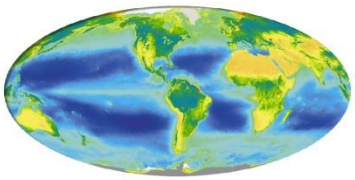
PHYSICAL/INTRODUCTORY GEOLOGY
GLY 101-003 Fall 2009



Instructor: **Mr. R. D. Shew**
Office: **Deloach 121**
Office Hours: **M-W 12:30 – 1:30**
Appts. welcome
Email: **shewr@uncw.edu**
Phone: **(910) 962-7676**

Class Times: **TTH 9:30 – 10:45**

Textbook: **Essentials of Geology**
Lutgens and Tarbuck, 10th edition, Pearson/Prentice Hall
Websites and Handouts will be given during the Course as well as other reference materials

Objectives:

Geology is the study of the solid Earth. However, the Earth acts a system. Therefore we will take a broad view of the earth that encompasses the interaction of the solid earth with the biosphere, hydrosphere, and the atmosphere. We will study the formation and changes that have occurred over geologic time but we will also discuss the current processes and geohazards that have and are affecting the earth today. Further, one of the primary goals of the Earth Sciences is to be predictive. Therefore, among other important studies, we will investigate some of the issues of today and ?tomorrow such as resource distribution and abundance, global system changes (climate change, etc.), and issues for a "Sustainable Society". In summary our goals in this course are to:

1) Introduce basic geologic principles
How does the earth work? What is it composed of? What changes have occurred over geologic time and **Can We "Predict**" what will occur in the future (Will an asteroid hit, Will the Earth get hotter, Will we run out of resources?)?

2) Describe geohazards (earth processes that are harmful to humans and their property). Examples include volcanoes, earthquakes, hurricanes, flooding, subsidence, etc.

3) Understand how humans interact with and impact these natural processes. And of course understand the interactions of the lithosphere, hydrosphere, biosphere, and atmosphere in order to know where the best waves are, where to go fishing, where to go to see the best scenery, how the natural wonders of the world formed and change, what controls the weather, issues associated with using fossil fuels, etc.?

4) Develop concepts and gain knowledge that will allow us to make better decisions as well as to be better critical thinkers for local and/or national policies that involve the earth and environment, whether they are biologic, geologic or environmental decisions. For instance: Should we 1) renourish beaches, 2) develop the North Slope for energy, 3) live near Mt. Etna, the San Andreas Fault, on a beach, or in a floodplain or should restrictions be required, 4) allow development in Areas of Environmental Concern, 5) utilize resources and the environment like they are endless supplies to be exploited or maybe they are, 6) be worried about the global changes that are occurring, or are they natural processes?, and finally 7) should we or shouldn't we be knowledgeable about the earth and its workings in order to better understand current issues and potential future problems?

In order to apply Geology to the issues of the real world, there are fundamental concepts and jargon, yes jargon that must be mastered. Every major has jargon. Don't think of these as foreign concepts, ask questions and keep an open mind. And importantly read the text, study the figures, and take notes and

you will have success in this course. If I call on you in class, be prepared to give an opinion and if you have an assignment be ready with some answers/ideas. Communication skills (oral and written) are still the most important tools that you will have/develop that will lead to success. I hope that some of the study skills, testing, and writing that you use in this course will help you in future courses – whether they are Earth Science courses or whatever your field of study.

Attendance:

All classes are important, however, I do not take "OFFICIAL ROLL". I believe that regular class attendance is really the only way to "master" the material. If you attend class, pay attention, and take notes during the classes your success is almost assured. I do take "UNOFFICIAL ROLL". There will be short assignments, questions, and even a pop quiz posed during some classes that will be part of the grade and/or extra credit. Consequently, I strongly recommend that you attend class regularly. If you miss class because of an emergency or sickness (and you have a note from your Mom or a Doctor, preferably both) I will try to provide any outside help necessary. **Otherwise, DO NOT ask for notes from me or for make-up material.** Good Surf, Bad Weather, Good Weather, and/or Partying are not legitimate excuses, nor is spring fever.

Grading:

There will be **Three Tests and the Final Exam.** You will be able to drop the lowest grade of the three tests but - **EVERYONE must take the Final**. The tests will be at or close to the times specified so that you can plan for them. You are encouraged to take all of the tests. If you can't take the test at the specified time then that will be the test you drop. **NO MAKE-UP TESTS** unless you have an excused absence as defined above. **And there will be no exceptions for taking the Final Exam at the time specified – NONE.** There will be **assignments/projects/quizzes** scattered throughout the semester for further learnings and thought. **These are 5% of your total lecture grade.**

Labs are very important in geology. They provide hands on application and working with the materials of the geologists. In addition the lab is 25% of your total grade for this geology course; therefore you should probably attend the lab. And since the materials of lab are supplemental to the lecture, the lab will help with lecture and vice versa.

Grades –

Tests	**-**	**60% (each test is worth 30% of grade)**
Final Exam	**-**	**30% (~ ¼ of exam is cumulative; mostly material from the previous tests - another reason to take all tests).**
Assignments, Questions, Projects	**-**	**10% (includes papers, reviews, articles, and the Classtime Assignments/Questions/Pop Quizzes, Letters, etc.**

Academic Honor Code:

It is UNC-W's stated policy that 'no form of academic dishonesty will be tolerated by its students or faculty'. I take this very seriously and it applies to plagiarism, copying, and all forms of cheating. Complete details of the code are in the current Student Handbook.
UNCW practices a zero-tolerance policy for violence and harassment of any kind. For emergencies contact UNCW CARE at 962-2273, Campus Police at 962-3184, or Wilmington Police at 911. For University or community resources visit http://uncw.edu/wrc/crisis.htm."

Etiquette:

NO cell phones (that includes texting) or players are acceptable (turn them off before class), nor is a running dialogue w/ your neighbor. These will not be allowed during lecture or testing. In addition, laptops are fine but not for checking email or running other programs/chatting during the lecture. It disturbs those around you - and me.

Geology 101 Tentative Lecture Schedule

Tentative Schedule

The topic order is subject to change based on current events and also on how excited we get about a topic.

Dates	TOPIC	Chapter
8/20	Introduction / Scientific Method	1
8/25	Geologic Time, Plate Tectonics	1, 18, 15
8/27	Plate Tectonics	15
9/1	Plate Tectonics, Rock Cycle, Minerals	15, 2
9/3	Minerals and Mineral Resources	2
9/8	Igneous Rocks and Processes	3
9/10	Igneous Rocks and Volcanoes	3, 4
9/15	Volcanoes, Weathering, Sediments	4, 5
9/17	**Test: Plate Tectonics, Minerals, Igneous Rocks, Volcanoes**	**1, 2, 3, 4, 15**
9/22	Sediments, Sedimentary Rocks	5, 6
9/24	Metamorphic Rocks	7
9/29	North Carolina Geology	Handouts
10/1	Sediments, Sedimentary Rocks and Environments, Geologic Time	5, 6, 18
10/6	**Fall Break**	
10/8	Geologic Time and Mass Extinctions, Change Through Time	18
10/13	**Test**	**5, 6, 7, 18 NC Geology and Mass Extinctions**
10/15	Maps, Structural Geology, Mountains	17
10/20	Earthquakes	14
10/22	Earthquakes	14
10/27	Hydrologic Cycle, Streams	9
10/29	Stream Processes and Floods; Water Quality Issues	9
11/3	Groundwater	10
11/5	Intro to Coasts and Issues	10, 13
11/10	**Test: Structural Geology, Earthquakes, Streams, Groundwater**	**17, 14, 9,10**
11/12	Coastal Processes and Issues	13
11/17	Coastal Issues and Hurricanes	14
11/19	Energy Resources and Climate Issues	Handouts
11/24	Energy and Climate Issues	Handouts
11/26	**Thanksgiving**	**14**
12/1	Oceanography and Review	**9**
12/3	**Reading Day**	**9**
12/8	**Final Exam 8:00 – 11:00 : Coasts, Energy and Climate Issues, Oceanography. And ¼ Cumulative from previous materials**	**13, Handouts Cumulative Materials**