

Syllabus

Brian Hanson

Lecture: 108 Memorial Hall, Monday Wednesday Friday, 12:20–1:10

Office Hours: 209 Pearson Hall
12:30–1:30 Tuesday, Wednesday 3:30–4:30, Friday 2:30–3:30
and by appointment

Email: hanson@udel.edu

Web: http://hanson.geog.udel.edu/~hanson/hanson/Intro_to_Environment.html
(see also Sakai site for this course)

William Goldman 205 Pearson Hall, wgoldman@udel.edu

Textbook: J. Withgott & M. Laposata, 2014. *Essential Environment: The Science behind the Stories*, 5th ed. Pearson

The goal of ENSC 101 is to provide a common introductory course for freshmen entering any of the concentrations of Environmental Science and Environmental Studies at UD. These majors span interests in the environment and its natural subsystems (atmospheric environment, geology, oceanography, ecology), the broad spectrum of challenges provided by both human and natural changes in the environment (atmospheric composition changes, land cover changes, natural resource availability), and solutions to these problems from both the technological approach (engineering) and social, political, and regulatory changes. Nearly all the courses taken for these majors (after this one) cover a single, relatively small aspect of knowledge needed to approach this diverse set of topics. This course is intended to provide a framework for tying all those other courses into a coherent field of knowledge.

The potential range of topics for this course covers everything about how the entire planet works, what can go wrong with human usage of the planet, and what we can or should do about what might go wrong. Covering that entire range in detail is clearly impossible and would miss the point of the course. To make the connections among the disparate topics apparent, we will tie nearly everything to a skeleton based around the understanding of global climate change, commonly known as the CO₂ or greenhouse-effect problem. We will use climate change as an example of a significant global problem for which a full understanding begins with fundamentals of science like conservation laws and mass cycles, has implications for most natural and human activities, including ecological and agricultural, systems, and creates economic and policy struggles that make satisfying solutions very difficult to construct. By the end, you will know more about global climate change, but it is more important that you also realize how inseparable the different aspects of environmental science can become.

This course is also aimed at incoming freshmen as a Freshman Year Experience course, we also cover some “introduction to college” topics regarding library research, paper writing, how scientists work, registration and course planning, study skills, and so on. Some of these will be on separate days for special topics, and some of these will be blended into discussions of the papers and tests for this course.

Class time

This will be primarily a lecture course, with plenty of room for interruption, questions, and discussions.

Assignments and Grades.

Three tests will be administered, tentatively the 6th and 11th weeks and during final examination week. These will include multiple-choice and short answers to make sure everyone is accumulating some basic knowledge and short essays to see that knowledge organized. Two very short papers will be assigned, due the middle and end of the course. More guidance about tests and papers will be provided as they approach. All five elements (three tests and two papers) will be equally weighted in determining 90% of the final grade. The remaining 10% will be awarded for completing a set of worksheets distributed on Sakai. Most of the worksheets are things for which you will receive full credit based on completion of the work, not on grading the quality of the work.

Schedule

A lecture topic schedule with tentative dates is available on the course web site. That schedule will be modified and updated as we go along, allowing for uncertainties in how long some topics take and the occasional hurricane closure. Test dates and paper due dates will be repeatedly announced in class and updated on the web site. Chapter references are from the textbook, and will be subject to change from the lists given. All tests will be preceded with substantial discussion of style and topics; all papers will have additional handouts discussing style and topics.

| Event, date | Topic |
|--|--|
| Test 1, October 21 | Natural science of the environment, framed around a study of climate change, Ch. 1, 2, 13, 14, 3, 4 |
| Test 2, November 13 | Natural and social responses to environmental change, especially related to energy and food. Ch. 14, 5, 6, 7 |
| Test 3, Finals Week | Human responses. Ch. 15, 16, 12 |
| Paper 1, October 26 | Natural science topics to be suggested. |
| Paper 2, December 11 | Socioeconomic or policy topics to be suggested. |
| Library visit 1, September 30, Meet in Morris Library room 114 | |
| Library visit 2, November 18 | |