GEOL 114 - The Earth's Dynamic Interior  
Jeffrey S. Barker

Syllabus - Fall 2016

Lecture: MWF 1:10 – 2:10 in LH-7  
Labs: M 3:30-5:30, T 2:50-4:50, W 3:30-5:30, or R 1:15-3:15,  
all in Science I, room 163

Professor: Jeffrey S. Barker, jbarker@binghamton.edu  
Science 1, G-60, 777-2522; Office Hrs: M and W 2:30-3:30  
other times by appt.

TAs and their office hours:
Monday: Tricia Martone, pmarton1@binghamton.edu, TBA  
Tuesday: Gillian Goldhagen, ggoldha1@binghamton.edu, TBA  
Wednesday: Chelsie Souto, csouto1@binghamton.edu, TBA  
Thursday: Ryan Brembs, rbrembs1@binghamton.edu, TBA

Subject

This is an introductory, General Education lab science course on the  
properties and processes of the Earth's interior, how those processes impact  
humans on Earth's surface, and how humans impact those processes. Hands-on  
experimentation and developing higher level critical thinking skills are  
important goals of this course.

Lectures

Lecture notes and lab instructions will be available on Blackboard, accessible  
only to members of the class.

In class, I will present, demonstrate and illustrate concepts. Because all of  
the material for this course is available to you, I will feel free to depart from  
the notes for purposes of discussion. Nevertheless, the material you will be  
responsible for is in the notes. We will also have some in-class discussions  
and short writing activities.

Please ask questions. You all come from a variety of backgrounds and  
purposes and you learn in different ways. Each of you will find means to  
understand these ideas and concepts in your own terms. This is facilitated by  
discussion with others. I will use figures, some (very few) equations, and  
graphs to illustrate ideas. If you find there are not enough or not the right  
sort of words for you to understand what I'm trying to say, please stop me.  
Similarly, I use a few movies and demonstrations to provide a different  
perspective on the material. Some are flashy, some comical, but I like them.
Questions like "How does that happen?" or "What if conditions were different?" are more important in many ways than the body of facts in this course. If you simply memorize facts for an exam, then forget them a week later, this class will have been a waste of time for you and for me. On the other hand, if you can develop new conclusions based on the facts as known, you will be well prepared for the future. Basically, science is about questions, not answers!

I will put PowerPoint-format files of lectures on Blackboard after each lecture. My goal is to relieve you from detailed note-taking and encourage you to think and participate in class.

Book
The "textbook" for the course consists of a set of course notes (in PDF format) that are available on Blackboard. There is no required textbook to purchase. The book is copyrighted. I give it to you for your use in this course. Please do not abuse this by distributing it to others.

Laboratories
Labs will be held each week unless noted on the schedule or announced in class. Attendance and participation in labs is required. This is a GenEd laboratory science (L) class*. As such, you will be forming hypotheses, making measurements and drawing conclusions as a result of a series of experiments designed to illustrate concepts in the Geological Sciences.

Lab reports will be written (this is also a Harpur College writing course) and turned in to the TA. Although lab activities may be done in groups and you are encouraged to discuss your results and ideas, the lab report must be your own, independent work. Please refer to the university guidelines on academic honesty/dishonesty regarding the consequences of plagiarism.

Grade
- Mid-term exam: 25%
- Final exam: 35%
- Written Lab reports: total 40%

- In-class participation credit will be used somewhat subjectively to raise or lower (I hope not) the final grade by 1/3 grade point, for example from a B to a B+. Asking questions, participating in discussions, volunteering for demonstrations are all examples of positive participation. Not coming to class and not participating will not hurt your grade; it will simply not help. Being disruptive in class or in some way detracting from your fellow students' learning environment will result in a lowering of your grade. Such participation credit is totally at the professor's discretion.
**Academic Dishonesty**

I encourage discussion and collaborative learning in the classroom, in labs, and outside of class. However, **any work submitted for a grade must be your own.** You are welcome to share data, ideas and conclusions, but if you draw substantially from another source (another student, the course notes, lab instructions, the internet, etc.) you must acknowledge that source.

Plagiarism is defined in the University Bulletin as

> presenting the work of another person as one’s own work (including papers, words, ideas, information, computer code, data, evidence-organizing principles, or style of presentation of someone else taken from the Internet, books, periodicals or other sources).

Further (and this should be obvious), copying from another student on a written exam is cheating. **Any** breach of the University's policies for academic honesty in this course will be referred to the appropriate disciplinary board. Please familiarize yourself with the University Policy on Academic Honesty.

Academic dishonesty does not cheat me; it cheats every other student who earns a grade through honest effort. Please do not allow this to occur in this course.

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* Students in **General Education Lab Science** courses will demonstrate:

1. Understanding of the methods scientists use to explore natural phenomena, including the formulation and testing of hypotheses and the collection, analysis and interpretation of data.

2. Knowledge of concepts and models in one of the sciences.

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Questions or comments: jbarker@binghamton.edu
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