GEOL 1470 Environmental Geology

http://web.mac.com/sukismaglik/CWC
(the last three characters must be in caps)

Fall 2011 T & TH 11:30 a.m. – 2:20 p.m. Room: MH 163

Instructor: Suki Smaglik Phone: 855-2146 **E-mail:** *ssmaglik@cwc.edu*
Office: MH 162 **Hours:** MW 11:00 am – 12:20 pm (W in Tutor Lab); T 3:15 - 5:15 pm
Lab Assistant: Lance Murakami **E-mail:** *lmurakam@cwc.edu*

Textbook: *Living with Earth*, 1e by Hudson (ISBN 9780131424470)
Lab Manual: *Investigations in Environmental Geology*, 3e
by Foley et. al. (ISBN 97801314206 4X)

Other required materials: 4x6 lined index cards; 10x hand lens (loupe) or magnifying glass (available at the bookstore for ~$7; 2-inch, 3-ring binder with clear insert cover; colored pens/pencils; transparent ruler; scientific calculator.
Course web site: ANGEL will NOT be used. You will find course materials at the URL listed above.

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Course goals:

- To excite the student about the world around us and to help the student gain a better understanding of the way Earth works.
- To explain geology in an integrated scientific format that allows the student to develop critical thinking skills.
- To help the student understand why science is important and how the scientific method can be applied to their lives.
- To encourage the student to become an informed and responsible citizen of the planet.

Note: Learning objectives for individual chapters/topics are given on the text website.

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society;

12. Analyze system dynamics of geologic systems and understand how geologists use temporal and spatial relations to interpret system;
13. Demonstrate awareness of competing concerns (including economic, social, & biological tradeoffs) that arise in environmental geologic decision-making;
14. Develop the ability to extract knowledge from published studies and communicate it in a professional manner via formal writing assignments and oral presentations;

C. Assess the human impact on natural environments:

15. Comprehend the impact of human population growth on the global environment;
16. Understand potential impacts of natural geologic events on society and some of the potential impacts of human activities on our environment;
17. Illustrate the connection between water and human health;
18. Describe the role, of human activities and natural variability in controlling climate apply geologic techniques for analyzing climate history and understand how geologists define the climate history;
19. Apply scientific methods and knowledge in making and evaluating decisions in human affairs;
20. Recognize the limitations of science in addressing certain societal problems.

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- **Homework:**
  1) Visit the Student Companion Site and read the Key Learning Concepts.
  2) Keep these in mind as you read the chapter.
  3) Read the assigned material before coming to class and write answers to assigned Review Questions in your notebook using full sentences.
  4) You must take the online chapter quizzes until you score 100% and submit your grades using the Grade Tracker (instruction on website; Class ID is cm394937).
  5) You will be asked to write several critical thinking questions. These may be form the text and must be typed, or they may be on the website and must be submitted there.
  6) Q-cards are due each Tuesday (see below for instructions).

- Each Tuesday you must turn in a 4x6 card (Q-card) as follows. (Loose paper or other size cards are NOT acceptable.) Focus on questions that you would like answered in class. DO NOT refer to problems or page numbers from text or lab. DO NOT copy questions out of your text.

Name	GEOL 1470	Date
1) A thoughtful question pertaining to what you are learning in this class (using Standard English and punctuation).		
2) Another thoughtful question pertaining to what you are learning in this class (using Standard English and punctuation).		

- **Exams:** There will be four exams consisting of questions from the weekly quizzes, short answer question form the text and an essay question. The **final exam** will be given on the last day of classes, **21 Dec. 2011**.

- **Field Trip(s):** You are required to attend the field trip(s) and file a report or turn in a worksheet. Any one not ble to attend the trips must consult with the instructor ahead of time and must have a valid excuse. Except in unusual cases "having to work" is not a valid excuse; enough time will be given for you to make appropriate arrangements. The dates and location for this semester's trip will be announcedas soon as possible so that you can make plan to attend. We will try to make some of the trips during class time but a full-day trip may occur on a Friday or weekend.

- **Grading:** Grading Rubrics for Coursework and Motivation and Attitude are given at the end of this document. Those for Essays (Critical Thinking), Notebooks and Projects will be

posted on the website or emailed to you .Letter grades will be assigned based on total class performance with the approximate provisions (determined statistically): >90% A, >80% B, >70% C, >60% D, <60% F. (see front page for assignment weights). Graded papers that are not reclaimed when returned in class, will be left in the assignments rack in MH 163. If you do not want your assignments left there, inform the instructor and make arrangements to claim them. Final Grades will be available on course website and WebAdvisor no earlier than 5 p.m., December 22, 2011.

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lowest (or missing) in-class assignment grades and *two* lowest (or missed) quiz grades will be dropped.

- You are required to use a computer in this class but you do not have to own one. They are available for you to use in several locations on this campus but especially, MH 163, Library, MH 156 and the CALL/Tutor Lab. Please ask for help if you need it. Not knowing how to use a computer and the Internet is not an excuse for not completing your class assignments on time.

- It is to your benefit to keep in contact with your classmates and the instructor during this course. You must learn how to use e-mail if you do not already know how. E-mail is the best way to contact the instructor.

- Always be willing to ask questions. If I can't answer them right away, I will try to get answers to you in a timely fashion. If you would like a question answered outside of class, or want to set up an appointment you can send me a message by phone or e-mail. I will check my e-mail and or call during office hours. I will respond as soon as I can, either by e-mail or phone.

- Assigned material must be read before coming to class. Being prepared by reading ahead will lead to more informative in-class discussions. Geology is a very visual science. Lectures will also include CD-ROM animations, videos and activities.

- You get out of this class what you put into it. You are expected to put in two hours of study outside of class for every hour spent in class. Manage your time appropriately.

- If you drop, you must follow the appropriate procedure. If you just stop coming to class, you will be assigned a "F" for the course. Incomplete grades (X) will be given at the discretion of the instructor and only when the student is passing the class at the time of the request.

- Students desiring reasonable accommodation under the Americans with Disabilities Act or who have serious medical conditions must notify the instructor to discuss their needs. All information will be held confidential.

- Plagiarizing/academic dishonesty: first offense will result in a reprimand/warning and counseling; second offense will result in failure of the course

- All other academic issues shall follow the procedures outlined in the CWC college catalog or CWC student handbook.

- Extra credit will be given on occasion. It is designed to enhance your grade, not replace missed work. Therefore, it will only count when all other assignments have been completed.

- If you have constructive criticism, *please* don't hesitate to approach me with your thoughts outside class. Don't wait for the semester's end, by which time it's too late for either of us to correct a negative situation. This is your class; make it worth your while!

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80% (B) Above-average attendance record. [Few unexcused absences. Timely arrival to lecture and lab.] Completes all assignments on time or arranges for later due date ahead of time (and only occasionally). Has a truthful, enthusiastic attitude toward computer work, homework, lab exercises and outside assignments. Shows limited higher-order thinking skills, independence and creativity. Is usually alert during demonstrations and videos, taking complete notes. Participates in class discussions and assists peers in a friendly manner. Consistent with minor flaws; stays mostly on task and offers some useful ideas.

60% (C) Adequate attendance record. [Several unexcused absences. Often late arrival to lecture and lab.] Completes most assignments on time or arranges for later due date ahead of time. Has a truthful, somewhat enthusiastic attitude toward computer work, homework, lab exercises and outside assignments. Is sometimes alert during demonstrations and videos, taking minimal notes. Infrequently participates in class discussions and rarely assists peers. Needs teacher's help or is overly dependent on peers (needs some prompting); offers few useful ideas.

40% (D) Marginal attendance record. [Many unexcused absences. Often late arrival to lecture and lab.] Completes many assignments on time but has a ready excuse for most late work. Has a somewhat enthusiastic attitude toward computer work, homework, lab exercises and outside assignments. Is rarely alert during demonstrations and videos, taking minimal notes. Rarely participates in class discussions and relies somewhat peers. Needs constant attention, offers very few useful ideas and is marginally involved in the task.

20% (E /F) Unsatisfactory attendance record. [Many unexcused absences. Mostly late arrival to lecture and lab.] Rarely completes many assignments on time but has little or excuse for most late work. May not turn in some assignments. Has very little enthusiasm, or a negative attitude, toward computer work, homework, lab exercises and outside assignments. Needs constant attention, offers no useful ideas and is not involved in the task. Finds fault for personal inadequacies everywhere but within.

0% (F) Unprepared for college-level work. Poor attendance record. [Many unexcused absences. Mostly late arrival to lecture and lab. Leaves room frequently.] Rarely completes many assignments on time but has little or excuse for most late work. May not turn in many assignments. Has very little (or false) enthusiasm, or a negative attitude, toward computer work, homework, lab exercises and outside assignments. Is rarely alert during demonstrations and videos, taking no notes. Does not participate in class discussions and relies heavily on peers. Needs constant attention, offers no useful ideas and is not involved in the task. Finds fault for personal inadequacies everywhere but within.

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GEOL 1470 Environmental Geology

Tentative Lecture Topic Order:

Part 1: The Earth System and Living With Earth

Ch. 1 Living with Earth
Ch. 2 Earth Systems
Ch. 7 Rivers and Flooding

Part 2: Earth Materials and Processes

Ch. 3 Plate Tectonics
Ch. 4 Earth Materials

Part 3: Geologic Hazards and Resources

Ch. 6 Volcanoes
Ch. 10 Water Resources
Ch. 11 Soil Resources (if time allows)
Ch. 12 Mineral Resources
Ch. 13 Energy Resources

Part 4: Resource Use and Environmental Impact

Ch. 14 Atmospheric Resources & Climate Change
Ch. 15 Human Impact on Resources

Tentative Lab Exercise Order:

Part 1:

Ex. 1 (parts) & Part IV – Misc Intro; TMYN pre-assessment
Ex. 3 (parts) & TMYN assignment 1; GCI
Ex. 2 (parts) & TMYN assignment 2
Ex. 10 & TMYN assignment 3

Part 2:

Plate Tectonics Digital Lab
Ex. 1 (parts) Minerals
Ex. 1 (parts) Rocks

Part 3:

Ex. 4
In-class Volcano Simulation
Ex. 12 & TMYN assignment 4
Ex. 13 & TMYN assignment 5
Ex. 15 & TMYN assignment 6

Part 4:

Ex. 17 & TMYN assignment 7
Ex. 18 & TMYN assignment 8; TMYN post-assessment
Global Warming Online Lab

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