

PHSC 4013 – Earth Science & Astronomy
LECTURE
Fall Semester, 2007

Professor	Dr. Cleo L. Bentley, Jr	Office Hours	M 1-6, TTh 12:30-2, 3:30-4, 5:30-6
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Phone	936-261-3140	Web address	
		Class Time	TR 400-520pm Rm 303 NSB
			PHSC 4013-001

CATALOG DESCRIPTION Credit 3 semester hours. Catalog description is being revised to include broader topics of advanced physical science for public and private school teachers to include introduction to science history, astronomy, earth science and geology, as well as some chemistry concepts.

CO-REQUISITE:

PREREQUISITES BY TOPIC:

Physical Science, PHSC 1123, or departmental approval.

TEXTBOOK: Internet, notes, and Contemporary Physical Science by I.J. Aluka

REFERENCE: Physical Science, Schaum's outline, 2nd Ed.; Innocent J. Aluka, "Contemporary Physical Science," McGraw-Hill, 1999.

COURSE GOALS:

The purpose of this course is to give the student practical classroom experience by frequent questioning/answering, quizzing, and 3 major examining on topics in astronomy, geology and chemistry which can be applied to the student's own classroom when the student becomes a teacher in junior or senior high school, but slightly toned-down mathematically, as would be applicable to high school and junior high science programs.

Course Outcomes :

Upon completing this course the student will have exposure to, basic knowledge of, and experience with many concepts in the teaching of astronomy, earth science, and chemistry.

Course Policies:

This course uses the lecture format. Preparation for student exams, reports and quizzes is expected. Occasional quizzes (usually everyday) will check the focus and preparation of the lectures and assignments. It is expected that you will need to spend at least two hours studying outside the class for each hour spent in class. That means you should plan to devote a minimum of eight hours per week for this class. Lab reports are due the same day, or no later than the next day.

Homework And Grading

1)

a. Your grade will be based on class participation in the form of student lectures, student laboratory procedure and reporting, explaining problems and taking quizzes (extra points to buffer your exam scores--you get paid for everything that you do), and three major exams (covering four to five current chapters, or student lectures, each).

b. Attendance should be maintained. Particularly, there is no way to make-up a quiz or lab missed, but if you miss a quiz, two points are taken.

c. Remember: 'To hear is to forget, to see is to know, to do is to understand'.

d. Your final grade will be based on your overall average falling in the following categories: A--from 90 to 100; B--from 75 to 89; C--from 60 to 74; D--from 40 to 59; F--under

* Student Academic Appeals Process (undergraduate catalog, 1998-2001, pp. 88-91)

100—90	A
89—75	B
74—60	C
59—40	D
40—0	F

Oral and Written Communications

Oral or Written communication assignments are given through exams, quizzes, board explanations, and lab assistance and report writing.

Attendance Policy: (undergraduate catalog, 1998-2001, pp.80

Classes will start at the prescribed time and will end at the prescribed time. Excessive absences or tardiness will result in lowered grades. Excessive absenteeism, whether EXCUSED or UNEXCUSED, may result in a student's course grade being reduced or in assignment of a grade of "F". Absences are accumulated beginning with the first day of class. University Undergraduate catalog (1998-2001, pp.80) provide more detail information.

Student Academic Appeals Process (undergraduate catalog, 1998-2001, pp.88-91)

ADA statement

COURSE OUTLINE

Week	Topic	Note
1	0. Introduction	
8	<p>COURSE CONTENT</p> <p>This course is a one semester course in earth science and astronomy for teachers. The objective of the course is to enhance the students broad exposure to and experience in those disciplines. It is desirable that the learning environment be a microcosm of the professional world--that is, the system of evaluation is to reflect the effort, as well as cleverness, that is produced by the student. Each student is "paid" extra points for class participation outside the three major exams, one research report. A list of what this course will cover and the tentative timetable is found below.</p> <p>FIRST 9 WEEKS</p> <p>Chapters 1, 17, 19, 18--Student oral classroom lectures (oral reports) on Science history, Geocentric and Heliocentric systems, Bode's law and Kepler's laws for planetary distances and periods, measurement, the earth, time zones, longitude and latitude, First exam. Moon and telling time by moon phases, solar system, Newton's universal law of gravitation, the Sun, stars, Hertzsprung-Russel diagram, cosmology, Review. Second major exam.</p>	
9-16	SECOND 9 WEEKS	

	Chapters 20-27 -- Meteorology, weather, geology, minerals, rocks, earthquakes, plate tectonics, geologic time, pollution; Chemistry--chapters 10-16, atomic structure, periodic table, Optional (chemical compounds, Bohr sketch, chemical bonding, chemical reactions, organic chemical classification groups, naming, chemistry mini-exam 2); Review. Third (Final) exam.	
16	13. Review	Final Exam