

ENVIRONMENTAL GEOLOGY, 51-150 (4 credits)
Spring 2013

INSTRUCTOR: Dr. Maureen Muldoon
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Office Hours:
Mon: 11:30-12:30
Wed: 11:30-12:30
Thur: 9:10-10:10, 12:40-1:50
Fri: 11:30-12:30
Or by appointment

LECTURE: 10:12-11:20 a.m MWF in Halsey 106

REQUIRED MATERIALS:

•*Environmental Geology*, James S. Reichard.

The textbook website (http://highered.mcgraw-hill.com/sites/0073046809/student_view0/index.html) includes on-line practice quizzes and optional lab exercises.

•An *eInstruction Classroom Response Pad* (aka 'clicker') is required for this course and may be purchased from the bookstore. In order to enroll your clicker, you'll need internet access, a clicker, our class key, and an activation card/enrollment code. I will hand out individual activation cards in lecture – they allow you to enroll for free, so don't enroll without them. Detailed instructions on how to register your clicker will be posted in the Course Information section of the D2L site.

•*Environmental Geology Laboratory Manual (Spring 2013 edition)*, by C.W. Fetter. No used or shared manuals allowed.

LABORATORY: All labs begin the 2nd week of classes (week of February 4th) in room 103 Harrington. See lab syllabus (in laboratory manual and on D2L) for more information.

ABOUT THIS COURSE:

What is Environmental Geology?

Geology is the science of the Earth including study of the processes related to its composition, structure, and history. It's *not* naming rocks. The study of the Earth is a pretty broad topic and geology draws on our knowledge of physics, chemistry, mathematics, and biology to help us understand Earth processes. Geologists perform a wide variety of tasks such as finding resources, helping clean up environmental messes, mapping geologic hazards, and researching basic Earth processes to gain a better understanding of how the planet works. Environmental Geology is basically applied geology and it focuses on the interaction of geology and humans.

Environmental Geology is a survey course that counts as a Laboratory Natural Science general education course. The course can be divided into four main sections (as is your book) 1) fundamentals, 2) Earth processes and natural hazards, 3) Earth resources, and 4) health of our environment.

Course Objectives

At the end of this course you should

- have an appreciation of the unique features of our planet and an understanding of Earth's place in space and time,
- understand how earth processes constantly reshape the face of our planet,
- know how geologic processes create natural hazards for humans and the means by which we can minimize those hazards,
- appreciate that life (including human life) relies on Earth resources for survival and understand how our resource use impacts the planet.

Why is this a General Education Course?

So how will all this knowledge of Earth processes help you later in life? Maybe I'm biased, but I think it's a good idea to know the basics about where you live. In your house (apartment) it is useful to know where the circuit breakers and water shut-off valve are located in case something happens and you need to deal with it. Similarly, it's good to know how earth processes work so that you, as an individual, and as a citizen, make reasonable choices about resource use and land-use. Secondly, geology is fun (OK, I am biased) and as you travel around this planet and see different landscapes you'll have a greater appreciation of how they got here.

But equally important to any geologic information that you take away with you is the ability to ask questions, observe patterns, evaluate data, distinguish between observations and interpretations, catalog new information and put it together into a coherent whole – basically figure out how and why something works. This is the underlying basis of any science. Even if you have no intention of being a scientist, these skills are useful and transferable.

EXPECTATIONS:

Workload:

The National Survey of Student Engagement (NSSE) suggests that there is a disconnect between faculty and student expectations in terms of time spent outside the classroom. Most faculty recommend that students spend one to two hours of studying and preparation for *each hour* spent in class. During the next 14 weeks we will cover parts of 14 chapters in your text. This is a great deal of material and you will need to spend several hours studying per week in order to earn an average or better grade. Do not deceive yourself with the expectation that “100 level courses are supposed be easy”. The 100-level designation for this course merely indicates that the student is expected to have minimal prior experience in the subject area – not that there will be any less work involved. In fact, this is a 4-credit course and so it will necessarily require more effort than a standard 3-credit course.

Attendance:

Lab: Attendance of is required. If you miss your regular lab for any reason, arrange to attend another lab section that same week. See **lab syllabus** for a schedule of lab sections.

Lecture: Lectures are dedicated to the discussion of key concepts covered in the readings and clarification of these concepts and will include in-class exercises, clicker questions, and occasional quizzes. Your success in the course will be greatly enhanced if you attend every class session.

Excused Absences (<http://www.uwosh.edu/registrar/policies/attendance-policy>)

Students are excused from class for university events (e.g. athletics, debate trips, and certain trips) and circumstances beyond the student's control such as extended illness, medical emergency, and family emergency. Students may not be penalized for these excused absences *as long as appropriate documentation is provided to the instructor in a timely manner.*

My expectations for you:

- to be prepared for both lecture and lab (do the reading prior to class, print off the relevant materials)
- to actively participate in lecture and lab
- to take responsibility for your own learning (seek help if you are having a difficult time)
- to be familiar with the course policies in both the lecture and lab syllabus
- to be respectful of all persons in this classroom (arriving late, leaving early, or talking or texting during class is distracting and discourteous)

What you can expect from me:

- to be enthusiastic and knowledgeable about the course material
- to present course material in an organized way
- to start and end lectures on time
- to set high standards for the class and help you meet those standards
- to treat you with fairness and respect

RESOURCES:

Desire2Learn (D2L) Site: I have developed a D2L site for this course. You must login to the D2L system using the same username and password that you use to access your UW-Oshkosh email account. Within the Environmental Geology course, there is a navigation bar at the bottom of the banner area that contains the following tabs: Course Home, Content, Discussion, Grades, and Links. I post a great deal of information to the D2L site so be sure to visit frequently.

Tutoring: The Geology Department offers tutoring to all students enrolled in our introductory courses. Geology majors are available Monday to Wednesday evenings in Harrington 114 to help you with any questions concerning the lecture or lab material for this course. The tutoring schedule is as follows:

5:30 - 7:30 Monday (N. Murray)
5:30-7:30 Tuesday (B. Sanderfoot)
5:30-7:30 Wednesday (J. Coenen)

The Center for Academic Resources (CAR) also provides tutors for this class (see D2L for details).

GRADING:

Exams (400 pts):

There will be four multiple choice exams, each worth 100 points. Lecture exams will be objective, multiple-choice exams. Please bring your student ID and a number 2 pencil to each lecture exam. No make-up exams will be given unless the student has contacted me *prior to* or the *day of* the exam and has an *excused absence* that caused them to miss the scheduled exam. Documentation regarding the absence is required to make up an exam. If no documentation can be provided, a student can take a comprehensive final exam on the last day of the semester (May 10) and substitute that score for the missed exam score. Students can also take the comprehensive final to substitute for their lowest exam score.

Note: These dates should **not** be considered final and are subject to change.

Exam 1	Friday, February 22	(Chapters 1, to 3)
Exam 2	Friday, March 15	(Chapters 4 to 6)
Exam 3	Monday, April 15	(Chapters 8, 10, 11, and part 15)
Exam 4	Wednesday, May 8	(Chapters 12 to 14, 16)
Optional Final	Friday, May 10	(to replace missed exam or low exam score)

In-Class Participation (50 pts):

There is a good deal of research that suggests that students learn better when they are actively engaged with the material (through discussion, in-class exercises, etc). This is difficult in a large lecture class, but one method of increasing student engagement has been the “wireless classroom”. We will be using the eInstruction classroom performance system (aka “clickers”) this semester. The system keeps track of student responses and I will use this information as part of the class participation portion of your overall course grade. In addition, there will be in-class exercises that will count toward your participation grade.

Lab (150 pts):

Lab attendance is required. Each week’s laboratory exercise is due at the end of your lab session. Four, non-comprehensive lab exams will be given (each worth 30 points of overall course grade). They will be a mixture of objective and short essay questions. Your score for laboratory will be the total of your scores on exams (120 points) plus an additional 30 points based on completeness of lab exercises.

GRADING SCALE:

There are 600 possible points in this course. Overall ~3/4 of the points (450 possible) are earned from the lecture portion of the course and ~1/4 of the points (150 possible) are earned in the lab portion of the course. Your final letter grade will be assigned according to the following scale which assumes an average of ~70 on lecture exams. The scale is setup so that an average score receives a grade of C+/C. Students who earn above average scores will receive a C+ or better. Student who earn below average scores receive a grade of C or lower.

A	552 - 600	B-	474 - 491	D+	396 - 413
A-	534 - 551	C+	456 - 473	D	372 - 395
B+	516 - 533	C	432 - 455	D-	354 - 371
B	492 - 515	C-	414 - 431	F	<354

SPECIAL NEEDS: Reasonable accommodations will be made for students with disabilities. Please contact Disability Services (424-3100 (voice) or 424-1319 (TTY)) or visit their web site at <http://www.uwosh.edu/deanofstudents/disability-services> for the University's accommodation request form and requirements.

ACADEMIC DISHONESTY: Academic dishonesty/cheating, in any form, will not be tolerated. All work must be your own. Violations will result in a score of zero on the assignment and will be reported to the Dean of Students for further disciplinary action. See the *University of Wisconsin Oshkosh Student Discipline Code* <http://www.uwosh.edu/deanofstudents/university-polices-procedures/documents/ChapterUWS14.pdf> for definitions of academic misconduct and details about procedures, sanctions, and other relevant information.

TENTATIVE COURSE SCHEDULE: This schedule may change slightly. The SCHEDULE tab in the D2L site contains detailed reading assignments for each day and will reflect any changes in the course schedule.

Week Beginning	Lecture Topics
January 28	Chapter 1 (Introduction, Scientific Method, Earth Systems, Earth & Human Population)
February 4	Chapter 3 (Atoms, Minerals and Rocks)
February 11	Chapter 3 (Weathering) and Chapter 2 (Earth from Space)
February 18	Geologic Time(parts of Chapter 1 & 3) Exam 1: Friday Feb. 22 (covers chapters 1 to 3)
February 25	Chapter 4 (Rock Deformation, Earth's Interior & Plate Tectonics)
March 4	Chapter 4 (Plate Tectonics) & Chapter 5 (Earthquakes)
March 11	Chapter 6 (Volcanoes) Exam 2: Friday March 15 (covers chapters 4, 5, & 6)
March 18	Spring Break! (Have fun)
March 25	Chapter 10 (Soil Resources) & start Chapter 8 (Streams & Flooding)
April 1	Chapter 8 (Streams & Flooding) & Start Chapter 11 (Water Resources)
April 8	Chapter 11 (Water Resources) & part of Chapter 15 (Water Pollution)
April 15	Exam 3: Monday April 15 (covers chapters 8, 10, 11, and part 15) Chapter 12 (Mineral Resources)
April 22	Chapter 13 (Fossil Fuel Resources) & Chapter 14 (Alternative Energy)
April 29	Chapter 16 (Glaciers, Climate & Climate Change)
May 6	Exam 4: Wednesday May 8 (covers Chapters 12, 13, 14 & 16) Optional Final: Friday May 10

Important dates:

- Feb 1: Last day to add without instructor's signature
- March 13: Last day to drop without Late Drop request or Withdrawal
- Spring Break: March 17-24
- End of semester: May 10