

SUNY Cortland
Department of Geology
GLY 573 – History of Geology
Summer I, 2009

SYLLABUS

Credit hrs.: 3

Website: <http://paleo.cortland.edu/class/gly573/>

Instructor: Dr. Christopher A. McRoberts

E-mail: mcroberts@cortland.edu

“We are like dwarfs on the shoulders of giants, so that we can see more than they
and for a greater distance, not by any virtue of our own but because we are carried
high and raised aloft by their stature.”

Bernard of Chartres
11th-12th century philosopher and teacher

Course Overview:

This course deals with the historical development of geology as a scientific discipline from ancient civilizations to modern times. The course will cover the historical context and cultural basis of major geological theories regarding the origin of the Earth and processes that have influenced Earth's development. We will also explore the lives and contributions of individuals, whose ideas have shaped geologic thought and public opinion as well as scientific technology, exploration, and the changing role of science through time.

An Asynchronous Online Course on the History of Geology

This course is completely web-based. All interaction between students and the instructor is via the internet in an asynchronous manner—meaning that the class members do not all need to be logged in at the same time and interaction between student and instructor and all course content and students assignments will take place through the internet. However, it is *not* a *self-paced* course. Students need to interact with each other in a timely fashion.

Technology Requirements

An internet connection (preferably broadband). Students will need to be on-line on a daily basis and have the ability to download and upload course content and assignments. Some of the digital content files may be big (+10 MB) or streaming video, thus if you have a slow internet connection, this course isn't for you.

Web browser. Make sure your web browser is up to date. For Windows I recommend Microsoft's Internet Explorer (v. 7 or higher) or Firefox (v. 2.0 or higher) for a Mac, Safari (any version) or Firefox v. 2 (or higher) would be fine.

An active email account. Much of the correspondence will be delivered through email. It is important to have a reliable email account that you can access on a daily basis and have the ability to receive and send attachments.

Video playback software. You will need to have the ability to download and view video podcasts (vodcasts). These will likely be large files and will be in a format that can be viewed in Apple's **QuickTime** or **iTunes**. Both software products are available for free download from Apple's website <http://www.apple.com>. Note: the vodcasts will be in a format that can be played on the newer generation iPods (iPod 5G with video and the newer iPod Classic, iPod Nano, iPod Touch, and the iPhone).

Additional software. Many of the files I will send you (or you will download) will be in pdf (portable document format) and you will need to have the ability to open them. Adobe provides the free Acrobat Reader reader to view pdf documents which can be downloaded from <http://www.adobe.com>. I would prefer also to receive documents in the pdf format as well. You will need a word processor. Microsoft Word (for Window's or Mac) will do as would several other open source programs that can be obtained for free.. Please note: I will **NOT** accept files from other programs such as WordPerfect (.wp).

Course Objectives and Assessment:

The primary objective of this course is for the student to gain an understanding of the various people, events, and ideas that have shaped the various disciplines which collectively make up the science of geology. In addition, the student is expected to place the contributions of these people/events/ideas within a societal context that includes the "scientific establishment", socioeconomic, and religious background.

This is a reading and participation intensive course. In addition to viewing bi-weekly vodcasts, students will be expected to read about 100 pages per week (usually in two bi-weekly installments). Students will be required to participate in on-line discussions based on video podcasts, bi-weekly readings and also provide typed 1-page essays either on the readings or other assigned topics. Students will also write a somewhat larger (about 10-15 p.) term paper. Finally, there will be two take-home essay exams.

Please download and read the document "GLY573Expectations" which articulates what is expected of you in terms of on-line participation, readings, and written work.

Grading:

Course grade will be based on the following formula:

Class participation in on-line discussions	20%
Short essays/reading summaries:	20%
Paper	20%
Take-Home Exams (20% each x2)	40%
Total:	<hr/> 100%

Required Text:

Gohau, G., M. Carozzi, and A. Carozzi. 1991. *A History of Geology*. Rutgers University Press.

Attendance Policy:

Being an on-line course, there is no attendance policy *per se*. However, students are expected to be up-to-date on course lectures and readings and be active participants in the course's on-line discussion boards in a timely fashion and provide writing assignments and exams by their due dates. Penalties for tardiness in discussions and late written assignments and exams will be levied.

A Rough Course Outline and Text Readings (subject, of course, to change):

1. A practical and mythical geology: prehistory and ancient civilizations
2. Cosmologies and categorical geology (Greek and Roman civilizations)
Gohau Chapters 1 and 2
3. Vestiges of cosmologies and theories of the Earth in the Dark and Medieval Ages
Gohau Chapters 2 and 3
4. Beginnings of geological science I: the significance of rocks and fossils in Medieval and Renaissance times.
Gohau Chapters 4 and 5
5. The establishment of geological science 17th and early 18th centuries
Gohau Chapters 8 and 9
6. Geological science comes of age: 18th and early 19th centuries
Gohau Chapters 10 and 11
7. Paradigm shifts in geological sciences (Lyell and Darwin)
Gohau Chapters 12 and 11
8. Geology in New York, 19th-20th centuries (James Hall and the New York State Geologic Survey)
9. Refining geologic time and battles over names
Gohau Chapters 13 and 14
10. A dynamic crust: continental drift and plate tectonics
Gohau Chapters 15, 16, and 17
11. The new catastrophist movement: Mass extinctions and asteroid impacts