 are about 1.5 weeks each and module 5-12 are about 1 week each. Students will be required to complete a set of assignments, discussions and assessments for each module. All assignments are listed in the course schedule by week; specific due dates can be found in the Calendar and on the Syllabus page in Canvas. As this is an online course, students must plan to have regular Internet access and time to explore the resources available on the various ideas and topics that we will be covering.

REQUIREMENTS: Students are expected to:

- Complete all Module assignments in a timely fashion.
 - Each module includes reading assignments, video lectures with accompanying PowerPoint presentations (available as .pdf files), a module quiz, and some combination of assignments and discussions (either or both). The one exception is Module 7, which in consideration that it occurs around the time of the course midterm Exam, has no assignments or discussions (only videos and readings).
- Actively participate in all module discussions as specified in each module (discussions take different forms in different modules).
- Complete online multiple-choice quizzes for each module (except module 7).
- Complete the course project (Geohazards Project which transpires during modules 8-12 and contributes to both your assignments and discussion grades).
- Check the course announcements and class e-mail at least three times a week.

COURSE TECHNOLOGY: Access to and on-going use of a computer is required for all students. Competency in the basic use of a computer is required. Course work will require use of a computer and a broadband connection to the Internet. In addition, students are required to have speakers and a webcam to take the proctored exams. For additional information on UF College of Liberal Arts and Sciences policy regarding computer requirements you can visit: <http://it.clas.ufl.edu/policies/student-computer-requirement/>

GRADING POLICIES:

See <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for general UF grading policies. Grades for the course will be based on the following:

Assignment	Points or percentage
Module Quizzes	20%, 1000 points (11 quizzes @ 100 points each, drop lowest score)
Assignments	30% (50-200 points each, 1500 points total)
Weekly Discussions	10 % (50 pts each, 500 points total)
Proctor U Midterm Exam	20 % (1000 points)
Proctor U Final Exam	20 % (1000 points)

GRADING SCALE:

Grade	%	Course Points needed	Grade Points Earned	Grade	% Points	Course points needed	Grade Points Earned
A	≥93	4650	4.0	C	73 – 76	3650	2.0
A-	90 – 92	4500	3.67	C-	70 – 73	3500	1.67
B+	87 – 89	4350	3.33	D+	64 – 66	3350	1.33
B	83 – 86	4150	3.0	D	60 – 63	3150	1.0
B-	80 – 83	4000	2.67	D-	57 – 59	3000	0.67
C+	77– 79	3850	2.33	E	< 56	<3000	0

MODULES QUIZZES (20 %): Module quizzes are unproctored and comprised of 15 multiple choice questions. The quizzes need to be completed 11:55 PM on the last day of each module. Each module has a module quiz with the exception of Module 7.

Quizzes are worth 100 points each. To account for any technical or personal circumstances that might hinder the performance on a quiz, the lowest quiz grade will be dropped at the end of the semester. The schedule for the quizzes can be found on the class website.

DISCUSSIONS (10 %): Online discussion will be used for further exploration of the topics we study each week. We'll go beyond what the text has to say, and collaborate to brainstorm new perspectives on the subject and how it relates to our lives. As such, students will be assessed by their participation in the Discussion Forum. For each module that contains a Discussion Forum, students will be expected to post a thoughtful, detailed response (i.e., "yes," "no," "I agree," or "I disagree" answer is not sufficient) according to the *Substantive Post Guidelines* and *Discussion rubric* that has been provided. Deadlines for discussion posts are listed on the course calendar. Typically the initial post will be due around the middle of the module (3-4 days before the module end) with a follow-up response being due two days later. For modules that begin on a Thursday and end on Wednesday (Modules 5-12), the initial post will typically be due Sunday evening with the follow-up post by Tuesday evening. In addition, the course project (Geohazards project...see below) has a component of its score that adds to the discussion grade. Please check the course Calendar for the specific due dates and remember to exercise courtesy and proper etiquette when responding to others' posts.

ASSIGNMENTS (30 %): Each Module (with the exception of Module 7) has associated Lab assignments. All module assignments are due no later than 11:55 on the last day of the module. For modules 1-4 this day will vary, for modules 5-12 the modules end on Wednesdays. Assignments take two main forms. The first form are assignments that you are intended to download, complete offline, then submit online via a canvas "quiz" that contains a series of multiple choice questions drawn from the assignment. These assignments are generally worth 100 points each. The second type of assignment is completed directly online. These assignments are drawn from Hazard City, a series of online labs that focusses on assessment of various geohazards. Hazard City assignments are worth 50 to 100 points each, depending on whether they include 1 or 2 individual hazard assessment exercises. Lastly, components of the course project (the Geohazards Project... see below) also contribute to the assignment grade for the course. There are a total of 1500 points (30% of the course) possible for the assignments portion of the course

GEOHAZARDS PROJECT: During the second half of the course you will work both individually and in a group to investigate one of 4 different geohazard categories (mass wasting hazards, earthquakes hazards, volcano hazards and flooding hazards). In this

project you will work first individually then in groups to create a PowerPoint presentation and fact sheet covering your chosen hazard category. After completing your group's geohazard presentation/fact sheet you will then peer review the works of other groups to learn about all 4 categories. This project is described in much greater detail on the course Canvas page that supports it. The project contributes 300 points to your assignments grade and 150 points to the discussion grade.

PROCTORED EXAMS (20% EACH, 40% TOTAL): Two proctored exams (Using Proctor U) will comprise a total of 40% of your grade (each is worth 1000 points and is comprised of 50 multiple choice questions. Students are responsible for scheduling the exam time during the 4-day time window available for each exam. Details on how to register are included in the Start Here section of the course site.

LATE ASSIGNMENT POLICY: Work submitted after the stated deadline will be penalized. A 10% grade penalty is assessed for work up to twenty-four hours late; an additional 10% is assessed for each additional day the work is late, up to one week. *This policy will be used for assignments only; it does not apply to discussions, quizzes, or exams.*

PROCTORU

Your exams in this course will be proctored using ProctorU. Review the ProctorU Student Guide (this can be found in Start Here section – ProctorU page – of your course site) for detailed information.

PREPARING FOR YOUR PROCTORU EXAM

- You will need a webcam and some type of speakers and microphone.
- You must register with ProctorU. If you already have an account, there is no need to register again.
- You will sign up for your two test times during the first week of class. These dates must be scheduled by January 18th. Go to the Start Here section of the course site for details.
- If you are in need of a specific time, sign up for a time early.
- Once you sign up for a time, you should receive a confirmation e-mail. If you do not receive the confirmation e-mail, you should contact ProctorU immediately
- If you make a last minute schedule change with ProctorU, you will incur a \$5.00 fee.

- The video of the proctor will freeze while you are taking the exam, but the proctor is still watching
- You will also be required to show picture identification to your proctor at the time of your exam. Approved forms of identification include, but are not limited to, a driver's license, military identification card, passport, or school-issued identification card.
- No breaks are allowed during your testing session and cell phones and other devices will not be permitted in the testing area.
- No other people are allowed in the area in which the test is being taken.
- Any unauthorized notes or other attempts to cheat will abort the test session and will be reported to your instructor

UF POLICIES:

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES: Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

UNIVERSITY POLICY ON ACADEMIC MISCONDUCT: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <http://www.dso.ufl.edu/students.php>.

NETIQUETTE: COMMUNICATION COURTESY: All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. <http://teach.ufl.edu/docs/NetiquetteGuideforOnlineCourses.pdf>

UF ONLINE HANDBOOK: Additional information can be found on <http://handbook.uflonline.ufl.edu/>

GETTING HELP:

For issues with technical difficulties for E-learning, please contact the UF Help Desk at:

- helpdesk@ufl.edu
- (352) 392-HELP - select option 2
- <http://helpdesk.ufl.edu/>

Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from The Help Desk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

Other resources are available at <http://www.distance.ufl.edu/getting-help> for:

- Counseling and Wellness resources
- Disability resources
- Resources for handling student concerns and complaints
- Library Help Desk support

Should you have any complaints with your experience in this course please visit <http://www.distance.ufl.edu/student-complaints> to submit a complaint.