Biology 111
Environmental Science
Fall 2009
T.R. Wade

"A mind, once stretched by a new idea, never regains its original dimensions."
Oliver Wendell Holmes

Environmental Science is an interdisciplinary study combining thoughts from many areas including biology, chemistry, geology, economics, politics, ethics, etc. According to G. Tyler Miller, Jr., the author of your textbook, it is a study of how the earth works, how we affect the earth's life-support systems (environment), and how we deal with environmental problems. In this course students begin with a study of natural ecological systems and principles in order to understand the interconnected complex workings of our world. Students then apply these ecological principles to local and global environmental problems as we study the human impact on the biosphere. Students will be confronted by new thoughts and ideas as we wrestle with various environmental issues and hopefully learn how to live more sustainably on this earth.

According to one environmental educator, the goals of environmental education are illustrated in several basic questions:

-What do I know about the place where I live?
-How am I connected to the earth and other living things?
- What is my responsibility as a human being?

Text: Environmental Science, Miller, 12th edition

Learnlink Class Conference: Be sure to add the icon to your desktop and check our conference regularly. I usually send an update on the readings and topics for the next weeks' lecture sometime on Friday.

Blackboard Website : Bio 111 also has a blackboard site that will be helpful to you for lecture, lab and research resources. You might even see yourself ☺ I'll let you know when it is available for use. From Oxford's home page type in: classes.emory.edu (Hint: do not type the www) Login with your OPUS user ID and password.

Lecture: Pierce 101, 10:00-11:15a.m. - Tuesday/Thursday

Proposed Lecture Schedule

Date	Topic	Readings
Aug. 27	Sense of Place/No child left inside	No Lab this day
Sept. 1	Tragedy of the Commons	(article by G. Hardin)
	Environmental Problems: Causes, Solutions and Sustainability	Chpt.1
3	Strategies: Eco-economics	p.405-414
	Lab 1: Science as a Way of Knowing	p.23-28

8	Ecosystems: Interactions and Connections	Chpt.3
10	Energy: Gotta have it!	p. 33-35
15	Ecological Succession/ Secondary Succession	p.115-117
17	Nutrient Cycles	Chpt. 3
22	Population Growth Rates and Predictions	p. 117-121
24	**Test I (Includes lecture and laboratory material.)**	
29	Human Population Dynamics and Controls	p. 124-137
Oct. 1	What is a species and how did they evolve?	P.63-71
6	Evidence for Evolution	notes only
8	Evolution, Extinction, Speciation and Biodiversity	Chpt.4&9
13	**Fall Break**	
15	Biodiversity: 8 Major Threats	9
20	Biodiversity: Conservation and Restoration	p.105-114 & Chpt. 9
22	**Test II (Includes lecture and laboratory material.)**	
27	Biodiversity: Ecosystem Approach	parts of Chpt.8
29	Water Resources	11
Nov.3	Water Conservation	
5	Everybody lives downstream of somebody	
10	Water: The Human Impact	11
	The Chattahoochee: a case in point	
12	Air Quality: Primary & Secondary Pollutants/Acid Deposition	15
17	Global Climate Change: the evidence	15
19	**TEST III (Includes lecture and laboratory material.)**	
24	Climate Change: Mitigation and Adaptation Efforts	
26	**Thanksgiving….enjoy the outside ☺**	
Dec. 1	Ozone Thinning	15
3	Air Quality Solutions	15
8	Energy: Choices for the future	13

FINAL EXAM – Wed. Dec 16, 2-5:00pm (Test 4 and Cumulative Section)

Fall 2009 Proposed Lab Schedule

Aug.	27	No Lab…first day of class
Sept.	3	Science as a Way of Knowing: Scientific Investigation
	10	In the Forest- Hearn Forest and Nature Trail
	17	Terrestrial Investigation: Oxhouse Science Center
	24	Rock Outcrop – Davison Arabia Mt. – DeKalb County
Oct.	1	Stream Study: Data collection
	8	Stream Study: Sorting, results and conclusions
	15	Introduction to Wetlands
	22	Wetland Investigation
	29	Stream/Wetland Protection: Water Reclamation
Nov.	5	Logging case study: Introduction and Methods
	12	Logging Case Study: Data, Results & Discussion
	19	Just how Smart is our Growth?
	26	**Thanksgiving Break**
	19	Wetland Mitigation/ Restoration: City of Covington
Dec.	3	TBA

Laboratory: Lab meets 2:30-5:30 Thursday afternoons in Pierce 101. There is no lab manual; handouts will be given for various labs. Check the blackboard site.
Lab schedule is subject to change based on any number of uncontrollable factors (the blooming of flowers, trees dropping their leaves, hurricane rains, etc.)

Writing Assignments (Class & Lab): Students will be submitting various types of writing including lab reports, critiques, position papers, etc.

Evaluation:

Tests	300 points
Writing Assignments (Class & Lab)	75-100 points
Final Exam	about 150 points
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*Total Points	525- 550 points

*Total points may vary based on possible changes in certain assignments over the semester. Grades are assigned on a plus-minus scale.

Office Hours: Wed./Fri. 9:00 a.m. – 11:30 a.m. or by appointment (4-8395) OR you can always just come look for me but remember I might be working in the labs or out in the greenhouse. Check with Ms. Budensiek before you give up and leave Pierce.

HONOR CODE: The Honor Code of Oxford College applies to all work submitted for credit in this course. All such work will be pledged to be yours and yours alone. This is the case when you place your name on any work (tests, writing assignments, lab reports, research papers, etc.) submitted. There will be times when you may work in a group to collect data but the writing assignments will be on your own after that point. If you have

any questions about how the honor code applies to any tests or assignments please ask me!!!

Absences: The absence policy is outlined in a separate handout. Unexcused absences or a failure to follow the procedures outlined in that handout will result in a reduction of your grade. Penalties are stiff so pay close attention to the policy. Additionally, tardiness is rude to other students and to the professor and will result in a decreased grade.

Cell Phones: They must be turned off if brought into class or lab. They must be left at the front of the classroom in your book-bag during tests.