

Earth and Space Systems

Geology 250 Section 003, Fall 2014

Professor: Mr. Bill McGuinness
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Meets: MW 6:30-8:00 pm
Room: Sims 201
Office Hours: by appointment only (Rm 201)
Text: Marshak, 2008. Earth: Portrait of a Planet, 2nd/3rd/4thEd.

Co-Requisite: Geol 251 (Earth and Space Systems Laboratory).

Objectives: To understand the range of processes responsible for the composition and morphology and of planet Earth and how the scientific method is used to study the interactions within and between the lithosphere, atmosphere, biosphere, and hydrosphere.

Date	Lecture Topic	Assigned Reading 4 rd Edition	Assigned Reading 3 rd Edition	Assigned Reading 2 nd Edition	Product Assigned/ Due Date
8/25	Introduction: Science Background	Pg. 1-8, Box 1.4, 22-23	Pg. 1-8, Appendix A	Pg 2-9, Appendix A	
8/27	History of the Universe	Pg. 15-26	Pg. 13-23	Pg 11-22	Homework (HW)#1 Assigned
9/1	Labor Day				
9/3	Formation of Stars and Solar System	Pg. 26-39	Pg. 24-31	Pg 22-30	HW #1 Due
9/8	Formation of the Earth & Moon	Pg. 788-789	Pg. 31-51; 803-805	Pg. 30-49; 570-574	HW #2 Assigned
9/10	Lunar Motion	Pg. 620-624	Pg. 631-635	Pg. 570-574	Exam 1 Assigned
9/15	The Seasons/Climate Changes	Pg. 687-693 Box 20.2	Pg. 703; Box 20.2, 793-798	Pg 635 Box 20.2, 714-718,	Climate Assignments
9/17	The Atmosphere	Pg. 680-687	Pg. 693-699	Pg 625-632	HW #2 Due EXAM 1 DUE HW #3 Assigned
9/22	Climate	Pg. 707-713	Pg. 699-711	Pg 632-642	
9/24	Weather	Pg. 693-700	Pg. 711-718	Pg 642-648	HW #3 Due HW # 4 Assigned
9/29	Weather & Climate Presentations				
10/1	Streams and Rivers	Pg. 569-589	Pg. 582-616	Pg 526-557	HW #5 Assigned HW #4 Due
10/6	Groundwater	Pg. 647-665	Pg. 661-689	Pg 598- 622	
10/8	Coastal Processes	Pg. 592- 625	Pg. 621- 659	Pg. 560-594	EXAM #2 Assigned
10/13	Earth Composition and Structure	Pg. 42-76	Pg. 41-84	Pg 37-74	

10/15	Plate Tectonics	Pg. 82-100	Pg. 57-84	Pg 49-74	EXAM 2 DUE HW #6 Assigned
10/20	FALL BREAK				
10/22	Seismology & Geologic Hazards	Pg.287-325	Pg. 303-334, 350-361, 557-580	Pg 275-305 318-327, 504-523	Term Assignment Issued HW#6 Due
10/27	Minerals	Pg. 105-127	Pg. 120-141	Pg 108-128	Mineral Assignments
10/29	Igneous Rocks	Pg. 140-165	Pg. 152-180	Pg 138-164	
11/3	Weathering	Pg.176-183	Pg. 183-192	Pg 165-174	
11/5	Sedimentary Rocks	Pg. 185-195	Pg. 199-209	Pg 180-205	
11/10	Metamorphic Rocks	Pg. 213-225	Pg. 229-248	Pg 207-230	
11/12	Geologic Time I		Pg. 400-428	Pg. 415-445	
11/17	Geologic Time II	Pg. 400-428	Pg. 415-445	Pg. 377-404	
11/18	Mineral Presentations				Term Assignment DUE
11/24	OPEN				
11/26	THANKSGIVING BREAK				
12/1	Geologic Resources	Pg. 467-495	Pg. 487-519	Chapter 14	EXAM#3 Assigned
12/3	Current Events and Challenges				
12/8	Review				EXAM 3 DUE
12/15	Final Exam 6:30 PM Sims 201				

Schedule subject to change (revised 8/14/14)

Preparation: You are responsible for assigned readings in this course prior to the associated lecture. The information contained in these readings is pertinent to the course and is considered testable material. If you do not understand something from the readings, please ask during the lecture.

Lecture Grading

Exams (3)	100 pts each	300 pts
Final Exam (1)	200 pts	200 pts
Homework (6)	10 pts	60 pts
Mineral Presentation	20 pts	20 pts
Climate Presentation	20 pts	20 pts
Paper/Field Trip/Game	100 pts	100 pts
Pop Quizzes (20)	1 or 2 pts each	25 pts
Total:		725 pts
<i>Extra Credit</i>		<i>25 pts</i>

<580 pts = A (s)
520-579 pts = B (s)
460-519 pts = C (s)
400-459 pts = D (u)
<400 pts = F

Tests: Tests will be a combination of multiple choice, true/false, fill in blanks, and short paragraph answers. Some tests will be given on a take home basis, some tests will be given in class. Tests given in class will be closed notes/closed book. There will be a scheduled Final test that will be an In Class Closed Book and comprehensive of the entire class material presented The Final is scheduled for **Monday December 15, 2014 6:30 PM.** Please make adequate arrangements to your schedule for attendance.

Homework: There will be homework assignments in addition to the scheduled reading. **Homework is due one week after it is assigned,** late work will not be accepted.

Mineral Presentation: You will be assigned a mineral and will be responsible for preparing a short (3-5 minute) presentation that you will give to the class on that mineral. You will be graded both on content and presentation. Questions regarding your mineral will also be asked on your final.

Weather and Climate Presentation: You will be assigned a global area and will be responsible for preparing a short (3-5 minute) presentation that you will give to the class on how that climate is created, how that climate affects the environment and what anticipated changes will occur with climate change. You will be graded both on content and presentation. Questions regarding your climate area will also be asked on your final

Paper/Field Trip/Game: A 1,500-word paper on a variety of topics or a field trip with write-up to one of several destinations will be assigned later in the semester. The paper and the field-trip must be completed before the Final. Your essays must be your own, individual work. Significantly similar essays from multiple students will all be assigned a grade of zero for that essay and further action may be taken. If you use material from any other source (a book, the internet, etc.) it must be clearly cited within the essay, and a full bibliographic citation given in a separate "Works Cited" section. Alternatively, you may create a game that uses the scientific principles and earth/space systems topics for elementary students to play. Details and a rubric for the assignment will be issued at a later date.

Pop Quiz: A quizzes worth 1 or 2 points will be given at the beginning of each lecture. The quizzes will cover topics to be discussed in that days lecture. Read ahead and be prepared.

Extra Credit: At times during the semester there may be guest lecturers or speakers on related geologic/earth science topics. You may receive cultural credit for attendance. I will issue advanced notice if the topic is appropriate and if extra credit is available. In general, a 500 to 750 word write-up of the views/opinions expressed and your view or opinion on the topic presented. – Up to 25 pts extra credit.

Cell Phones: All phones must be put away for the duration of the lecture and the laboratory. If you have any doubts, please review the policy on the use of cell phones at the following link
<http://www2.winthrop.edu/artscience/AppropriateUseApprovedPolicyMar2010.pdf>

Full Disclosure: At times during a test or homework assignment you may have questions regarding the way it is phrased or what is being asked. If you do not understand, please ask (or email for take-home assignments) your question. In fairness, your question will be repeated to the entire class, then I will attempt to answer it. Questions like, "Is this the right answer?" will be ignored.

Statement on Cheating: Your grade in this course will be based solely on your work, alone. Any attempt to copy another student's answers during tests or quizzes or any use of unauthorized materials (cheat sheets/information stored on calculators/etc.) during test and quiz time is strictly forbidden and could result in an "F" for the entire course in conjunction with other unpleasant administrative actions. Unethical behavior with regard to course material will not be tolerated.

Global Learning Initiative (GLI). *The purpose of the Global Learning Initiative is to infuse global learning into the Touchstone (General Education) Program and in co-curricular activities. The global learning components of this course are the following: Students will present physical influences of ocean currents, wind patterns, and elevation on regional climates. Students will also predict the effect of climate change on these global areas.*

Students with Disabilities: *Winthrop University is dedicated to providing access to education. If you have a disability and require specific accommodations to complete this course, contact the Office of Disability Services (ODS) at 803/323-3290. Once you have your official notice of accommodations from the ODS, please inform me as early as possible in the semester*

Winthrop University's Office of Nationally Competitive Awards (ONCA) *identifies and assists highly motivated and talented students to apply for nationally and internationally competitive awards, scholarships, fellowships, and unique opportunities both at home and abroad. ONCA gathers and disseminates award information and deadlines across the campus community, and serves as a resource for students, faculty, and staff throughout the nationally competitive award nomination and application process. ONCA is located in Dinkins 222B. Please fill out an online information form at the bottom of the ONCA webpage www.winthrop.edu/onca and email onca@winthrop.edu for more information.*

Winthrop's Academic Success Center *is a free resource for all undergraduate students seeking to perform their best academically. The ASC offers a variety of personalized and structured resources that help students achieve academic excellence, such as tutoring, academic skill development (test taking strategies, time management counseling, and study techniques), group and individual study spaces, and academic coaching. The ASC is located on the first floor of Dinkins, Suite 106. Please contact the ASC at 803-323-3929 or success@winthrop.edu. For more information on ASC services, please visit www.winthrop.edu/success.*

Non-Traditional Students - *The Resource Center for Adult Students located in 108 Dinkins Hall, serves Winthrop's non-traditional, veteran, and transfer student populations. The Resource Center for Adult Students will provide programmatic and student support services, as well as serve as a resource for students as they transition to and navigate Winthrop's campus. The staff at the Resource Center for Adult Students looks forward to serving our non-traditional, veteran, and transfer students and would like to encourage you to refer students in these populations to our office. The Resource Center for Adult Students can be reached at (803) 323-4784.*