

Earth Sciences 1100 - Planet Earth: How it Works [= Geology 1100 - Introductory Geology]
Winter/Spring 2020

Instructor: James St. John

Office Hours: Mon. & Wed., 2:15-3 PM, Founders Hall room 2160.

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Lectures: Mondays & Wednesdays, 3:55-5:15 PM, Founders Hall room 2168.

Labs: Fridays, 3:05-4:55 PM, Founders Hall room 2168.

Textbook: Lutgens, F.K., E.J. Tarbuck & D. Tasa. 2017 [dated 2018]. *Essentials of Geology, 13th Edition.*

New York, New York. Pearson Education, Incorporated. 574 pp.

<u>Week</u>		<u>Reading Assignments</u>
1 - Jan. 6-10	Mon. - Introduction, Basics of science, Basics of geology Wed. - Basics of geology, Earth structure Fri. - Plate tectonics	Chapter 1 Chapters 1, 2 Chapter 2
2 - Jan. 13-17	Mon. - Plate tectonics, Geologic time Wed. - Geologic time, Minerals Fri. - Minerals	Chapters 2, 1 Chapters 1, 3 Chapter 3
3 - Jan. 20-24	Mon. - No class Wed. - Minerals Fri. - Lab - Minerals I	Chapter 3
4 - Jan. 27-31	Mon. - Minerals, Intro. to rocks, Igneous rocks Wed. - Igneous rocks Fri. - Lab - Minerals II	Chapters 3, 4 Chapter 4
5 - Feb. 3-7	Mon. - Igneous rocks, Sedimentary rocks (siliciclastics) Wed. - Sedimentary rocks (biogenic, chemical) Fri. - Lab - Igneous Rocks	Chapters 4, 7 Chapter 7
6 - Feb. 10-14	Mon. - Test # 1 Wed. - Sedimentary rocks (diagenesis, sed. structures, fossils, facies) Fri. - Lab - Sedimentary rocks	Chapter 7
7 - Feb. 17-21	Mon. - Metamorphic rocks Wed. - Metamorphic rocks, Introduction to volcanoes Fri. - Lab - Metamorphic rocks	Chapter 8 Chapters 8, 5
8 - Feb. 24-28	Mon. - Volcanoes (occurrences, volcanic hazards) Wed. - Volcanoes (types of volcanoes, eruption precursors) Fri. - Lab - Topographic maps (bring calculator)	Chapter 5 Chapter 5
9 - March 2-6	Mon. - Volcanoes (famous historic eruptions) Wed. - Earthquakes Fri. - Lab - Pinatubo Volcano	Chapter 5 Chapter 9
10 - March 9-13	Mon. - SPRING BREAK - no class Wed. - SPRING BREAK - no class Fri. - SPRING BREAK - no class	
11 - March 16-20	Mon. - Earthquakes Wed. - Structural geology Fri. - Lab Test (Minerals & Rocks)	Chapter 9 Chapter 11
12 - March 23-27	Mon. - Test # 2 Wed. - Structural geology, Relative age dating Fri. - Lab - Earthquakes (bring calculator)	Chapters 11, 18
13 - March 30-April 3	Mon. - Relative age dating Wed. - Absolute age dating Fri. - Lab - Absolute & relative age dating (bring calculator)	Chapter 18 Chapter 18

14 - April 6-10	Mon. - Introduction to fossils Wed. - Evolution & extinction Fri. - Lab - Fossils	Chapters 18, 19 Chapters 18, 19
15 - April 13-17	Mon. - Precambrian-Paleozoic Earth history Wed. - Paleozoic-Mesozoic Earth history Fri. - Mesozoic-Cenozoic Earth history	Chapter 19 Chapter 19 Chapter 19
16 - April 20-24	Mon. - Cenozoic Earth history Wed. - Final Exam , 3:00 to 4:45 PM, 22 April 2020, Founders Hall room 2168.	Chapter 19

Grading: Tests (2): 35%; Final exam: 35%; Lab grade: 30%.

Final course grades: A = 92-100%; A- = 90-91%; B+ = 88-89%; B = 82-87%; B- = 80-81%;
C+ = 78-79%; C = 72-77%; C- = 70-71%; D+ = 68-69%; D = 60-67%; E = below 60%.

Grade rounding - all final course grades are rounded following these examples:

Example: 79.45% = 79% = C+ Example: 79.50% = 80% = B-

In other words, .4999 & below always round down, and .5000 & above always round up.

“Points” - every lab is equal in weight, although the number of points on each lab differs. Points on tests are relative & are used purely for ease of grading. One point on a lab does not in any way equal one point on a test. Course grades are computed using test & lab percentage grades only. Grades are not based on “points”.

Course grade formula: $((T1+T2)/2) \cdot 0.35 + (Final \cdot 0.35) + (((L1+L2+L3+L4+L5+L6+L7+L8+L9+L10+L11)/11) \cdot 0.3$

Lectures: All students are expected to attend all lectures. No one is permitted regular attendance in lecture unless they are enrolled in the course. Students are expected to behave with respect for other students and for the instructor. **This means no distracting conversations during lecture!** This means no sleeping during lecture! This means no reading non-geology stuff in lecture! This means no doing homework for other classes during lecture! **This means NO INTERNET SURFING OR TEXTING OR OTHER ELECTRONIC DOOHICKEY STUFF!!** The list of scheduled lecture topics is intended as a guide only, and is subject to revision. Some topics may be expanded or take longer, and other topics may be shortened or cut back a little.

Reading assignments: Reading assignments are listed on the schedule and will be announced during lecture as each new topic is reached. Readings are expected to be done after being assigned by the instructor. Some portions of the textbook will not be specifically discussed in class. Also, some lectures and lecture material will not be covered in the textbook. However, all lecture material and all assigned readings are fair game for test and exam questions.

Lab: Geology 1100 is a lab course. Attendance at lab is required. Lab exercises will be held most Fridays and they will count toward your final course grade. Each lab exercise must be turned in at the end of lab class. Make-up labs are not offered.

Tests: Two tests will be given during the term, and 1 final exam will be given at the end of the term. All material covered in lecture and lab, and in the assigned readings are potentially fair game for test and exam questions, unless otherwise indicated. No make-up exams will be given. The style of questions for the 2 tests and final exam will be a mixture of multiple choice, true-or-false, fill-in-the-blank, and short answer questions. I will make every effort to include only unambiguous questions. If students find any ambiguous questions, a case should be presented to the instructor for consideration.

Miscellaneous: OSU will provide this syllabus in other formats if requested.

Students who have special needs during the course should visit the Student Life Disability Services office (Warner Center room 226) and the testing center (Hopewell Hall room 88). Once approved, paperwork will be provided that can be shared with instructors. All of this should be done in a timely manner (= early in the term), so that instructors can make arrangements. Students who take tests in the testing center **MUST** tell the instructor before **each** test with a written note - otherwise, I will assume you take tests in class with everyone else.

Geology 1100 is a 4 credit hour general education program natural sciences/physical sciences course. The class will cover the materials of the Earth’s crust, the processes that produce and modify them, and the development of the Earth and its life forms through time. Classes in natural sciences/physical sciences provide: 1) an understanding of the principles, theories, and methods of modern science & the relationship between science and technology; 2) an understanding of the key events in the development of science; 3) a recognition that science is an evolving body of knowledge; 4) insights into the interdependence of scientific and technological developments; 5) a recognition of the social & philosophical implications of scientific discoveries; 6) an understanding of the potential of science and technology to address problems of the contemporary world.

Cheating will be reported to the dean and OSU’s committee on academic misconduct.

Please don’t ask when graded stuff will be returned. The answer will always be the same: “As soon as they’re done.”

All proper names mentioned & presented in this course begin with CAPITAL letters. This includes geologic time scale terms, stratigraphic names, continent & paleocontinent names, and non-species level scientific names for organisms.

Please don’t ask for bonus assignments. If you can’t handle the normal work, you can’t handle extra work. The best way to do well is to attend every class, take good notes, do assigned readings, ask questions, and study diligently for tests. Please do yourself a favor and take your education and intellectual development seriously!