Biology 111
Environmental Science
Spring 2010
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. I'll let you know when it is available for use. From Oxford's home page type in: classes.emory.edu (Do not type the www) Login with your OPUS user ID and password.

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

Proposed Lecture Schedule

Date		Topic	Readings
Jan.	14	Sustainability: What's it all about?	Chpt.1
	19	"Tragedy of the Commons" by Garrett Hardin	Chpt. 1
	21	Environmental Problems: Causes and Solutions	
	26	Eco-economics	Chpt. 18 (p.401-414)

	28	Ecosystems: Interactions and Connections	3
Feb.	2	Energy: Gotta have it!	p. 33-35 & Chpt. 3
	4	Food Chains, webs and nutrient cycles	
	9	Human Population Dynamics	7 (p.123-137)
	11	**Test I (Includes lecture and laboratory material.)**	
	16	Population Growth Rates and Predictions	7
	18	Evolution, speciation and extinction	4
	23	Biodiversity: Major Threats	9
	25	David Wagner: Biodiversity OS Event	
March	2	Biodiversity: Protection and Policies	9
	4	**Test II (Includes lecture and laboratory material.)**	
	9 & 11	**SPRING BREAK**	
	16	Biodiversity: Ecosystem Approach	8/9
	18	Biodiversity: Conservation and Restoration	8/9
March	22	Coal Country Film Williams Hall OS Event 7:00pm	
	23	Water Resources	11
	25	Everybody lives downstream of somebody	11
	30	Water: The Human Impact	11
April	1	The Chattahoochee: a case in point	11
	6	**TEST III (Includes lecture and laboratory material.)**	
	8	Power Point Workshop	
	13	Air Quality: Primary and Secondary Pollutants	15
	15	Acid Precipitation	15
	20	Ozone Thinning	15 (p.376-378)
	22	Global Climate Change	15 (p.360-375)
	29	Copenhagen and Climate Policy	

FINAL EXAM – Thurs. April 29, 9-12:00pm (Test 4 and Cumulative Section)

Laboratory: Lab meets 2:30-5:30 Thursday afternoons in Pierce 101. There is no lab manual; handouts will be given for various labs and then placed on Blackboard.

Proposed Lab Schedule

Jan.	21	Scientific Investigation – EXCEL- Pierce 125 Lab
	28	Terrestrial Investigation – Oxhouse Science Center
Feb.	4	Sustainability Projects- Proposals/Primary Sources, Pierce 206
	11	Logging Case Study: Methods- Pierce 101
	18	Logging Case Study: Data, Results & Discussion-Oxhouse
	25	Introduction to Wetlands- Pierce 101 and wetland tour
March	4	Wetland Investigation-GA Wildlife Federations
	11	Spring Break
	18	Stream Study: Data collection- In a local stream
	25	Stream Study: Sorting, results and conclusions- P125 and P101
April	1	Primary Succession on a Rock Outcrop – Davison Arabia Mt.
	8	Sustainability Projects- Time and Space for Groups to meet- P101
	15	Sustainability Project Symposium- Pierce 101
	24	TBA- Evaluations-Prepare for Exam

Lab schedule is subject to change based on any number of uncontrollable factors (the blooming of flowers, trees dropping their leaves, hurricane rains, etc.)

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

Evaluation:

Tests	300 points
Lab/Writing Assignments/Participation	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 handout. 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.