

**Geol 110-EARTH AND SPACE SCIENCE**  
**Summer 2013 Syllabus and Lecture Schedule\***  
Section 30103 (New Science Bldg, Room 2733)

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### **Course Description:**

The Earth System is diverse and dynamic, featuring volcanoes, earthquakes, tsunamis, landslides, floods, hurricanes, tornadoes, and so on. As citizens, we want to understand what is going on in our natural world and which aspects directly affect us or are most interesting. Understanding past events helps us comprehend what has happened and begin to predict future events. With the Earth System (it's components being the Atmosphere, Hydrosphere—including ice, Biosphere, Geosphere and influences from Space or the Exosphere), we examine past events and current natural processes to understand how this past and these processes affect humans. We will examine Space, the evolution of the Solar System and how space affects Earth's systems. Accordingly, this course looks at the processes and materials composing Earth's physical environment, for example, its landscapes, interior, air and water, and explores topics such as natural hazards and disasters, fossils, energy resources, and much more. This course also explores topics related to space, such as the evolution of stars and our solar system, and examines evidence of past impacts and the threat of impacts with space objects today. To do so, we will learn some underlying principles of the natural world, from small things like the very building blocks of matter (atoms), to large things, like the cause and effect of regional forces that build mountains (e.g., the Himalayas) and make new oceans (e.g., the Red Sea). These processes are active today on Earth, whether driven by the Sun or Earth's internal heat, and as mentioned above can culminate in earthquakes, volcanoes, landslides, ocean currents and hurricanes, all of which obviously affect humans. This class meets weekly and is taught using a hybrid approach, partly as a normal lecture in the classroom during our normal meeting time, and partly as an online course, which you do on your own outside of class. During this time outside of class, you are required to complete online quizzes and worksheets assigned for that week. There are online materials to help you complete the investigations and to prepare you for online quizzes, but the book is your best resource.

### **Textbook:**

*The Good Earth*, by McConnell (and others), 2<sup>nd</sup> Edition. Three scientific themes are emphasized throughout the text: 1) scientific literacy; 2) Earth Science and the human experience; and, 3) the science of global change. This book will help you learn earth science concepts and processes on your own and complement what we do in class.

The *Key Concepts and Terms List* is your guide to what is important, and all online quizzes are derived from this list. Required reading is listed in the right column of the *Lecture Schedule* later on in this document. If you revisit the chapter corresponding to the most recently finished lecture *after* we cover that topic, the material will be best retained.

Checkpoints are found on nearly every page in each chapter. These checkpoints consist of a wide variety of learning methods from construction of Venn Diagrams to filling in rubrics and constructing concept maps. These will be assigned as weekly homework questions, including online, and are a key component to doing well on Exams.

### **Course Philosophy and Teaching Method:**

The subject of Earth Science is as vast and diverse as the natural world around us. Together, we will explore and visualize this dynamic world in a number of ways; in no way will it be a static collection of facts. Accordingly, we will concentrate on understanding natural processes and how we explore and learn things about our planet, rather than terms and factual trivia. We will concentrate on active, inquiry-based learning and will learn how to observe, think about, and understand our place in the natural environment. The critical inquiry and observational skills that we cultivate this semester should be useful in any profession, since they give you an appreciation of how earth science processes in our natural world impact our environment and society.

*Class time will not simply consist of me repeating via lecture everything that is in the book! It is your responsibility and obligation to complete the required readings prior to quizzes. Class time may be used for clarifying written materials, introducing new material, small-group activities, discussions, independent work projects, and/or identifying and applying principles and concepts, including in-class demonstrations.*

### **Course Expectations:**

My role in this class is to provide a framework that includes theory, best practices, activities, and assignments for you to utilize in the development of your knowledge, understanding, and skills. I care very much how and what you learn in this class, but I believe that you are responsible for participating in learning from the activities provided. This class requires significant outside preparation and reading. It will be impossible to cover all issues in the textbook during class time. This is partly why we use a hybrid approach in this course (or totally online approach for online course).

### **Attendance:**

Each student is expected to attend all classes. It is the student's responsibility to inform the instructor of an excused absence as soon as possible. Absences for emergency situations may be excused unofficially by the instructor. Instructor-excused absences must be obtained *prior to or on the day of the student's absence*. It is the student's responsibility to inform the instructor of an upcoming excused absence as soon as possible. Make ups for such absences will be at the option of the instructor. *There will be absolutely no make ups for unexcused absences*. Please contact the instructor if you have circumstances arise that conflict with attending class. Please do not contact the instructor *after* any unexcused absence (re-read this paragraph if necessary).

### **Grades:**

In this course, your grade will be based on points that you earn. There are approximately 770 possible points, which are spelled out below:

Point Distribution Summary*	
In-Class Exams (4 @ 60 points each)	240
Online Quizzes (12 @ 15 points each))	180
Online Assignments (12 @ 10-20 points each)	~180
In-Class Participation (~5 @ ~5-10 points each)	~50
Total Points Possible	~650

- (a) **In-Class Exams (concept maps, sketches):** There are 4 total tests over three chapters each. **Each of the 4 in-class exams is worth 60 points, for a semester total of 240 points.** In advance of each in-class exam, you will be given a list of 6 to 8 possible concept-sketch/map/diagrams/rubric-type questions (see checkpoints), and three of these will be on the exam. These possible questions will be developed from the checkpoints. You can make up exams only if you have a note from a doctor, a letter from the university regarding some university-sponsored activity, a copy of a jury summons, a police report, or some other document that can be verified. This legitimate proof for why you cannot attend class that day must be provided to the instructor as far in advance of the exam as possible.
- (b) **Online Quizzes:** For every chapter, on your own time outside of lecture, you will complete an online quiz using Blackboard that covers information from the textbook and from any online materials. **Each of the 12 online quizzes is worth 15 points, for a total of 180 points.** See the *Assignment Schedule* at the end of this syllabus for due dates. You can use your textbook or your notes to answer these quizzes, but not another person. Each quiz has a time limit of 45 minutes (and two attempts), which will not be enough to look up every answer from scratch during a quiz. In other words, you will need to read the textbook, view online materials, and study your notes *before* beginning the time-limited online quiz. Use the *Key Concepts and Terms* as your guide of what to study in preparation for the online quizzes. Some of the quiz questions might relate to assigned readings that are not discussed in lecture; you are thus expected to read all of the assigned reading. Quizzes **close on the due dates**, no late or make-up quizzes.
- (c) **Online Assignments (homework):** Throughout each chapter are “Checkpoints,” which consist of a wide variety of learning methods. You will complete 12 assignments which cover chapter checkpoints and sometimes questions over animations related to each chapter using Blackboard during your non-lecture time. **Each investigation is worth ~10-20 points, for a total of ~180 points.**

You will need to read and refer to the Checkpoints in your textbook while completing the online investigation. Paper copies of the Checkpoints will occasionally be handed out and some are available on Blackboard and can be printed out in color or black and white, but these are for your use only. I suggest you print out a copy of the Checkpoint (or view it in your textbook) and fill it out by hand or complete it before answering the questions

online. You can use your textbook and notes when completing these investigations and you can collaborate with other classmates, but please do your own work. Material pertaining to these online investigations will be included in some in-class activities. The *Assignment Schedule* lists due dates for each online assignment. Late online assignments are accepted at 30% off for each day late. There is no time limit, but a limit of 3 attempts (and each attempt after the first one is 5% off your grade). If you experience computer issues doing an assignment, you are responsible for documenting the issue as it happens, and showing this to the instructor ASAP.

**In-Class Participation:** During the semester, we will do a small number of in-class activities centered on the material covered during the lecture. In most cases, you will be able to discuss these activities with your classmates before answering, but in other cases you might be asked to work out the exercise on your own. You may or may not be allowed to use your textbook and notes. Irrespective of the number of questions or problems on the activity, there will be approximately five of these activities worth approximately 5-10 points possible for each in-class activity, for a total of approximately **50 points**.

**Due Dates:** The above assignments have specifically defined due dates as noted in the Course Schedule and Assignment Schedule later on in this syllabus. It is your responsibility to consult the Lecture Schedule and Assignment Schedule for all due dates. The instructor will not assume the responsibility of reminding you that an assignment is due or that an exam will be given.

**Grade Posting:** All grades will be posted on Blackboard. *You have 7 days after a grade has been posted to dispute an entry.* After the 7-day period, the grade stands as entered. Do not wait until the end of the semester to check your grades. Grades are not assigned by a “curve”, where a certain percent is assigned “A”, “B”, etc. Instead, you are competing against my expectations, not your classmates, and there is no predetermined percentage of “A”, “B”, and “C”. The exact division between letter grades will not be determined until the final points are totaled, but the grade breaks will not be raised above typical values (e.g., the A-B grade break will be 90% or lower, etc.). No items are weighted—your grade is based solely on total points received.

**Dates for Withdrawals:** There is a course withdrawal deadline—check the university calendar to find the course withdrawal deadline for this semester. The course withdrawal deadline is a no-tolerance policy. When the withdrawal period ends, students only have one option – a grade of F for the course.

**Incomplete Grade:** A mark of “I” is given only when a student who is otherwise doing acceptable work is unable to complete a course because of an illness or other situation beyond the student’s control. The student is required to arrange for the completion of the course requirements with the instructor. The university does not allow instructors to assign a grade of “I” simply because a student has quit attending classes and/or completing assignments.

**Tardiness:** Tardiness is discouraged since it disrupts class. Tardy students will not be allowed extra time to make-up for the time lost on timed exams. Remember, in-class exams and in-class points cannot be made up for non-emergency, unexcused absences, or absences that

occur without prior notification to the instructor. **Points missed due to tardiness cannot be made up.**

**Academic Misconduct and Academic Dishonesty** will not be tolerated. Students engaging in misconduct or dishonest practices on exams, quizzes, or other assignments will be dealt with according to the guidelines established by the college.

**Class Disruptions** are defined as activities that distract the instructor or other students from the course content. Such activities include talking or whispering, cell phones ringing, tardiness or whispering about another tardy student, noisily preparing to leave the class prior to the end of the period, etc. Disruptive students will be asked to leave the class. Repeat offenders may be withdrawn.

**Audio/Visual Recording:** Neither audio nor video recording will be permitted except under special circumstances prescribed by the DSPS. You are also not allowed to use the camera in your phone to record pictures or video, without expressed consent of the instructor.

**Cellular Telephones/Text Messaging/Pagers:** Please turn off all cellular telephones and pagers during class time – this includes text messaging. If your work situation requires that you be on call, please notify the instructor prior to class. Text messaging is not permitted in this class.

**Use of Laptops In the Classroom:** You are only permitted to use a laptop during class to take notes, as long as you do not disturb your neighbors. Many of the notes in this class, however, will involve sketches, so a laptop may not be the best way to take notes in this class. Laptops may not be used during class time to answer email, browse the web, listen to music, or any other activity not related to class. If you are using your laptop for one of these unauthorized activities, you will lose all in-class points for that day. The instructor may simply note who you are and contact you after class rather than interrupting the class to notify you. If you are disrupting other students you will be asked to leave the classroom.

**Help Along the Way:** Many students enter this class with a bit of anxiety. Other students may have various disabilities, including test anxiety, which may make traditional classroom environments very difficult. Don't worry, almost all such students before you have passed this course – many with very high grades! The success of many of these students, though, was in part because they attended class regularly, took advantage of my office hours, or obtained help from their peers. If you are having difficulty understanding the course work, please contact me immediately. Also, the college has learning centers, disability resource centers, and counseling centers to address the various needs of students.

**Lecture Schedule for Geol 110: Earth and Space Science, Summer 2013**

Week	Topic	Readings, Assessments
1)-June 24 to June 27	M: Introduction, no lecture T: Introduction to Earth Science W: Earth in Space Th: Earth in Space/Near-Earth Objects	Chapter 1 Chapter 2 Chapter 2/3
2)-July 1 to July 4	M: Near-Earth Objects/Test Review <b>T: Test 1: Chapter's 1-3</b> W: Plate Tectonics Th: Holiday (no class)	Chapter 3 Chapter 4 No Class
3)-July 8 to July 11	M: Plate Tectonics/Earthquakes T: Earthquakes W: Volcanoes Th: Volcanoes/Test Review	Chapter 4/5 Chapter 5 Chapter 6 Chapter 6
4)-July 15 to July 18	<b>M: Test 2: Chapter's 4-6</b> T: Rocks and Minerals W: Rocks and Minerals/Geologic Time Th: Geologic Time/Oceans and Coastlines	Chapter 7 Chapter 7,8 Chapter 8/13
5)-July 22 to July 25	M: Oceans and Coastlines/Test Review <b>T: Test 3: Chapter's 7,8 and 13</b> W: The Atmosphere Th: The Atmosphere/Weather Systems	Chapter 13 Chapter 14 Chapter 14/15
6)-July 29 to Aug 1	M: Weather Systems T: Climate System and Global Change W: Climate System and Global Change/Test Review <b>Th: Test 4: Chapter's 14, 15, part of 16, 17</b>	Chapter 15 Chapter 16/17 Chapter 16/17

\*All due dates and distribution of grade points is subject to chance according to class needs.

### Assignment Schedule for Geol 110 Summer 2013\*

Quizzes and Assignments are due on Blackboard by 11:59 p.m. on the day indicated.

Week	Topic	Assigments/Quizzes/Tests
1)-June 24 to June 27	M: Introduction, no lecture T: Introduction to Earth Science W: Earth in Space Th: Earth in Space/Near-Earth Objects Sat: (June 29)	nothing due nothing due A1,Q1 due tonight nothing due A2, Q2 due tonight
2)-July 1 to July 4	M: Near-Earth Objects/Test Review <b>T: Test 1: Chapter's 1-3</b> W: Plate Tectonics Th: Holiday (no class)	A3, Q3 due tonight TEST Ch 1-3 nothing due nothing due
3)-July 8 to July 11	M: Plate Tectonics/Earthquakes T: Earthquakes W: Volcanoes Th: Volcanoes/Test Review Sat: (July 13)	A4,Q4 due tonight nothing due A5, Q5 due tonight nothing due A6, Q6 due tonight
4)-July 15 to July 18	<b>M: Test 2: Chapter's 4-6</b> T: Rocks and Minerals W: Rocks and Minerals/Geologic Time Th: Geologic Time/Oceans and Coastlines	TEST Ch 4-6
5)-July 22 to July 25	M: Oceans and Coastlines/Test Review <b>T: Test 3: Chapter's 7,8 and 13</b> W: The Atmosphere Th: The Atmosphere/Weather Systems	
6)-July 29 to Aug 1	M: Weather Systems T: Climate System and Global Change W: Climate System and Global Change/Test Review <b>Th: Test 4: Chapter's 14, 15, part of 16, 17</b>	

\*All due dates and distribution of grade points are subject to change according to class needs.

## LIST OF CHECKPOINTS

**NOTE:** Checkpoints to be covered in each chapter (covered in online Assignments and during class through lecture and handouts); also **highlighted in red** are possible checkpoints to be used during **Tests**.

- Chapter 1: Checkpoints 1.3, 1.7, **1.8, 1.11**, 1.12, .1.15, **End of Chapter Concept Map**
- Chapter 2: Checkpoints 2.3, 2.4, 2.5, 2.7, 2.12, **2.14, 2.20, 2.24**, 2.27
- Chapter 3: Checkpoints **3.2**, 3.6, 3.8, **3.11**, 3.12, **3.14**, 3.17
- Chapter 4: Checkpoints **4.4, 4.7, 4.14, 4.19**, End of Chapter Concept Map, (any other sketches done in class of plate tectonic processes-TBD)

- Chapter 5: 5.3, 5.10, **5.11**, **5.12**, 5.15, **5.18**, End of Chapter Concept Map, (any other sketches done in class of fault and earthquake processes-TBD)
- Chapter 6: Checkpoints 6.4, 6.6, **6.19**, **End of Chapter Concept Map**