

Instructor:

Dr. John H. Whitmore, Associate Professor of Geology, at Cedarville since 1991
1985, BS Geology, Kent State University
1991, MS Geology, Institute for Creation Research
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If you need to contact me immediately, please call me. If you need to leave a message, the best place to leave it is on my cell phone. **If you have problems on an exam, please call me immediately so the problem can be rectified before the exam expires.** Reach me by email for non-emergency situations.

The course will begin on January 5. If you would like to work ahead on assignments, you may. However, you must take exams, enter laboratory results, contribute to discussions, etc., during the appropriate time windows (see the schedule on pages 6 & 7).

Course Description:

The catalog description is as follows: A survey of the sciences of geology, oceanography, and meteorology. Major lecture topics include discussion of earth's geological history, minerals, rocks, dating, plate tectonics, glaciers, volcanoes, ocean currents, marine life, waves, the atmosphere, and weather systems. When appropriate, contrasting views of these subjects will be examined. Laboratory experiences include field trips to areas of local geological interest. Lecture three times per week and laboratory on alternate weeks. Satisfies the physical science requirement of the general education requirements (Fee: \$75). You are taking a mediated (online) section of this course which has a few differences from my lecture class, but covers essentially the same material.

Should you take a mediated (online) class?

Mediated, or online classes, are not for everyone. To be successful in such a class, you must be self motivated and able to learn on your own without continual reminders from a professor to complete various assignments. If you are not this type of person, you may find a traditional lecture class may fit your needs better. It is generally expected that you will be able to learn all of the lecture and laboratory material provided by the instructor on your own. However, the instructor and other students in the class may help you with difficult to understand topics. Please don't hesitate to contact the instructor immediately if you are having difficulties with the course material. The course requires access to an appropriate computer and fast, reliable internet service.

If you believe you may need support in managing the impact of a disability, please contact THE COVE. Faculty rely on Disability Services to verify the need for academic accommodations and to identify reasonable and appropriate accommodation strategies. Examples of disability are AD/HD, Specific Learning Disabilities, Hearing, Vision, Health Impairment, Psychological, Orthopedic, and Traumatic Brain Injury. Disability Services is part of the Academic Enrichment Center—The Cove located in the Center for Biblical and Theological Studies, Office #223, email AEC@cedarville.edu, phone 937-766-7437. For more information view the Disability Services website at <http://www.cedarville.edu/departments/aec/disabilities/faculty.cfm>.

A Few Course Goals (Objectives): 1) Be able to intelligently discuss and think about biblical issues related to earth science and earth history. 2) Understand, appreciate and enjoy the created world in which we live, especially as related to its geology, atmosphere and oceans. 3) Be able to identify various common types of earth features like clouds, rocks, mass movements, streams, volcanoes, sand dunes, plate boundaries, mountains, weather fronts, etc.. 4) Be able to intelligently discuss important issues like global warming, waste disposal, stewardship and the value of earth science education. 5) Realize that there are different ways to interpret earth history depending on what philosophical basis you begin with. As a result, students will be able to engage with those who believe differently than they do. 6) Be able to identify assumptions in various views of earth history. 7) Upon presentation of the course material and careful study of this material by the student, the student will be able to excel on exams and other assignments given by the instructor.

Objectives will be assessed in part with a final comprehensive examination that will include written some written components.

Teacher Education Program Unit and Program Assessments Assigned to Course

Unit Outcome	Program Outcome	Decision Points	Assessment
Competence	NSTA Std 1a.	4	#1 Content Knowledge
Competence	NSTA Std 1a.	1, 2, 3, 4	#2 Content Knowledge

Required Texts, DVD and Computer:

- Text book: *Foundations of Earth Science*, 5th ed., Lutgens and Tarbuck, 2008
- Lab book: *Geoscience Laboratory*, 5th ed., by Tom Freeman, 2009. The lab book will be supplied by the instructor. You must stop by his office to pick it up, or request that it be shipped to you, if you are off campus. The lab book is the property of the Science and Math Department. Please do not write in it. It must be returned, in good condition at the end of the course. Failure to do so will result in your grade being withheld.
- DVD: *Genesis: The Key to Reclaiming the Culture* (any version) by Ken Ham (available in library). You can also buy it online or you may even be able to watch it for free online.
- It is expected that all students have an updated computer with reliable high speed internet access

How the course is organized:

This course contains three components: lecture, laboratory and discussion. “WebCT/Blackboard” is the software tool that the instructor will use for the course. All of your exams and discussions will be administered and graded using Blackboard. You can access the software with your web browser from the Cedarville University web site. If you find Internet Explorer does not work well, try Firefox.

Lecture:

This course will be covering the first six units of *Foundations of Earth Science* by Lutgens and Tarbuck. Each unit will be followed by an exam that is worth 10% of your final grade (lecture is worth a total of 60% of your final grade). Various laboratory assignments from the lab book will be integrated into the lecture units. The laboratory exercises will give you “hands on” experience and help you to understand the lecture material. A “Due Dates” checklist is provided to help you organize your semester and keep track of what is due when (you can find this later in the syllabus). In general, approach each unit of the text as follows:

1. Read the textbook unit highlighting and taking notes like you would do in a normal “lecture” class
2. View and take notes on any provided PowerPoint lectures provided by the instructor on Blackboard (WeBCT).

3. View and take notes on any supplementary reading provided by the instructor on Blackboard
4. If you need additional help learning the material use the following study aids:
 - a. The GEODe disc found in the front cover of your text
 - b. The online study helps and quizzes found at the text book website
 - c. The end of the chapter review questions following each chapter
5. Complete any associated labs with the unit
6. Participate in discussion for the unit
7. Study all of the material and take your exam!

You will be given two opportunities to take the first lecture exam. The purpose of this is to help you get used to the exam style. Exams will be open book, but it is recommended that you study and prepare for the exams just like you would in a traditional closed book lecture exam. The exams will be timed and you will not have time to look up every answer. **So study, and prepare well for each exam or you will find them extremely difficult!**

Exam questions will be selected from a large exam data base which will include questions from the text, readings and PowerPoints. No student will get the same exam. Questions will be selected randomly by the computer. Tests will be open book, but timed. Students are not allowed to work with others during the exam. Such activity is considered cheating and will be dealt with accordingly. The bulk of exam questions will be derived from the textbook material, but expect several questions from each of the unit assignments.

The due dates for each unit exam and the accompanying labs for that unit will be the same. It will probably be impossible for you to complete an exam and several labs on the same day. It is recommended you work ahead on the labs so you don't end up having to complete several assignments on the same day.

Tip: Prepare for the exams as if they were closed book exams. This will allow you to answer most of the questions quickly, allowing you to spend more time on the questions you are unsure of.

Final Exam:

You will have a comprehensive final exam that will primarily cover the course goals. The test will be administered using WebCT. It will contain both multiple choice questions and essay questions. Expect to identify some photographs as well. The exam will be worth 10% of your final grade.

Laboratory:

You will need to complete eight selected labs from *Geoscience Laboratory*. If you picked the book up from the instructor, it belongs to the Science and Math Department, and it will need to be returned at the end of the semester. Please do not write in the books. They will be used again by another class. Failure to return a lab book will cause your grade to be withheld and your account to be charged.

You will find "Answer Pages" for each of the labs you need to complete within WeBCT. Please print these and complete your labs on them. **DO NOT WRITE IN THE LAB BOOKS.**

The laboratory assignments should help you understand the lecture material from Tarbuck and Lutgens. You may want to complete the laboratory assignment(s) for each unit *before* beginning the lecture material.

After you have completed each lab (on your printed "Answer Page"), drop the page off at my office for grading. If you are off campus, mail it to me (Dr. John Whitmore, Cedarville University, 251 N. Main

St., Cedarville, OH 45314). Make sure I get it by the unit due date. **I do not accept late work for partial credit.**

Students may work with others (in the same class) on laboratory assignments. Students may not get laboratory answers from others outside the class (from previous classes, or from previously used lab books). Such activity is considered cheating and will be dealt with accordingly.

The laboratory experience is a vital piece of this course. Any student who fails the laboratory portion of the course will automatically fail the entire course, despite what their other grades may be.

Lab Assignment in Freeman	Corresponding unit in Tarbuck and Lutgens	Deliver to Dr. Whitmore no later than
2. Maps (p. 23)	1	Jan 22
11. Streams and Rivers (p. 193)	2	Feb 12
14. Glaciers (p. 249)	2	Feb 12
8. Plate Tectonics (p. 133)	3	Feb 26
9. Earthquakes (p. 153)	3	Feb 26
1. Geologic Time (p. 1)	4	Mar 19
16. Coastal Processes (p. 274)	5	Apr 9
15. Deserts (p. 265)	6	Apr 23

Discussion:

Discussion with other students in the class is worth 5% of your grade. You must participate in discussion at least three times for each unit. Posts should be thoughtful and respectful of others. For credit, one post needs to be at least 300 words (a long post) and the other two need to be at least 100 words (short posts). Posts that do not fit within all of these parameters will not be given credit. You will be getting a maximum of 4 points per unit (2 for the long post and 1 each for the short posts). Because of the way BlackBoard reports scores, you might see a 1/4 or a 2/4 for your discussion scores. Please don't let this worry you. It is the numerator of the fraction that will indicate how many points you earned, not the denominator.

Discussions can start by answering one of the instructor's posted questions (2 are posted for each unit) or by posting responses to another student's post (a "thread"). Either type of post can be counted toward the three posts that you need for each unit.

Two discussion questions are posted for each unit by your instructor "to get the discussion going." The discussion on these questions and their threaded posts, must occur while the unit exam for that particular unit is active. In other words, you can't go back and work on previous discussion questions once the deadline for that particular unit exam has expired.

Grading:

Your grade will be based on a percentage of the total number of points you earn from the total available.

- Tests are worth 60% of your total grade (6 @ 10% each = 60%).
- Labs are worth 25% of your final grade (8 @ 3.125% each).
- Discussion is worth 5% of your final grade.
- The comprehensive final is worth 10% of your final grade.

My grading scale is as follows:

A	91.99-100%	B	81.99-87.98%	C	71.99-77.98%	D	61.99-67.98%
A-	89.99-91.98%	B-	79.99-81.98%	C-	69.99-71.98%	D-	59.99-61.98%
B+	87.99-89.98%	C+	77.99-79.98%	D+	67.99-69.98%	F	00.00-59.98%

Keep in mind you must pass the laboratory portion of the course to pass the entire course. A failing lab grade will cause you to fail the entire course despite what you receive on the rest of your assignments.

Extra Credit:

Extra credit assignments are generally not available. It is not my policy to give extra credit at the end of a course to individuals who are failing and “need a few extra points to pass.” Offering individual extra credit is unfair and unethical. When I make extra credit available, it will be available to the entire class. On occasion, I do offer extra credit. For this semester, you may visit the Creation Museum and write a 600 word reaction paper on your experience. To get credit, you must attend this semester (even if you have attended before) and attach your dated ticket (or planetarium pass) to a hard copy of your reaction paper. Turn in a hard copy of the assignment to Dr. Whitmore no later than 5:00 PM on April 23 (I must have it in my hands by this time). The graded assignment is equal in value to one lab exercise.

Discounted Creation Museum passes are now available at the information booth in the SSC!

Late Work:

I do not accept late work! Work not completed on time will receive zero credit. It is your responsibility to make sure all of your work is completed by the assigned dates and times. There will be no extensions. You have a “window” of opportunity to complete all of the assignments (in general, ten days or more). It is suggested you complete the assignments for each unit a day or two ahead of time in case extenuating circumstances (like sickness, loss of internet connection, computer problems, etc.) arise which prevent you from completing a set of assignments on the day they are due. Your instructor is not responsible for extenuating circumstances and often will not be able to accommodate them, especially if you wait until the day an assignment is due to talk to him. You must contact the instructor by phone or in person, far in advance of due dates, if circumstances arise which might prevent you from completing assignments on time. Email is often not an appropriate way to contact the instructor for these types of circumstances because you cannot have immediate dialogue and feedback from him. You will note that deadlines in this syllabus are two days prior to the actual deadlines you will find in WebCT. Thus, you have a two day grace period for the completion of all assignments. No further extensions are possible. Plan accordingly.

Grading Disputes on Exams and Labs:

The exams are produced from a data bank of questions. Answers to all the questions have been checked against the 5th edition of the textbook. Questions from other material have been generated by your instructor and are also randomly selected from a data bank of questions. After taking the test, you will be able to view the exam, and the answers you have selected, but only during the time the exam is available. If you wish to dispute the answers to various questions, you may, but you need to do so via email within one hour after the exam expires. In your email be sure to list the unit exam number and the question(s) you are disputing. It is important you finish the exam well ahead of the deadline if you wish to carefully go through it and find the mistakes you have made, because you will not be able to view the exam after the deadline has expired. The same policy applies to your laboratory assignments.

Textbook Unit	√	Assignments (It is suggested you do the assignments consecutively in each unit)	To be completed during this time window
1		Text Introduction <u>PowerPoint</u> : Two Models of Earth History DVD: Genesis the Key to Reclaiming the Culture Text Chapter 1, Minerals Text Chapter 2, Rocks <i>Geoscience Laboratory</i> Ch. 2, Maps Participate in Unit 1 discussion questions Prepare for exam, using study aids if necessary (see syllabus) Take Unit 1 exam	Tuesday 1-5-10 to Friday 1-22-10
2		Text Chapter 3, Landscapes fashioned by water <i>Dating of Niagara Falls</i> , ICR Impact Article #359 <i>Geoscience Laboratory</i> Ch. 11, Streams and Rivers Text Chapter 4, Glacial and arid landscapes <i>Geoscience Laboratory</i> Ch. 14, Glaciers <i>The Ice Age and the Genesis Flood</i> , ICR Impact Article #168 <i>Polar Ice Sheets</i> , ICR Impact Article #361 participate in Unit 2 discussion questions Prepare for exam, using study aids if necessary (see syllabus) Take Unit 2 exam	Saturday 1-23-10 to Friday 2-12-10
3		Text Chapter 5, Plate tectonics <u>PowerPoint</u> :: Catastrophic Plate Tectonics <i>Geoscience Laboratory</i> Ch. 8, Plate Tectonics <i>A Catastrophic Breakup</i> (Article from <i>Answers</i> magazine) Text Chapter 6, Earthquakes and mountain building <i>Geoscience Laboratory</i> Ch. 9, Earthquakes <i>Twentieth Century Earthquakes</i> , ICR Impact Article #295 <i>Recent Uplift of Mountains</i> , ICR Impact Article # 381 Text Chapter 7, Igneous activity <u>PowerPoint</u> : Mt. St. Helens <i>Mt. St. Helens and Catastrophism</i> ICR Impact Article #157 Participate in Unit 3 discussion questions Prepare for exam, using study aids if necessary (see syllabus) Take Unit 3 exam	Saturday 2-13-10 to Friday 2-26-10

4	<p>Text Chapter 8, Geologic time <i>Geoscience Laboratory</i> Ch. 1, Geologic Time <u>PowerPoint</u>: Dating and Scripture <u>PowerPoint</u>: Young Age Evidences <u>PowerPoint</u>: Radioactive Dating <u>PowerPoint</u>: Dinosaurs and the Bible Young Age Evidences, ICR Impact Article # 384 Carbon Dating Undercuts Evolution, ICR Impact Article #364 <u>PowerPoint</u>: Noah's Flood Participate in Unit 4 discussion questions Prepare for exam, using study aids if necessary (see syllabus) Take Unit 4 exam</p>	<p>Saturday 2-27-10</p> <p>to</p> <p>Friday 3-19-10</p>
5	<p>Text Chapter 9, Oceans <u>PowerPoint</u>: Seafloor vents Article: <i>Salty Seas: Evidence for a Young Earth</i> Text Chapter 10, Ocean circulation and coastlines <i>Geoscience Laboratory</i> Ch. 16, Coastal Processes <i>Supersize Tsunamis</i> ICR Impact Article #382 <i>Springs of the Ocean</i> ICR Impact Article #98 Participate in Unit 5 discussion questions Prepare for exam, using study aids if necessary (see syllabus) Take Unit 5 exam</p>	<p>Saturday 3-20-10</p> <p>to</p> <p>Friday 4-9-10</p>
6	<p>Text Chapter 11, Heating the atmosphere Text Chapter 12, Moisture, clouds, precipitation <i>Geoscience Laboratory</i> Ch. 15, Deserts Text Chapter 13, Atmosphere in motion Text Chapter 14, Weather patterns and severe weather <i>Earth's Climate Thermostat</i>, ICR Impact Article #339 <i>The Christian and the Greenhouse</i>, ICR Impact Article #204 <i>Global Warming</i>, ICR Impact Article #406 Participate in Unit 6 discussion questions Prepare for exam, using study aids if necessary (see syllabus) Take Unit 6 exam</p> <p>MAKE SURE YOU SEND YOUR LAB BOOK TO THE INSTRUCTOR. HE MUST HAVE IT IN HIS OFFICE BY MONDAY, APRIL 26, 5:00 PM, OR YOUR GRADE MAY BE WITHELD AND YOUR ACCOUNT CHARGED.</p>	<p>Saturday 4-10-10</p> <p>to</p> <p>Friday 4-23-10</p>
	<p>COMPREHENSIVE FINAL EXAM</p>	<p>Saturday 4-24-10</p> <p>to</p> <p>Wednesday 4-28-10</p>

Spring 2010 schedule for John H. Whitmore, Associate Professor of Geology:

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	Monday	Tuesday	Wednesday	Thursday	Friday
8:00	Office	Office	Office	Office	Office
9:00	Historical Geology ENS 238		Historical Geology ENS 238	Office	Historical Geology ENS 238
10:00	Chapel	Chapel	Chapel	Chapel	Meeting
11:00	Earth Science ENS 245	Office	Earth Science ENS 245	Office	Earth Science ENS 245
12:00	Lunch	Lunch	Lunch	Geology Readings TYL 202	Lunch
1:00		Earth Science Lab ENS 248	Earth Science Lab ENS 248	Geology Readings TYL 202	
2:00					
3:00		Earth Science Lab ENS 248	Earth Science Lab ENS 248	Historical Geology Lab ENS 248	
4:00					
6:00-10:15		Oceanography Lecture and Lab ENS 240 & 248			