

Tentative Lecture Syllabus: Cronin's Section of Geology 1405 *The Dynamic Earth*

[Geology Department](#), Baylor University

The URL of this web page is

http://www3.baylor.edu/~Vince_Cronin/PhysGeol/spring.syllabus.html

Revised February 25, 2008. Professor Cronin reserves the right to revise this syllabus as necessary throughout the semester. Notice of revision will be given during one or more lecture meetings, or via email broadcast to registered students in the course.

Lecture Section meets Tuesdays and Thursdays from 12:30 till 1:50M in Baylor Science Building (BSB), room D110

Taught by Professor Vince Cronin, Ph.D.

Lab/Office: BSB E437.....Telephone: 710-2174

email: Vince_Cronin@baylor.edu.....Web URL http://www3.baylor.edu/~Vince_Cronin

All email communication to Professor Cronin concerning this course must originate from your Baylor email account.

Office hours: 1 hour before/after class, when my lab/office door is open, or by appointment

This is a laboratory science course in physical geology. Science is a process whereby knowledge of the natural world is obtained through reproducible observation/experimentation, and involves the development of testable (*i.e.*, **falsifiable**) hypotheses. This course is an attempt to explore and summarize the best scientific understanding of Earth's age, evolution, composition, and major dynamic systems, as that understanding exists in the geoscience community based on published peer-reviewed scientific literature. As Albert Einstein once said, "Truth is what stands the test of experience."

- Lecture-section text: Reynolds *and others*, **Exploring Geology** [most recent edition], McGraw-Hill Higher Education, ISBN 978-0-07-313515-1
 - Required laboratory text, which must be brought to all lab meetings: Cronin, 2004, **Geology Laboratory Projects for Group Learning** (Baylor University Version): McGraw-Hill Primis, ISBN 0-07-304415-6.
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You are REQUIRED to *STUDY* the assigned material BEFORE you attend class

Approximate Lecture Schedule

Lecture Dates	# Sessions	Lecture Topic	Reading Assignment	Quiz Dates
January 15-24	4	Introduction, Earth Basics	ch. 1-3	January 24, 31
Jan 29-31	2	Atoms and Minerals	4	February 7

Feb 5-12	3	Volcanoes and Igneous Rock	5-6	February 14 & 21
February 14-19	2	Sedimentary Rock	7	February 28
February 21-26	2	Metamorphic Rock	8	March 6
Feb 28-Mar 18	4	Geologic Time	9	(on midterm exam)
March 8-16	-	No Class/Lab: Spring Break	--	--
March 20	1	Midterm Exam	all assigned to date	--
March 21-24	-	No Class: Easter	--	--
March 25-27	2	Ice Ages and Global Warming	13-14	April 3
April 1-3	2	Streams	16	April 10
April 8-10	2	Ground Water	17	April 15
April 17	-	No Class: Diadeloso	--	--
April 15-24	3	Earthquakes	12	(on final exam)
April 29-May 1	2	Earth Resources	18	(on final exam)
Thurs. May 8	-	Final Exam 9-11 AM	<i>all assigned reading</i>	--

The Laboratory Is A Required Part Of This Course. There is a separate syllabus and [home page](http://www3.baylor.edu/~Vince_Cronin/PhysGeol/PhysGeoLab/index.html) for the lab part of this course (www3.baylor.edu/~Vince_Cronin/PhysGeol/PhysGeoLab/index.html). The laboratory syllabus is an extension of this course syllabus, as is the information posted on the course [home page](http://www3.baylor.edu/~Vince_Cronin/PhysGeol/index.html) (www3.baylor.edu/~Vince_Cronin/PhysGeol/index.html) and its various links.

- o Your attendance at every lecture session is expected. By Baylor University policy (http://www3.baylor.edu/StudentHandbook/pp_attendance.htm), you must attend no less than 75% of the lectures in this class. In order to be considered "present" for purposes of this rule, you must be present for the entire lecture session. **Students who do not attend at least 75% of the lectures will receive a grade of "F" for the course.**
 - o Your attendance at each lab session is **mandatory**, and *there are no make-up labs*. **Students who miss more than 2 lab meetings will receive a grade of "F" for the course.** Lab sessions begin the week of August 27.
 - o Cell phones, pagers, audio/video recorders, text-messaging devices, audio players (*e.g.*, iPods...), cameras, laptop computers and other recording, communication or keyboarding devices must be turned off and put away during all lecture and lab sessions, and during exams.
 - o No food or beverage is permitted in the lecture classroom or in the laboratory.
 - o Disruptive behavior, as judged by Dr. Cronin or the lab teacher, will not be tolerated in the lecture or the lab sessions. Dr. Cronin and the laboratory teachers reserve the right to require any student to leave the lecture room or laboratory because of disruptive behavior.
 - o **You must bring a basic scientific calculator to every lecture and lab session.** Adequate scientific calculators that can perform arithmetic and trigonometric (*e.g.*, sin, cos, tan) calculations and basic statistics of one variable (mean, standard deviation) cost as little as \$10 to \$15, and need not have any graphing or programming capabilities. You are assumed to meet the national mathematics standards that have been established for graduating high-school students (*e.g.*, <http://www.nctm.org/standards>).
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- o You must take the lab exams in the lab section in which you are registered, unless other arrangements are made beforehand with Dr. Cronin.

- Material on lecture exams will be drawn from the assigned textbook chapters, as well as from material introduced in lecture and lab. Students are responsible for having read all of the assigned chapters in the lecture and lab books.
- Make-up exams and quizzes in the lecture section are only given in response to significant verified illness/injury (verified in writing from a doctor or nurse) or other *really compelling* reasons as judged by Dr. Cronin. **All make-up exams will be administered within one week (or within 3 class meetings) of the original exam.** No exams will be administered early. There will be no make-up quizzes in the laboratory sections.
- The final exam will take place as scheduled in the Schedule of Courses (**May 8 from 9:00 AM until 11:00 AM**). ***You may not take the final exam at any other time***, so do not plan to leave for the holiday break before 11:00 AM on May 8.
- The final exam is cumulative in nature.
- All lecture exams and quizzes are closed-book, closed-notes exercises. Use of cell phones, personal digital assistants, or other resources that can facilitate cheating is not permitted during exams. People who are suspected of cheating during the lecture or lab exams will be subject to University disciplinary proceedings.

Grading

Grading in the Lecture Section

Any student who does not attend at least 75% of the lectures will receive an "F" as the final grade (http://www3.baylor.edu/StudentHandbook/pp_attendance.htm). In order for an absence to be excused, notification of absence must be made in writing (by email at Vince_Cronin@baylor.edu), and written verification of medical excuses by the attending physician or nurse must be provided to Dr. Cronin. The student must provide the written explanation of the absence no later than one week after the absence.

The lecture portion of the course supplies 70% of the raw final percentage grade, and the lab portion of the course supplies the remaining 30%. The lecture portion of the grade is the percentage of all questions asked on exams and quizzes that you answered correctly, where all responses are weighted equally. So if Professor Cronin asks 215 questions on quizzes and exams during the semester and you answer 185 of them correctly, your lecture score will be $185/215 = 0.86$ or 86 percent.

Final Course Grade

For students who have attended at least 75% of the lecture meetings and at least 75% of the lab meetings, the final course percentage grade will be determined using an equation like the following:

$$\text{Final course percentage grade} = (A \times 0.7) + (B \times 0.3) + C + (D \times [1.0 - \{(A \times 0.7) + (B \times 0.3) + C\}]),$$

where

- *A* is the percentage grade from the lecture section,
- *B* is the percentage grade from the lab section,
- *C* is a translation factor (a positive number or zero), and
- *D* is a compression factor (a positive number or zero),

Professor Cronin determines the values of the translation and compression factors, and the same

factors are used for all students in the course. Based on the final course percentage grade, letter grades are assigned as follows:

Final Course Percentage ... Letter Grade

90% to 100%	...	A
87% to 89%	...	B+
80% to 86%	...	B
77% to 79%	...	C+
70% to 76%	...	C
67% to 69%	...	D+
60% to 66%	...	D
below 60%	...	F

Academic Integrity

Academic integrity refers to the "integral" quality of the search for knowledge that a student undertakes. The work a student produces, therefore, ought to be wholly his or hers; it should result completely from the student's own efforts. A student will be guilty of violating academic integrity if he/she...

- (a) knowingly represents work of others as his/her own,
- (b) uses or obtains unauthorized assistance in the execution of any academic work, *including* possessing or using a stolen copy of one of Professor Cronin's exams, or
- (c) gives fraudulent assistance to another student.

After McGlynn, A.P., 2001

In the spirit of being a good steward of university resources, you must be careful not to abuse samples, maps, models, reserve materials, or other resources provided for your use in this course.

Students agree that by taking this course, all required papers, exams, class projects or other assignments submitted for credit may be submitted to turnitin.com or similar third parties to review and evaluate for originality and intellectual integrity. A description of the services, terms and conditions of use and privacy policy of turnitin.com is available on its web site: <http://www.turnitin.com>. Students understand all work submitted to turnitin.com will be added to its database of papers. Students further understand that if the results of such a review support an allegation of academic dishonesty, the course work in question as well as any supporting materials may be submitted to the Honor Council for investigation and further action.

Course Homepage	Lab Homepage	Professor Cronin's Homepage	Vince_Cronin@baylor.edu
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For answers to frequently asked questions about geology and science, go to
<http://www.baylor.edu/Geology/index.php?id=26719>

Tentative Lab Syllabus: Geology 1405 *The Dynamic Earth*

Geology Department, Baylor University

The URL of this web page is

http://www3.baylor.edu/~Vince_Cronin/PhysGeol/PhysGeoLab/Spring08LabSyl.html

Revised January 17, 2008

There are five separate laboratory sections which meet, respectively, on Monday (2 and 5 PM), Tuesday (2:30 PM), and Wednesday (2 PM) of each week, all in the Baylor Science Building, Room E406 (4th floor). Each lab is taught by a graduate teaching assistant under the direction of Dr. Vince Cronin.

The contact information for the graduate teaching assistants is as follows:

Monday 2 PM lab, Sikiru Amidu, Sikiru_Amidu@baylor.edu

All other labs, Jason Mintz, Jason_Mintz@baylor.edu

Approximate Laboratory Schedule

Lab Dates	Lab Topic	Reading in Cronin (2004)
January 28-30	Science Basics	Preface & Chapter 1
February 4-6	Minerals	Chapter 2
February 11-13	Igneous Rocks	Chapter 3
February 18-20	Sedimentary Rocks	Chapter 4
February 25-27	Metamorphic Rocks	Chapter 5
March 3-5	Lab Big Quiz 1	Chapters 1-5
March 10-12	No Lab (Spring Break)	--
March 17-19	Geologic Time	Chapter 6
March 24-26	No Lab (due to Easter Break)	--
Mar 31-April 2	Topo Maps	Chapter 7
April 7-9	Streams	Chapter 9
April 7-9	Ground Water	Chapter 10
April 14-16	Earthquakes	Chapter 11
April 21-23	Big Quiz 2	Handouts and Ch. 6-7 & 9-11

Laboratory Text, which must be brought to lab meetings: Cronin, 2004, **Geology Laboratory Projects for Group Learning** (Baylor University Version): McGraw-Hill Primis, ISBN 0-07-304415-6. There are no used copies of this book.

Important Information...

- Your attendance at each lab session is **mandatory**, and *there are no make-up labs*.

- In order for an absence to be excused, notification of absence must be made in writing (by email at Vince_Cronin@baylor.edu) within one week of the absence, and written verification of medical excuses by the attending physician or nurse must be provided to Dr. Cronin.
- Lab sessions begin the week of January 28.
- Every lab session is 1 hour and 50 minutes long, and starts promptly at the scheduled time.
- Your safety in Geology Department laboratories is your responsibility alone.
- The math skills/knowledge used in this lab do not exceed the national standards for graduating high-school students (www.nctm.org/standards).
- Disruptive behavior, as judged by the lab teacher, will not be tolerated in any of the lab sessions. The laboratory teachers reserve the right to require any student to leave the laboratory because of disruptive behavior.
- No photography or audio recording is allowed in the laboratory classroom.
- **Before each lab session**, you must...
 - **study** the introductory material for that particular lab topic, and
 - **skim** all of the project descriptions, so that you will not waste time in lab reading the project descriptions for the first time.
- You must bring the following to *every* lab session:
 - **A basic scientific calculator** Adequate scientific calculators that can perform arithmetic and trigonometric (*e.g.*, sin, cos, tan) calculations and basic statistics of one variable (mean, standard deviation) cost as little as \$10 to \$15, and need not have any graphing or programming capabilities.
 - **Your personal copy of the lab book.** (Photocopies are not allowed -- they are not legal under the book copyright.)
- The beginning-of-lab quiz covers material from the previous week's lab, and is taken individually (not as a group) as a closed-book, closed-note exercise, unless otherwise notified by the teacher. A homework project may substitute for the beginning-of-lab quiz some weeks.
- The end-of-lab quiz covers material from the lab projects that have just been completed. You are responsible to your group for learning the material, and you share responsibility to help the other members of your group learn.
- You must take the lab exams in the lab section in which you are registered, unless other arrangements are made beforehand with Dr. Cronin.
- Make-up exams are only given in response to significant verified illness/injury (verified in writing from a doctor or nurse) or other *really compelling* reasons as judged by Dr. Cronin. **All make-up exams will be administered within one week of the original exam.** No exams will be administered early.
- All of the "big quiz" exercise are closed-book, closed-notes exercises completed individually (*i.e.*, not as a group). People who are suspected of cheating during the lecture or lab exams will be subject to University disciplinary proceedings.

The Laboratory Is A Required Part Of This Course.

There is a separate home page for the lab part of this course:

www3.baylor.edu/~Vince_Cronin/PhysGeol/PhysGeoLab/index.html

You will be required to replace, at personal expense, any laboratory resources that you damage, mark, deface or destroy. Deliberately causing damage to laboratory resources will result in University

disciplinary action.

Grading

The percentage of the final course grade that is represented by your laboratory grade will be determined by the teacher of your lecture section.

In accordance with Baylor University policy (http://www3.baylor.edu/StudentHandbook/pp_attendance.htm), **you will receive a grade of F for this course if you attend less than 75% of the laboratory-section meetings**, which we interpret to mean 75% of the 10 meetings at which new content is presented (*i.e.*, not the two meetings that are entirely devoted to a "big quiz."). In order to be considered "present" for purposes of this rule, you must be present for the entire laboratory session.

The lab portion of the grade will be determined using an equation like the following:

Lab percentage grade = $(A \times 0.15) + (B \times 0.3) + (C \times 0.25) + (D \times 0.15) + (E \times 0.15)$, where

- *A* is the average percentage grade of the homeworks or beginning-of-lab quizzes,
- *B* is the average percentage grade of the end-of-lab quizzes,
- *C* is the average percentage grade associated with the worksheets completed in lab
- *D* is the percentage grade associated with Big Quiz 1
- *E* is the percentage grade associated with Big Quiz 2

If there are more than 2 unexcused absences in the lab, the final grade will be an F.

This course is conducted under the conventional honor code: work you hand-in for credit must be entirely your own work, and you may not abuse samples, maps, models, reserve materials, or other resources provided for your use in this course.

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[Course Homepage](#) [Lab Homepage](#) [Dr. Cronin's Homepage](#) Vince_Cronin@baylor.edu