ENVR 30: Environmental Issues: Natural Sciences

Fall 2010

Instructor: Kim Griest

Lecture: MWF 11-11:50pm, room Center Hall 113

Discussions (help with homework; ideas and issues. You will sign up for one

discussion section. Attendance will be taken and count towards the arade.)

Mon 9-9:50am, York 3050A (Allison)

Mon 1-1:50pm, York 3000A (Graeme) [CHANGED]

Wed 3-3:50pm, SSB 106 (Graeme) Wed 4-4:50pm, SSB 106 (Allison) Fri 12-12:50pm, U413A 3 (Graeme)

Griest Office: 337 SERF, 858-534-8914

Griest Office Hours: Thursdays 11-12pm (337 SERF) or call for

appointment

T.A.s: Allison Weston (aweston@ucsd.edu)

Graeme Moody (gemoody@ucsd.edu)

T.A. Office hours: Allison: Thurs 2-3pm, Perks coffee

Graeme: Wed 12-1pm, Perks coffee

Text: Environmental Science: Systems and Solutions,

4th edition, McKinney, Schoch, and Yonavjak

2nd Text: Cadillac Desert, Marc Reisner

Midterm: Fri, Nov 5, in class

Final: Tues, Dec 7, 11:30am-2:30pm, in class

[NOTE: NO LATE OR EARLY FINAL; no makeup for midterm; CHECK YOUR SCHEDULE

NOW! 7

GRADING POLICY

I add up points based on the percentages below and then set A,B,C, etc lines based upon what I consider A,B,C, etc. work. There is not a fixed percentage for A,B,C, etc., i.e. it is possible for everyone to get an A.

final 45%
midterm 25%
graded homework 20%
discussion section attendance/participation 10%
class participation up to 5%, (final

and midterm will count less)

Homework will be assigned weekly. It will consist of short answer, essay questions, calculations, and small research projects. It will be graded only by spot checking one or two questions and looking quickly over the rest. It will be graded on a scale:

- 0 (did not turn in)
- 1 (not really adequate),
- 2 (ok),
- 3 (exceptional effort made).

Most everyone should expect to get 2's on their homeworks. Since most everyone will be getting the same scores on the homework, it means that as long as you do the homework, the bulk of your grade will come from the midterm and final.

You should sign up for one of the above discussion sessions. Attendance will be taken at your discusion section; in addition, there will participation questions asked during lecture which will be turned in. A total of up to 5% of the grade can come from participation. For example, if you participate 80% of the time you will receive 80% of 5% or participation credit of 4%. Your final or midterm (which ever is worse) will then be worth less (for example your final will be worth only 45%-4%= 41% of the grade, the rest being made up by participation credit).

There will be a midterm on Fri Nov 5 and a final on Tues Dec 7. There will be no make-up exams, so if you cannot make both these exam dates, you should not take this class.

The midterm and final will be multiple choice exams, taken on a scantron (requires scantron form X-101864-PAR).

The reading will be assigned out of the main textbook and out of the Reisner book as well as other readings posted on the course website.

Note that ALL work handed in on the homework must be written by you alone. You may work together, but you must compose and write out everything yourself. I do not want any cheating done by anyone in this class.

OUTLINE OF TOPICS

In 10 weeks we cannot cover in depth all of the topics list below. The textbook contains more material than we can adequately discuss. So we will be jumping around some. We will touch on all of these listed topics and go into depth on several.

- 1. Overview of Environmental Science
- 2. Human Population and Consumption
- 3. Biosphere: water, air, energy
- 4. Life on Earth: evolution, biodiversity, biomes
- 5. Planet Earth: plate tectonics, climate, earthquakes, volcanoes, weather, fires
- 6. Resource use: renewable and non-renewable
- 7. Energy: overview, current and total fossil fuels (coal/oil/natural gas),
- 8. Energy: nuclear, hydro, biomass, solar, and wind
- 9. Water resources, hydrologic cycle, supply and demand, coming scarcity
- 10. Mineral resources: use, reserves, how long will they last
- 11. Conservation: biodiversity loss, extinctions.
- 12. Land use: parks and preserves
- 13. Food and soil: agriculture, fertilizers, sustainability
- 14. Pollution, pesticides, water pollution, air pollution
- 15. Climate change and global warming
- 16. Hazardous wastes: dumps and toxics
- 17. Transportation: gasoline, electric, fuel cells, mass transit, bikes