

Biology 111
Environmental Science
Spring 2006
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, 10th 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. You will use your opus user ID and password to log on.

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

Proposed Lecture Schedule

Date	Topic	Chapter
Jan 19	Science as a way of Knowing: Scientific Method	3-Intro. and 3-1
24	Tragedy of the Commons	1-4, 1-5 & 1-6
26	Sustainability, Natural capital, Ecosystem Services	1-intro, 1-2, 1-3, 1-8 & 2-5
31	Ecosystems: Structure and Function	4
Feb 2	Ecosystems: Energy Flow	3-7, 3-8, 4
7	Ecosystems: Biogeochemical Cycles	4
9	Nitrogen Phosphorus & Sulfur Cycles	4
	Envirenews 1	

	14	Human Population Dynamics	11
	16	Test I (Includes lecture and laboratory material.)	
	21	Population Growth Rates and Predictions	11
	23	What is a species? How did they evolve?	5
	28	Evidence for Evolution (Not in the book so take good notes☺)	
March	2	Biodiversity: Threats	18
		Debate 1	
	7	Endangered Ecosystems-Endangered Species	17/18
	9	Test 2 (Includes lecture and laboratory material.)	
	14	Spring Break	
	16	Spring Break	
	21	Water: Availability and Use	14
	23	The Chattahoochee: Sediment, Sewage & Pathogens	14
		Environews 2	
	28	The Chattahoochee: Heavy Metals & POPs	10/14
	30	Air Quality: How Bad Is It?	12
		Debate 2	
April	4	Global Climate Change/Ozone Thinning	13
	6	Solutions to Air Quality Issues	12/13
	11	Food Supply: Resources and Availability	16
	13	TEST 3 (Includes lecture and laboratory material.)	
	18	Food Supply: Agricultural Impact	16
	20	Power: Today's Issues	19
		Debate 3	
	25	Energy: Choices for the future	20
	27	Waste: Throw it Where?	15
		Environews 3	
May	2	NIMBY, NIABY and NOPE	15

FINAL EXAM – Fri., May 5, 2006 - 9:00-12:00 (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. Check the Blackboard site for further info on each lab.

Proposed Lab Schedule

Jan	19	First Week – no lab
	26	Scientific Investigation - EXCEL
Feb	2	Our Place- The Piedmont of GA- Oxhouse Science Center
	9	Terrestrial Investigation – Oxhouse Science Center
	16	Resources Workshop & Logging Case Study: Methods
	23	Logging Case Study: Data, Results & Conclusions
March	2	Stream Study: Data collection
	9	Stream Study: Sorting, Results and Conclusions
	16	Spring Break – No Labs
	23	Sustainable Development-The Center/Clark’s Grove
	30	Introduction to Wetlands
April	6	Wetland Investigation: Data, Results & Conclusions
	13	Rock Outcrop – Davison Arabia Mt. – DeKalb County
	20	Outcrop Investigation: Data, Results & Conclusions
	27	TBA

Lab schedule is subject to change based on any number of uncontrollable factors (the blooming of flowers, leaves budding, heavy spring rains, etc.)

Sophomore Writing: Biology 111, Environmental Science is a Writing Intensive course and counts as sophomore writing only if you have completed 30hrs. at Oxford College before you enroll in the class. Other regulations apply to transfer students (see p. 9 of the 2005-2006 Oxford Catalog). Students must complete the course with a C or better (not a C- or lower) to receive their writing credit.

Writing Assignments: Students will be submitting various types of writing including lab reports, critiques, position papers, etc. in addition to one major paper. Note below that writing assignments will account for about one forth of the final grade.

Evaluation:

Tests	300 points
Writing Assignments	150 points
Final Exam	150 points

*Total Points	600 points

*Total points may vary based on possible changes in certain assignments over the semester but the test will count for half the final grade and the exam and writing assignments will each count for a forth of the final grade. 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 scurrying around 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.