PHYSICS 478
EARTH AND SPACE SCIENCE
Spring 2011

Instructor: Dr. David Slavsky and Hethyr Tregerman, M.Ed.
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Class Meetings: Thursdays, 4:30-8:00 from March 31-June 9 (no class April 21)
Course Web Page: http://www.luc.edu/faculty/dslavsk/courses/phys478/phys478.shtml

COURSE DESCRIPTION:

This is a course that will focus on the nature of the Earth as a planet and its place in the Universe. In this, we will investigate how the Earth evolved as a planet, focusing on the nature of the Earth's geology and atmosphere.

We will also study the Earth as a member of planets of the Solar System; by studying the systematics of our solar system, we learn more about the nature of planets in general, and see how the Earth compares and contrasts with other planets in our system. We will also study how modern astronomy allows us to understand the nature of larger associations in the Universe, including galaxies, clusters of galaxies, and ultimately the nature of the Universe itself.

During the semester, we will do a number of in class activities designed both to enhance your knowledge of the subject matter, and to help you frame how you might teach this material in your classes. Many of these activities will be drawn from the curricula used frequently in CPS middle schools.

COURSE REQUIREMENTS AND GRADING:

Successful completion of this course will earn 3 hours of graduate credit at Loyola University Chicago. Grades in the course will be determined according to:

20% class participation
20% in class and take home assignments
20% lesson plan
15% mid term exam
25% final exam

The nature of this course is such that it is critical that all participants engage fully in all activities and discussions. Passive learning will detract from the educational experience of the individual and the entire class. It is our expectation that all participants will attend

each class and be on time for each class. Missing a class (or classes) will necessarily reduce your class participation grade.

Each week there will be assignments due at the beginning of the next class. These can include lab write-ups, short papers, or problem sets. All assignments must be submitted before or at the beginning of class on the due date; late assignments will lose credit at the rate of 5% for each calendar date they are late. Assignments will adhere to the following format rules:

All assignments must be legible.
Write only on one side of the paper
Assignments consisting of more than one sheet must be stapled together.

Credit will be reduced by 15% for assignments not following these format rules.

You may turn in homework in class or submit via email to dslavsk@luc.edu ; if submitting via email, assignments must be in a single file (not a series of .jpgs, for instance.)

The lesson plan will be due in class (or submitted via email to dslavsk@luc.edu) by the beginning of class of the last class, Thursday, 9 June 2011. The format and scope for the lesson plan will be posted on line within the next two weeks; we will have ample time to discuss this during the term.

Two exams will be scheduled for the course. The mid-term, based on material covered in the first half of the course, will be given on May 12; the final exam will be given in class on Thursday, June 9. All participants are expected to take these exams as scheduled; make-ups will be given only in the event of serious illness, death in the immediate family, unavoidable court date, or religious observances prohibiting work or attending school. I will need appropriate documentation for any absences.

GRADING SCALE

Semester grades will be assigned according to:

90-100% A
80-89% B
60-79% C
50-59% D
<50% F

MATHEMATICS REQUIRED

Since mathematics is the language of science, there will be a certain amount of mathematics in the course. This will include the ability to perform basic calculations, manipulate simple equations, read, interpret and construct graphs, and use units correctly.

ACADEMIC HONESTY

Academic honesty is at the core of all scholarly work. I will expect you, as Loyola students and as teachers to uphold the highest standards of this principle. The first instance of a violation of academic honesty, including inappropriate exam behavior (e.g., copying from another's paper, using "crib notes" or other unauthorized notes) or engaging in plagiarism on assignments will result in a zero on the assignment. A second violation will result in an "F" in the course.

Many students are often unclear what constitutes plagiarism; we will use the Loyola University definition of the term, which is included below:

Plagiarism is a serious form of violation of the standards of academic dishonesty. Plagiarism is the appropriation of ideas, language, work, or intellectual property of another, either by intent or by negligence, without sufficient public acknowledgement and appropriate citation that the material is not one's own. It is true that every thought probably has been influenced to some degree by the thoughts and actions of others. Such influences can be thought of as affecting the ways we see things and express all thoughts. Plagiarism, however, involves the taking and use of specific words and ideas of others without proper acknowledgement of the sources, and includes the following

- Submitting as one's own material copied from a published source, such as print, internet, CD-ROM, audio, video, etc.
- Submitting as one's own another person's unpublished work or examination material
- Allowing another or paying another to write or research a paper for one's own benefit
- Purchasing, acquiring, and using for course credit a pre-written paper