Geol 100- INTRODUCTION TO GEOLOGY Spring 2014 Syllabus and Lecture Schedule* Several Sections (New Science Bldg, Room 2733)	
Instructor: Kevin Marty **E-mail address: kevin.marty@imperial.edu** **Office Phone: 760-355-5761** **Office: 2776** **Office hours: Tues-Fri, 5-6 pm; Room 2776**	

Course Description:

The Earth is diverse and dynamic, featuring volcanoes, earthquakes, tsunamis, landslides, floods, 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, we examine past events and current natural processes to understand how this past and these processes affect humans. Accordingly, this course examines the processes and materials composing Earth's physical environment, for example, its landscapes and interior. We will explore topics such as natural hazards and disasters, fossils, energy resources, and much more. 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, and give rise to earthquakes, volcanoes, and landslides, all of which obviously affect humans. The class will meet generally twice per week (once for lecture; once for lab) over a 16 week-long semester. This course 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 investigations assigned for that week.

Textbook:

Exploring Geology, by Reynolds, Johnson, Kelly, Morin, and Carter, 2nd Edition. This is a unique textbook designed to help you learn geologic concepts and processes on your own and to complement what we do in class. Nearly all the information in the book is built around illustrations and photographs, rather than being in long blocks of text. The entire book consists of a series of two-page spreads organized into chapters. Each two-page spread is a self-contained block of information about a specific topic, and has a short list indicating what you should be able to do before you leave these pages. The items from these lists for which you will be held responsible for knowing are compiled into a *What-To-Know List* that is downloadable from this course's Blackboard website. The What-To-Know List is your guide to what is important, and all online quizzes and in-class exams are derived from this list. If, when studying from the book, you construct your own answer to each item on the *What-To-Know List*, then I predict you will do well in the class. 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. Each two-page spread in the book has a unique number (e.g., 11.4), and these numbers are referenced for online quizzes and other course assignments. Each chapter ends with an *investigation* concerning a problem associated with a "virtual place". These i*nvestigations* are assigned as

online homework and are automatically graded by Blackboard. (**NOTE: investigations are not assigned this semester**)

Course Philosophy and Teaching Method:

The greater subject of Physical Geology 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 geologic 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 and working on lecture assignments including sketches.

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 I use a hybrid approach in this 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).

Lab:

In order to receive a laboratory science credit, you must also take the laboratory. The lecture and lab complement each other by covering different aspects of the same material.

Field Trips:

Geology is best seen, learned, and taught outdoors. During the semester, the lab course offers a field trip, which gives you the opportunity to experience geology first hand. You will receive points for going on any required field trips, but no points for optional field trips. Each trip is fun and interesting, and you'll get some exercise and a chance to be outside.

Grades:

In this course, your grade will be based on points that you earn. There are approximately 505-565 possible points, which are spelled out below

Point Distribution Summary	Points
In-Class Exams (3 @ 70 points each)	210
Online Quizzes (11 @ 7.5 points each)	~80
Online Investigations (9 @ ~10-15 points each)	~100 (N/A)
In-Class Participation (~5 @ ~5 points each)	~25
In-Class Labs software/manual (12 @ 10-15 points each)	~120-180
Lab Practicum (1 @ 70 points)	70
Total Points Possible	~505-565

(a) **Lecture, In-Class Exams (concept sketches):** Every four chapters there will be an in-class exam consisting of three to four concept-sketch style questions and 30-40 multiple choice questions. There are 3 total exams. **Each of the 3 in-class exams is worth 70 points, for a semester total of 210 points**. In advance of each in-class exam, you will be given a list of 6 to 10 possible concept-sketch questions, and three to four of these will be on the exam. These possible questions will be developed from the What-To-Know List, along with the multiple choice questions, some of which will come from your weekly (or daily) quizzes and investigations (see below). 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: Every week on your own time outside of lecture (some may be done during classtime), you will complete an online quiz that covers information from the textbook and from online materials. **Each of the 11 online quizzes is worth 7.5 points, for a total of ~80 points (there are actually 12 quizzes but only 11 are counted)**. See the *Lecture 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, 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 *What-to-Know List* 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 cannot be reopened after the due date has passed. Many quiz questions will be found on your lecture tests (hint)!**

(c) **Online Investigations (N/A THIS SEMESTER)** (Homework): At the end of every chapter in your textbook is an investigation two-page spread, and you will complete 9 of these online using Blackboard during your lecture time. **Each investigation is worth 10-15 points, for a total of ~100 points**. You will need to read and refer to the investigation two-page spread in your textbook while completing the online investigation. Paper copies of the worksheets for each investigation are available on Blackboard and can be printed out in color or black and white, but these are for your use only; they have also been added to your lab manual. I suggest you complete these worksheets and fill it out by hand 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 investigation. Late online investigation homework assignments are accepted but marked down 50% for every day late. 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.

(d) **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 5 of these activities worth approximately 5 points possible for each in-class activity, for a total of approximately **25 points**.

(e) **Labs and Lab Practicum:** Our labs will compliment the lectures, and are generally tied to the material we cover in lecture each week; for example, the week we cover minerals in lecture will be followed by a minerals lab that week. Our labs will be a combination of computerized investigations (using software called "The Layered Earth") and software titled "Plate Tectonics"; and hands-on traditional labs involving such activities as topographic map interpretation and rock and mineral identification. There will be approximately 12 labs at 10-15 points each for a total of **120-180** points; and there will be one lab practicum (or lab test) worth **70 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.

Score/Grade Posting: All scores will be posted on Blackboard. *You have 7 days after a score has been posted to dispute an entry*. After the 7-day period, the score stands as entered. Do not wait until the end of the semester to check your scores (e.g., for quizzes, test, labs, etc). 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 Disability Resource Center (DRC). 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 personal 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. **Please note**, we will be using college laptops for lab exercises and possibly quiz/investigation assignments. These are to be

used for class purposes only, or as stated above, you will lose points for that day that cannot be made up and may 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. Relax, almost all such students before you have actually 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/Test/Quiz Schedule and Required Reading for Geol 100*

Week of	Topic/Lecture/Test/**Quiz**	Readings
Jan 20-24	Introduction; possible short lecture Nature of Geology	Chapter 1
Jan 27-31	Investigating Geologic Questions ***Quiz 1&2; due Sun, Feb 2**	Chapter 2
Feb 3-7	Plate Tectonics ***Quiz 3; due Sun, Feb 9**	Chapter 3
Feb 10-14	Earthquakes and Earth's Interior ***Quiz 12; due Sun Feb 16**	Chapter 12
Feb 17-21	Minerals ***Quiz 4; due Sun Feb 23**	Chapter 4
Feb 24-28	Test 1: Chapter's 2-4 and 12; begin Igneous Rx	Chapter 5
Mar 3-7	Igneous Rocks ***Quiz 5; due Sun Mar 9**	Chapter 5
Mar 10-14	Volcanoes ***Quiz 6; due Sun Mar 16**	Chapter 6
Mar 17-21	Sedimentary Rocks ***Quiz 7; due Sun Mar 23**	Chapter 7
Mar 24-28	Metamorphic Rocks ***Quiz 8 due Sun Mar 30**	Chapter 8
Mar 31-Apr 4	Test 2: Chapter's 5-8; begin Geo Time	Chapter 9
Apr 7-11	Geologic Time ***Quiz 9; due Sun Apr 13**	Chapter 9
Apr 14-18	Seafloor and Continental Margins ***Quiz 10; due Sun Apr 20**	Chapter 10
Apr 21-25	Spring Break	Spring Break
Apr 28-May 2	Climate, Weather and Influences on Geology ***Quiz 13; due Sun May 4**	Chapter 13
May 5-9	Shoreline, Glaciers and Changing Sea Levels ***Quiz 14 due Sun May 11**	Chapter 14
May 12-16	Test 3: Chapter's 9,10 and 13,14	

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

Lab Schedule Geol 100 Spring 2014-no traditional manual required; you will need to purchase a copy of the lab manual from reprographics prior to our first lab during the second week of classes.

Week of	Topic/Lecture/Test	Readings
Jan 20-24	Finish Lecture Chapter 1 Nature of Geology Video: Mystery of the Megaflood	
Jan 27-31	Eath's Interior (LE-A)	software
Feb 3-7	Plate Tectonics (LE-B)	software
Feb 10-14	Earthquakes (LE-E)	software
Feb 17-21	Minerals (LE-C1+samples+manual)	software/manual
Feb 24-28	Rock Cycle (LE-C2 and C3) and Shaping Earth (LE-C4 and D1)	software
Mar 3-7	Igneous Rocks	manual
Mar 10-14	Volcanoes (LE-F)	software
Mar 17-21	Sedimentary Rocks	manual
Mar 24-28	Metamorphic Rocks	manual
Mar 31-Apr 4	Geologic Structures	manual
Apr 7-11	Geologic Time (LE-G)	software
Apr 14-18	Field Trip-Salton Sea	
Apr 21-25	Spring Break	Spring Break
Apr 28-May 2	Topographic Maps	manual
May 5-9	Lab Practicum	
May 12-16		

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