Earth Science 111. Earth Science and Environmental Justice

Spring 2009
Class Meetings: Tuesday and Thursday, 1:30-2:45 pm, Ely Hall 104

Instructor: Jill Schneiderman
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Office Hours: Monday and Wednesday, 1-2pm no appointment necessary (& by appointment)
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“We are going to have to gather up the fragments of knowledge and responsibility that we have parceled out to the bureaus and the corporations and the specialists….We are going to have to put those fragments back together again in our own minds and in our families and households and neighborhoods.”
~Wendell Berry, A Continuous Harmony

Course Description
The environmental justice movement is one civil rights movement of the 21st century. It is relatively young but has grown rapidly. Activists in the movement challenge structures and institutions of power that systematically subject less powerful groups of living beings to debilitating conditions. Our course examines the natural science related to and social roots of environmental justice issues. By the end of the semester, students will be familiar with the principles of environmental justice and will have gained a basic understanding of the earth science behind selected environmental issues, namely water, climate, energy, and mineral resources.

There is a strong emphasis on reading and writing in the course and active participation in our class meetings. I expect you to attend every class and arrive on time. Please be eager and prepared at every class meeting to share with other classmates your questions, observations, confusions, and critiques. While not all students relish outspoken participation, we will all benefit from the struggle to articulate our thoughts.

Office hours are for you. Please stop by and discuss any course-related matters. If my office hours do not fit your schedule, I am happy to try to schedule an appointment at a mutually convenient time.

Books
Required
Barbara Murck, Visualizing Physical Geology, New York: Wiley, 2008. (This is an e-book. Purchase a card at the college bookstore that has a code for accessing your copy).


Recommended

All written materials for the course are located on our course Blackboard site under “Course Documents.” Please complete all assigned readings before the class session to which they pertain. All videos are on 3-hour reserve in the library. Follow links on the syllabus to all audio materials.

Assignments and Grading
Assignments: 30%
Midterm: 20%
Final exam (take-home): 20%
Reading preparation and class participation: 30%

Please type all written assignments using Microsoft Word, Times New Roman, 12-point font. Make sure your work has your name and page numbers.

Students must attend all classes and complete all exams and assignments on time to receive a passing grade. Late assignments or missed classes will result in reduction of your final grade. If an emergency or an illness arises and you must miss class or you need an extension on an assignment, per The Student Handbook, please see your Class Advisor to receive authorization. Unless you receive authorization, I will not accept work more than one week after it is due.

Grading criteria:
An “A” grade reflects conspicuous excellence in several areas of the coursework.
A “B” grade reflects general high achievement, and excellence in some aspects of coursework.
A “C” is the acceptable standard for graduation at Vassar. It reflects satisfactory work.
A “D” (as well as a C-) reflects unsatisfactory work.


Academic accommodations are available for students with disabilities who are registered with the Office of Disability and Support Services. Students in need of disability accommodations should schedule an appointment with me early in the semester to discuss any accommodations for this course that have been approved by Office of Disability and Support Services, as indicated in your DSS accommodation letter. I am very happy to work with you and ODSS in order to facilitate your best work in our course.

The Writing Center
Located in the Learning and Teaching Center (LTC), Thompson Library, the Writing Center may be helpful to you in your coursework. Check the LTC website for drop-in hours (http://ltc.vassar.edu/writingcenter/) and for hours of consultation stations in the residence halls. Specially trained and experienced students can help you with everything from brainstorming to paragraph organization to grammar. Online resources provided by the LTC available at http://ltc.vassar.edu/onlineresources/ may also be helpful.

Schedule of Classes
(N.B. please bring with you to each class meeting either a paper or electronic copy of the reading and notes related to video and audio materials)

January 22: Introduction to our course.

Environmental Racism? http://www.ncpa.org/ba/ba143.html

January 27: What is environmental justice?


**Receive assignment 1.**

**January 29:**  **Environmental change and Google Earth**, Meg Stewart, Educational Technologist

**February 3:**  **Geographic distribution of environmental risk**, Meg Stewart, Educational Technologist

**Environmental Justice and Water**

**February 5:**  **In class video FLOW: For Love of Water** (2008) Irena Salina, dir. (84 minutes)


**Assignment 1 due.**

**February 10:**  **Earth cycles and the hydrosphere**


**Receive assignment 2.**

**February 12:**  **Present and future water crisis**


**February 17:**  **Water-related conflict**

Assignment 2 due.

Environmental Justice and Climate

February 19:  Earth cycles, the atmosphere, and the cryosphere


February 24:  The cryosphere and global warming


“Sea level and climate” http://pubs.usgs.gov/fs/fs2-00/ (USGS Fact Sheet, January 2000).

Receive assignment 3.

February 26:  Climate change and human rights


Listen/Watch “Supreme Court Global Warming Hearings” http://www.kqed.org/epArchive/R612040900 (Forum with Michael Krasny, KQED Radio, 4 December 2006).


Environmental Justice and Solid Earth Resources
March 3: Renewable and nonrenewable resources in the lithosphere


March 5: Midterm Exam

Spring Break—read *Refuge*

March 24: Nuclear energy I (power production and weapon manufacture)


Assignment 3 due.

March 26: Nuclear energy II (power production and weapon manufacture)

*Required Field Trip March 28: American Museum of Natural History. Depart 9 a.m. in front of Ely Hall.*

March 31: Nuclear energy III (power production and weapon manufacture)


Watch/Listen *Nuclear Waste: Solutions for the Nuclear Renaissance* (Heritage Foundation forum, 6 December 2007). Watch | Streaming MP3 | Save MP3 | Details

April 2: Nuclear energy IV (power production and weapon manufacture)
Watch *Building Bombs: The Legacy* (1993) Mark Mori and Susan Robinson, directors. (45 minutes.)


April 7: Fossil fuels I

Receive assignment 4.

April 9: Passover (no class)
April 14:  Fossil fuels II—petroleum and natural gas


Watch Delta Force (1995), Glenn Ellis, director (running time 52 minutes).

April 16:  Fossil fuels III—petrochemicals


April 21:  Fossil fuels IV—energy policy
Watch/Listen “A Conversation on Energy Policy” with Steve Forbes & Peter Huber

Assignment 4 due.

April 23:  Mineral resources I


April 28:  Mineral resources II—asbestos


April 30:  Mineral resources III—metals
Watch At the Edge of Conquest: The Journey of Chief Wai-Wai (1993) Geoff O’Connor, producer. (Running time 30 minutes.)


May 5: Wrap-up