

Truman College Mission Statement: *To deliver high-quality, innovative, affordable and accessible educational opportunities and services that prepare students for a rapidly changing and diverse global economy.*

Truman College
Physical Science 111 LM
Spring Semester 2013

Schedule Friday, 8:30-11:20 (lecture) with one break; 11:30-1:30 (lab). Rm 3974.

Instructor Mr. Likwan Cheng
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Office Hours 1:30-2:00 Friday after class or by appointment.

Required Text *Earth Science*, 13th edition, by Tarbuck and Lutgens, Prentice-Hall. 12th edition is acceptable but not preferred.

Online Resources Textbook website: www.prenhall.com/tarbuck. Study materials on the website are strongly recommended.

Catalog Description General Course I—Introduction to the scientific method, astronomy, geology, meteorology. Writing assignments, as appropriate to the discipline, are part of the course. 3 lecture hours and 2 lab hours per week. 4 credit hours.

Grading	• 4 Quizzes (6 given; drop lowest 2 scores)	20%
	• Graded homework	10%
	• Weekly Lab Exercises (drop lowest 2 scores)	20%
	• Midterm (covering the first half of the course)	25%
	• Final (covering the second half of the course)	25%

Homework. Homework questions will be regularly assigned. They will be discussed in class; they are not graded but will likely appear in subsequent quizzes.

Lab Grading. Lab write-ups will be graded based on (1) correctness of answers, (2) quality of writing, and (3) level of participation. Arrival at a lab session after it has started will receive a reduction in score.

Exit Exam. An Exit Exam is required for this course. The Exit Exam is given in two parts as part of the Midterm and Final Exams. The passing score for the Exit Exam is 40%; the passing score is *required* for a C or better grade for the course.

Grading: Generally A(80%), B(70%), C(60%), D(50%), F(40%).

Policy

1. There will be no makeup quizzes or labs. Exceptions are granted for medical emergencies, legal obligations, or critical professional activities with official written documents, and *only after* having exhausted the allowed drops.
2. Normal attendance is expected. Excellent attendance will be rewarded with extra credit points in the course grade. Starting with the 4th, each unexcused absence will drop course grade by 3% point.

3. Good classroom disciplinary conducts are expected, as defined under Standards of Conduct in the Student Policy Manual. Misconducts, such as *talking during class*, will be penalized in the course grade by up to 5% points. No extra credit of any type will be given to students with incidents of misconduct.

Course Objectives

1. Cultivate in students the ability to think analytically, critically, methodically, and responsibly.
2. Familiarize students with the scientific method.
3. Familiarize students with the scientific facts of the major geological phenomena on and near earth's surface, in earth's atmosphere, specifically in the framework of the rock cycle and the hydrologic cycle.
4. Introduce the solar system from an geologic perspective
5. Help students understand the impacts of geological phenomena on the environment, human life and society. Help students understand the impacts of human activities on the environment.

Student Learning Outcomes

1. Understand the procedure of scientific method and be able to apply it.
2. Understand minerals and rocks.
3. Understand the rock cycle and the geological phenomena that are the essential components of the rock cycle, and their physical impacts to life.
4. Understand the hydrological cycle and the associated atmospheric processes, including their impacts to the climate.
5. Understand the planetary astronomy of the solar system, specifically the motions of Earth and the Moon, the evolution of terrestrial atmospheres, structure and energy generation of the Sun, and other topics.

Active Pursuit Policy

Students who do not actively pursue the course, as defined as failing to submit at least 2/3 of the turn-in work (quizzes and labs) and maintain a 2/3 attendance by the midterm time, are eligible to be given a midterm grade of ADW, and thereby *dropped from the course*.

Academic Integrity Statement

Cheating in a test or lab write-up will nullify the score. Generally, a student involved in any cheating incident will have his or her course grade lowered by one letter grade. Serious cases will be reported to the Registrar.

Disability Statement

According to the Rehabilitation Act of 1973, no otherwise qualified individual with a disability in the United States shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

Truman's Disability Access Center is located in Room 1428. Office hours: Monday-Thursday 9:00 am - 7:00 pm, Fridays, 9:00 am - 4:00 pm. Phone: (773) 907-4725.

Phy Sci 111 LM Spring 2013

Lecture and Lab Schedule
(Actual progress may vary)

<i>Dates</i>	<i>Topics</i>	<i>Reading, 12th ed. (13th ed.)</i>	<i>Lab Exercises</i>
1/25	Ch 1: Scientific Method; Ch 2: Minerals; Ch 3: Rocks	6-9 (5-8); 30-44 (28-43)	Identifying minerals
2/1	Ch 3: Rocks; Ch 4: Weathering.	52-75 (52-75); 84-93 (84-93)	Identifying rocks
2/8	Ch 5: Rivers & Groundwater Ch 6: Glaciers	117-146 (118-146); 150-152 (150-152); 154-166 (158-171)	Making copper metal from malachite mineral
2/15	Ch 9: Volcanoes & Intrusive Structures	250-259 (259-270); 266-270 (273-282)	Profiling Mississippi River gradient using Google Earth
2/22	Ch 10 & 11: Mountains and Geologic Time	284-292 (298-301, 304-306); 310-316 (324-329)	Truman permeable patio: Sediment porosity and permeability
3/1	Ch 7: Plate Tectonics; Ch 8: Earthquakes	189-205 (195-197, 201-204, 209); 220-221 (228-229); 225-228 (234-236)	Geologic models; Review for midterm exam
3/8	<i>Midterm Exam, including Exit Exam part 1; Ch 16: Atmosphere</i>		
3/15	Ch 16: Atmosphere heating; Ch 20: Climate Change	448-464 (462-480); 586-590 (594-601)	Greenhouse effect
3/22	Ch 17: Moisture, Clouds, Precipitation	480-489 (490-502); 492-497 (506-509); 501-505 (512-515)	Heating of land and water experiment
4/5	Ch 18: Winds and Storms. Ch 19: Weather.	516-527 (529-533, 535-540); 544-549 (552-559)	Latent heat of ice melting experiment
4/12	Ch 21: General Astronomy	605-611 (616-622); 615-620 (625-631)	Middle latitude cyclone: Interpreting weather map
4/19	Ch 22: Solar System	626-649 (636-640); 665-670 (646-653, 655-659)	Cassini and Mars Rover missions online exercises
4/26	Ch 23: The Sun	665-670 (678-683)	Review for final exam
5/3	<i>Final Exam, including Exit Exam part 2</i>		