

Appendix II Course Syllabi

Environmental Science 110

Fall Semester

MWF: 10:30 to 11:20 am

Instructor: Dr. H. Curtis Monger

Office: N 328 Skeen Hall, Phone 646-1910, email: cmonger@nmsu.edu

Hours: 1:00 to 2:00 pm MWF

Text: *Environmental Science a Global Concern*, (Eighth Edition) W.P. Cunningham, M.A. Cunningham, and B. Saigo. McGraw-Hill Higher Education, NY, NY

Course Objectives: This course will introduce you environmental science as a global Earth-systems science. The first third of the course will examine large-scale cosmologic, geologic, ecologic processes. The middle third will focus on small-scale physical, chemical, and biological processes. The final third of the course will concentrate on humans as a global biogeologic factor. Specific topics to be covered will include the following:

1. Planetary setting of environmental science
2. Natural cycles of climate change during geologic time
3. Links between climate and organisms

(Exam 1)

4. Matter and energy
5. Mineralogical properties of the Earth's surface
6. Cells: fundamental units of life

(Exam 2)

7. Global biogeochemical transfers by humans.
8. Changes in land cover and ecosystems resulting from human population growth
9. Cities: energy and matter inputs, transformations, and outputs

(Exam 3) and (Exam 4)

Grades will be based on the three best of four exams and homework assignments. The fourth exam is a comprehensive exam given during finals exam week. Exams will account for 80% of the grade and homework 20% of the grade. Letter grades will be

assigned base on the following percentage scale: A=90-100; B=80-89; C=70-79; D=60-69; F=0-59.

Environmental Science Laboratory 110L

Fall Semester

W or Th: 2:30 to 5 pm

Skeen Hall W122

Instructor: Dr. April L. Ulery

Office: Skeen Hall N340, 646-2219, aulery@nmsu.edu

Hours: MTF 1:30 to 2:30 or by appointment

Text: Laboratory materials will be provided in class or via email.

Grading: Quizzes will be given at the beginning of every lab over the material from the previous week and in preparation for that week's lab. Best 10 out of 13 quizzes will be averaged for 30% of your grade. Short reports will be required for most lab exercises and will be averaged for 35% of your grade. The remaining 35% will be from class participation and group projects.

Course Objectives: To illustrate the concepts of Environmental Science in an active learning environment including experiments, demonstrations, team projects, and field trips. To introduce field and laboratory techniques used in Environmental Science and Earth System Science. To help you improve your learning and critical thinking skills.

Laboratory Schedule

<u>Week</u>	<u>Title</u>
1	Introduction
2	Global Recycling (solar/earth/biological systems)
3	Introduction to the Hydro/Litho/Bio/Atmo/spheres
4	Hydrology and the Rio Grande Basin
5	Sampling and Analysis of the Rio Grande
6	Soil as a filter to improve water quality
7	Microbes Rule! Food and water safety
8	Soil Erosion by Wind and Water
9	Dust Collection and Analysis
10	Remote Sensing of Dust Movement using LandSat and NASA data
11	Energy: Fuel cells, efficiency, and environmental impact
12	Energy at a Global Scale
13	“What <i>is</i> Environmental Science?” (revisiting earlier conceptions)
14	Putting it all together: “What is the <i>real</i> impact of humans on the environment?”
15	<i>no class during last week.</i>