

## Environmental Science (EFB 120)

### THE GLOBAL ENVIRONMENT AND THE EVOLUTION OF HUMAN CULTURE ENERGY, ADAPTATION AND THE EXPLOITATION OF RESOURCES

**Instructor:** Mrs. Fischer

**Room:** 125

**Contact:** [fischers@chatham.k12.ny.us](mailto:fischers@chatham.k12.ny.us)

phone: 392-2400 x 1038

BOOKMARK these websites!

Websites: (for general information) <http://fischer-science.weebly.com>

## Welcome to the Global Environment!

*Environmental problems make headlines every day. How can we help to develop participatory citizens who understand the complex scientific and social issues behind the headlines, make informed decisions, and meet these environmental challenges? How can you help shape the environmental future for the 21st Century and beyond?*

The *Global Environment* will help you to gain the knowledge and tools to make informed decisions regarding the environment and the earth's future and to be able to understand the connections between such varied topics as pollution, deforestation, climate change, acid rain, soil depletion, economics, evolution, history and social justice. The course stresses a science based systems approach in evaluating problems and potential solutions as well as the critical role of energy in many of the environmental challenges facing the world.

The *Global Environment* emphasizes the strengths and utility of environmental science, a complex and multifaceted discipline of the natural and social sciences whose dimensions are exemplified by several unifying themes: (1) relationships among organisms and their environment (including atmosphere, land, and water), (2) population growth of humans, (3) human social systems, (4) sustainability of natural resources, and (5) urban ecosystems.

In addition, the *Global Environment* will give you a historical background to build upon. The same forces at work today, which define the current state of our world, have been at work for the earth's entire history. The course will help you to understand the role of these forces in the evolution of humankind and the development of human culture, thus giving you a context to understand the roots and complexities of today's environmental challenges.

The *Global Environment* deals with the "Big Questions" not from strictly economic, environmental, or biological approaches but from an integration of both the social and physical sciences. This interdisciplinary approach allows for a clearer view of reality that makes the *Global Environment* unlike any other environmental course. The varied topics are connected from an energy and systems perspective during every class and it is this integration that makes learning interesting and exciting and also makes the *Global Environment* unique.

Global Environmental Change is a result of:

#### (1) Biophysical Dimensions

- Hydrosphere
- Biosphere
- Atmosphere
- Lithosphere

#### (2) Sociocultural Dimensions

- Politics
- Economics
- Ethics

## I. Course Objectives:

Students will be able to...

1. Demonstrate the complexities of environmental problems where skills and knowledge from both the natural and social sciences are needed to meet these challenges.
2. Articulate the critical role of energy and resources in the evolution of the human and human culture.
3. Describe how humans and human culture have impacted various ecosystems.
4. Describe how hydrosphere, lithosphere, atmosphere, and biosphere interact to affect one another.
5. Understand the behavior of complex systems, effects caused by changes in one part of the system are hard to predict, often occurring at disparate times, scales, and locations.
6. Explain the biophysical components and determinants of human history.
7. List and explain as well as to develop one's own approaches to meeting environmental challenges.

## II. Grading:

Tests/Quizzes	20% (per quarter)
Homework	20% (per quarter)
Projects/Labs	60% (per quarter)
Midterm	5% (final grade)
Final	15% (final grade)

## Two Options: CHS Science Credit or UHS through SUNY ESF (3 credits)

- Students will be expected to complete all assignments on time. All work is due at the beginning of the class period. Tests and quizzes will be announced unless it is felt that students aren't properly prepared for class. At that point a pop quiz may be administered.
- Grades will be updated on SchoolTool on a weekly basis.

## III. Class Rules:

- Be respectful of your classmates and instructors.
- *Late assignments will not be accepted or may be accepted with a grade penalty! No extra credit!*
- ***Come to class prepared – readings done, ready to work, ready to go outside.***
- **No plagiarism or cheating!** Any student found guilty of either will receive no credit for the assignment and will be referred to Administration.

## IV. Class Materials

- **Textbook:** Cleveland, C. J. and R. Kaufmann. *Environmental Science*. (replacement cost is \$125)
- Notebook for class notes.
- Folder or binder to store worksheets, readings, etc.
- Pens/Pencils

## V. Extra Help

Students can receive extra help during any planning periods or by request before school. I will be available after school at least one day a week and more upon request. I understand that students are very busy with sports and other extracurricular activities but I am willing to work around their schedules to give them the help that they may need. I encourage any student who is confused about a topic to ask for help so that he/she can succeed in the class.

