CSPS118G: Earth, Life, and Time Colloquium

SEMESTER I: The Nature of Science and Holtz & Merck’s School of Rock

Fall 2007

Room: CCC1100 Tue, 3:30-5:00

ELT Website: http://www.geol.umd.edu/~jmerck/eltsite/

Course Website: http://www.geol.umd.edu/~jmerck/eltsite/syl1118GF07.html

INSTRUCTORS:

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TEACHING ASSISTANT

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NOTE: It is your responsibility as a student to completely read through and understand this syllabus. If you have questions about it, please contact Dr. Holtz or Dr. Merck. You will be held responsible for following all requirements of this syllabus.

COURSE ORGANIZATION: One meeting per week, one weekend scavenger hunt/orientation, five weekend field trips (1 required).

REQUIRED READINGS: This semester there are two required texts:


Additional short readings will be made available on the ELT website. Reading assignments must be done by the classtime listed.

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COURSE OBJECTIVES AND PHILOSOPHY: Semester 1 concentrates the nature of science in general and its role in Society. We will also examine the geological sciences as an example of the methods of science in practice. In this semester, we will introduce the concept of Deep Time, especially as it relates to the primary question of the Earth, Life & Time Program:

- How is the scientific understanding of the physical world and its living components (including our own species, our behavior, and our society) more completely comprehended when we take into account time (whether the “deep time” of evolution and geology, or the smaller scale of human history)?

CLASSROOM POLICIES: You should bring the following to every single colloquium meeting:

- A writing implement
- A notebook (containing this syllabus)
- The text for that half of the course (Sagan through October; Bjornerud after that)
- A willingness to participate constructively, both in small groups and in the class as a whole
- A readiness and ability to discuss the readings for that week
This semester we will have a number of small-group in-class projects. We expect everyone to help move tables and chairs when necessary for a particular project, and to help restore the tables and chairs to the “neutral” position when we are done. Many hands make light work!

During classtime:
- PLEASE be courteous to your fellow students and your faculty, and do not engage in side conversations. Even what you might think are hushed whispers in the back row can be heard all the way up front, and are disruptive to the attention of your classmates who are interested in getting a good grade in the class.
- All electronic modes of communication (mobile phones, pagers, etc.) must be turned “off” or be in silent mode.
- Laptops may be used ONLY for taking notes and/or following along with webnotes for the class. If you are found to be using your laptop for other purposes you will be asked to shut it down. If you fail to do this, you will be considered “absent” for that day.
- No personal electronic listening devices (e.g., CD players, MP3 players, personal radios, etc.) will be allowed.
- No reading of material not germane to the class activity will be allowed.

Finally, please do not leave any debris behind: pick up all food/beverage containers, papers, newspapers, etc. near your seat and on your desk when you leave.

ATTENDANCE: Given the nature of the course and program, participation in colloquium meetings is MANDATORY. It is up to you to make certain that your presence has been recorded for every class.

- **Recording Your Presence:** On days with quizzes and/or group projects, your presence will be taken from these items. On other days, there will be a sign-up sheet. It is your responsibility to make certain that you have signed the quiz, project report, or sign up sheet.
  - Students observed leaving the colloquium before 4:50 or before it is formally dismissed will be counted absent.
  - NOTE: We expect students to adhere to proper academic decorum during colloquia. This means focusing your attention on presentations, refraining from conversations or activities that are not relevant (e.g., reading newspapers, doing homework for other classes, etc.), and showing proper respect for student, faculty, and guest presenters. *We reserve the right to count you absent from colloquium if you fail to uphold this standard!*

- **Excused Absences:** If you have a legitimate reason for being absent, such as a family emergency, unavoidable academic conflict, or other excuse according the University’s guidelines, we will usually excuse your absence. However you must notify us in a timely fashion. Requests for the excusing of an absence will not be considered after two workdays from the absence. Please use the Excused Absence Report form from http://www.geol.umd.edu/~jmerck/eltsite/rtfs/absence.pdf. **NOTE:** the next colloquium meeting is too late for requests for excuses.
  - Even if you miss a class from an excused absence, you are still held responsible for material during that class, included graded assignments such as quizzes and small group projects. See the faculty about arrangements for a make up. If the small group project is such that it cannot be done alone, it will not be factored into your grade if you have an excused absence that you informed the faculty about within two workdays from the absence.
  - Religious Observances: The University System of Maryland policy provides that students should not be penalized because of observances of their religious beliefs, students shall be given an opportunity, whenever feasible, to make up within a reasonable time any academic assignment that is missed due to individual participation in religious observances. It is the responsibility of the student to inform the instructor of any intended absences for religious observances in advance. Notice should be provided as soon as possible but no later than the end of the schedule adjustment period (September 12).

- Unexcused Absences: All other absences are considered unexcused absence. You may have one unexcused absence that does not directly affect your grade (except for missed quizzes or small group projects: see below). Each subsequent unexcused absence lowers your final course grade by 10 points.
  - If you miss a quiz or small group project because of an unexcused absence, you will not be allowed to make it up.
POLICY ON GRADES: There are six components to the grade, each of which is worth a certain percentage of the total. These are Service Day (10%), Scavenger Hunt/Orientation (5%), Field Trip Report (25%), Small Projects (25%), Quizzes (25%), and Academic Website (10%). Here are the details:

1) Service Day: (10%) All Scholars students are expected to participate in Service Day (August 27). If you missed Service Day, you MUST see the instructors and work out some arrangement for a make-up task or you will receive a 0 for this portion of your grade.

2) Scavenger Hunt/Orientation: (5%) This event, held on September 2 (Sunday), is to help orient students to the Washington, D.C. area and the Metro System, as well as help you get to know other people in the class.

3) Field Trip Report: (25%) This semester there will be five (5) field trips. It is mandatory that every student participates in one (1) of these trips. These trips have only minimal expenses; typically the Metro fare and/or lunch. These trips are:
   • 09/29 (Saturday): Chesapeake Beach and Jug Bay Wetlands Sanctuary
   • 10/7 (Sunday): West Virginia Fossil Hunting and Geology
   • 10/28 (Sunday): Sideling Hill and Western Maryland Geology
   • 11/11 (Sunday): Maryland Science Center
   • 12/1 (Saturday): Marian Koshland Museum of the National Academy of Sciences

   If you do not go on any field trip and/or fail to do a report, this part of your grade will be a 0.

   In order to get credit for attending a field trip, you must complete a short report concerning aspects of the natural sciences you learned about on this event. You will be handed out the report packet on the day of the trip, and must turn it in upon completion of that field trip. You may do these projects individually or in groups up to 3 people: if done as a group, all students in that group will receive the same grade.

4) Small Projects: (25%) Throughout the semester there will be a series of small assignments; some in-class, some take home. Those in-class will be conducted in small groups (to be created on those dates), with your results handed in at the end of that classtime. Everyone in each small group receives the same grade for that day’s work.

5) Quizzes: (25%) To verify that you are, in fact, mastering the material of the course, six (6) scheduled quizzes will be administered during the semester. We will automatically drop the lowest of the six grades.

   NOTE: Quiz materials will cover both the classes and the readings.

6) HTML Professional Academic Website: (10%) In the mid-semester we will have a short workshop teaching the basics of HTML coding and website design. You will be responsible for creating a website to be mounted on a umd.edu server; successful completion of this project is worth 10% of the total. You will be expected to maintain your website throughout your four semesters in ELT, and you will be adding new webpages to it over time. An html template for the Professional Academic Website is downloadable from the ELT website http://www.geol.umd.edu/~jmerck/eltsite/templates/website.html. The assignment itself can be found at http://www.geol.umd.edu/~jmerck/eltsite/rtfs/Website07.pdf, and a guide to html can be found at http://www.geol.umd.edu/~jmerck/eltsite/elthtml07.html.

GRADE SCALE (Course): ≥90, A; 80-89, B; 70-79, C; 60-69, D; <60, F. “+” and “−” grades are given to the top and bottom two-point range, respectively, within each grade.

GRADE SCALE (Small Projects): +, 100; √+, 90; √, 80; √−, 70; −, 60; 0, 0 points

EXTRA CREDIT: ELT offers several different means of earning extra credit this semester. You earn 5 points maximum extra credit per item, up to a total of two items (i.e., 10 points total). Below are the options and requirements for Academic and Service extra credit. You may do two items in one category, or one in each.

   Academic: You may write an additional report on colloquium-related academic material, and mount this report as a separate page on your website. Topics could include:
• A second field trip report (see above) beyond the one required.
• A reaction paper based on any full-length chapter in _Demon-Haunted World_ or _Reading the Rocks_.
• A reaction paper to any of the Supplementary Readings for the semester listed on the website http://www.geol.umd.edu/~jmerck/eltsite/readings.html.
• A reaction paper to a non-classroom academic presentation on campus, such as a departmental seminar.
• A reaction paper to some other academic event: check with the ELT faculty to make sure it qualifies.

Reports for field trips should follow the format assigned for that trip, including the specific questions required. Reaction papers are reports that would address both a summary of the material encountered as well as your thoughts and comments on this material and how it relates to related matter you may have encountered (in colloquium, other classes, etc.). Reaction papers require you to show insight into the matters concerned, not a simple retelling of what was there nor your “feelings” about it. See the Reaction Paper template at http://www.geol.umd.edu/~jmerck/eltsite/templates/reactionpaper.html.

Full extra credit will only be earned if all format issues are properly completed (sufficient length, proper HTML coding, no spelling or factual errors, etc.). Problems with these issues will result in a decrease in the extra credit grade received, as per field trip and other web-based reports. **All Academic extra credit assignments must be online by the end of classes (i.e., before finals).**

**Service:** College Park Scholars seeks to promote civic responsibility among its students and faculty. To help fulfill Scholars’ commitment to community service, we offer extra credit to your grade total for students who participate in some form of community service this semester.

- You cannot be paid for this service activity, nor be receiving credit for it in any other classes, nor be doing this service for disciplinary purpose for some other entity on campus (i.e., no “double-dipping”).
- This service must be conducted between Move-In Day and the last day of exams this semester.
- This activity must be approved by the Faculty Directors of ELT, or else you will not receive credit for it. Your best bet is to get it pre-approved, so you know in advance if it will count for extra credit!
- You must turn in an Activity Report form (see http://www.geol.umd.edu/~jmerck/eltsite/rtfs/activityreport.pdf) signed and dated by yourself and a site/activity supervisor in order to get credit.
- This extra credit can be earned by any of a number of activities. The list below is by no means exhaustive, but gives you an example of some of the sorts of activities that would count:
  - Serve as the ELT freshman representative on the Scholars Student Advisory Board
  - Serve as a Scholars Ambassador, or in Student Program Circle, or in the Residence Halls Association
  - Go to a high school to promote ELT (and Scholars, and UMCP)
  - Participate in a Voting Drive
  - Donate blood
  - Volunteer at a clinic, shelter, or other similar institution
  - Volunteer at a non-profit organization
  - Serve as an officer in an SGA group
  - Volunteer for Scholars on the Hill

**COMMUNICATION:** Because many of our communications will be by e-mail, all students are required to maintain e-mail accounts and arrange for access to the Internet. Although not a course requirement **per se,** students should get into the habit of checking their e-mail daily. Failure to do so may cause you to miss crucial course information. A list of available computer labs on campus can be found at http://www.oit.umd.edu/wheretogo/seeTable.cfm.

**ACADEMIC INTEGRITY:** The University of Maryland has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit http://www.studenthonorcouncil.umd.edu/whatis.html
The University of Maryland is one of a small number of universities with a student-administered Honors Code and an Honors Pledge, available on the web at http://www.jpo.umd.edu/aca/honorpledge.html. The code prohibits students from cheating on exams, plagiarizing papers, submitting the same paper for credit in two courses without authorization, buying papers, submitting fraudulent documents, and forging signatures. The University Senate encourages instructors to ask students to write the following signed statement on each examination or assignment: “I pledge on my honor that I have not given or received any unauthorized assistance on this examination (or assignment).”

ACADEMIC ACCOMMODATIONS: If you have a documented disability, you should contact Disability Support Services 0126 Shoemaker Hall. Each semester students with documented disabilities should apply to DSS for accommodation request forms which you can provide to your professors as proof of your eligibility for accommodations. The rules for eligibility and the types of accommodations a student may request can be reviewed on the DSS web site at http://www.counseling.umd.edu/DSS/receiving_serv.html.

MAIN SYLLABUS

8/27/07 SERVICE DAY

9/2/07 (Sun.) Metro Scavenger Hunt

9/4/07 Introduction and Logistics of Class
Being an Effective Student
What is Science? What is Natural History?

9/11/07 The Logic of Science and The Scientific Method
Reading: Sagan Preface, Chaps. 1-2
Reading (online): “The Nature of Science” from Science for All Americans

9/18/07 Quiz 1
An Introduction to Carl Sagan’s Toolbox and How to Detect Baloney
Reading: Sagan Chaps. 3, 10, 12

9/25/07 Making Science Happen: Who Pays For Science?
Reading: Sagan Chaps. 14, 19, 23

9/29/07 (Sat.) FIELD TRIP 1: Chesapeake Beach and Jug Bay Wetlands Sanctuary

10/2/07 Quiz 2
Recognizing Good, Bad, and Pseudoscience
Reading: Sagan Chaps. 5, 13

10/7/07 (Sun.) FIELD TRIP 2: West Virginia Fossil Hunting and Geology

10/9/07 Hollow-Earth Antarctic Space Nazis, Surviving Plesiosaurs, Crop Circles, and Ancient Astronauts: the Lure and the Lore of Pseudoscience
Reading: Sagan Chaps. 4, 7, 11, 17

10/16/07 Workshop: Website Design

10/23/07 Quiz 3
Mad Science and Evil Scientists—Do They Really Exist?

10/28/07 (Sun.) FIELD TRIP 3: Sideling Hill and Western Maryland Geology

10/30/07 The First Word in “Science Fiction”
HTML project due
11/6/07  The Restless Earth: An Introduction to Geology and the History of the World
        Reading: Bjornerud Prologue, Chap. 1

11/11/07 (Sun.) FIELD TRIP 4: Maryland Science Center

11/13/07  Quiz 4
        Commando Geology: An Adventure in Deep Time
        Reading: Bjornerud Chap. 2

11/20/07  Fossils and Worlds of the Past
        Reading: Bjornerud Prologue, Chap. 5

11/27/07  Quiz 5
        Clocks in the Rocks and Terra Mobile: How Geologists Discovered the Age and Motion of the Earth
        Reading: Bjornerud Chap. 6

12/1/07 (Sat.) FIELD TRIP 5: Koshland Museum of the National Academies of Sciences

12/4/07  Strange New Worlds: The Wonders of Planetary Geology
        Reading: Bjornerud Chap. 4

12/11/07  Quiz 6
        Bangs and Whimpers: Mass Extinctions in Earth History
        Reading: Bjornerud Epilogue