

ENVIRONMENTAL LIFE SCIENCE ABIO 106
Spring 2007

Instructor:	Dr. Andrew Dyer	Lecture:	MW 2:30-3:45
Office:	SBDG 101E	Credits:	4
Office hours:	By appointment	Lab:	Sec 001: 9:15-12:05, Th in SBDG 103 (Reinhart)
Phone:	(803) 641-3443		Sec 002: 12:15-2:55, Th in SBDG 103 (Dyer)
email:	andyd@usca.edu		

Required lecture text: Sustaining the Earth, 8th Edition, by G. Tyler Miller
Taking Sides, 12th Edition, by Thomas Easton

COURSE OBJECTIVES: The course will provide students with an understanding and appreciation of the complex interactions between man and the environment. The course will focus generally on natural resources and human population growth, and specifically on resource use/depletion/degradation, types of pollution, pollution reduction and prevention, and strategies for local and global sustainability.

METHODS OF PRESENTATION AND EVALUATION: Information will be presented through lectures along with appropriate visual aids. Traditional exams will be used to evaluate student progress in the class. These exams will include multiple choice, terms/definitions, and short answer. Students should bring a pencil and a long-form Scantron to each exam.

There will be several unannounced quizzes and in-class assignments during the semester. Students are expected to have reviewed the material from the previous lecture in preparation. These will be administered during the first 10 minutes of class, and **there will be no make-up opportunities** for absence or late arrival; however, the lowest quiz grade will be dropped at the end of the semester.

The student will be required to complete one written library research assignment. Full details will be handed out in class.

The final course grade will be based on the following:

4 Lecture exams @ 100 pts. ea.	400
1 Final exam	200
On-line and in-class quizzes / assignments	50
<i>Taking Sides</i> assignment	100
<u>Laboratory quizzes, reports, and participation</u>	<u>225</u>
	~1000 total

GRADING SCALE: A (90-100%), B (80-89), C (70-79), D (60-69), F (0-59).

The grades in this course and its components will not be curved.

ATTENDANCE POLICY: Students are expected to adhere to the University attendance policy as stated in the Student Handbook. The instructor may impose a penalty for absences in excess of 25% of regularly scheduled class meetings (lectures and labs) by assigning an "F" in the course. Absences, *neither excused nor unexcused*, absolve the student from meeting class assignments. Lecture exam dates are clearly stated in the syllabus, and all students are expected to take the exam at the regularly scheduled time. Make-up lecture exams will be considered only for a **documented, excusable** reason. If there is an illness or emergency, you are expected to contact the instructor immediately. Be prepared to show documentation (doctor's excuse, etc.). Failure to contact the instructor within 24 hours will forfeit any chance of making up the test.

Attending lecture and taking notes is the sole responsibility of the student. Under no circumstance will the instructor provide copies of lecture notes or slides for students.

CHANGES: The instructor reserves the right to make changes in the lecture or laboratory schedule, the number of quizzes and exams given, and the contents of each exam as deemed necessary.

LABORATORY ATTENDANCE: Because of their nature, **laboratory investigations cannot be made up.** Therefore, students must make every effort to attend laboratory sessions. If you miss a laboratory investigation, you will not be allowed to take the associated quizzes or turn in a lab report the following week even if you get the information from your lab partners. This also applies if you come in late, leave early, or do not participate fully. You cannot write a report on a laboratory investigation that you did not do.

ELECTRONIC DEVICES: Plan to be out of touch and to have your cell phone stored out of sight during lecture and lab time. This includes leaving the room to answer silent rings or using the phone for text messages. If you have reason to need to be in cell phone contact, let the instructor know.

PLAGIARISM: Any and all work turned in for credit is assumed to be your work and the product of your brain and your brain alone. Work can be considered plagiarism even if it is not exact copying; if you rephrase someone else's work or merely change a few words, it is still plagiarism. If you and a lab partner work together and turn in work that is substantially the same, it is plagiarism. If the instructor cannot tell who produced a piece of work, no credit will be assigned.

If the instructor finds any work that is too similar to other work, either in the class or out of the class, the student(s) involved will be summoned to his office, a zero will be given to the assignment, and a formal letter will be sent to the student and to the Executive Vice Chancellor for Academic Affairs documenting the situation. If the student(s) wishes to appeal, there is a process detailed in the USCA Student Handbook. There is no latitude given because there is no excuse for plagiarism.

COMPUTER USE AND EMAIL: All laboratory reports will require the use of a computer. You must be able to log on to the USCA computer system in order to accomplish these laboratory exercises. If you do not know how to sign on to the USCA computer system, you should contact the CSD HELP desk as soon as possible.

All official email communications, including class announcements, are made to USCA email accounts. Students should check their USCA email account on a regular basis and use this account for communication with the instructor. In order to protect the privacy of the student, the instructor will not reply to emails sent from non-USCA accounts (e.g., Hotmail, Yahoo, etc.). Also, because of federal law, no grades or scores can be communicated by phone or email; you must come to the instructor's office.

DISABILITY STATEMENT: If you have a physical, psychological, and/or learning disability which might affect your performance in this class, please contact the Office of Disability Services, 126A B&E, (803) 641-3609, as soon as possible. The Disability Services Office will determine appropriate accommodations based on medical documentation.

Tentative Lecture Schedule for ABIO 106, Spring 2008

Week	Date	Topic	Chapter
1	Jan 14	Introduction	1
1	Jan 16	Environmental Science and Sustainability	1
2	Jan 23	Energy and Ecosystems	2
2	Jan 28	Energy and Ecosystems	2
3	Jan 30	Terrestrial Ecosystems	3
3	Feb 4	Aquatic Ecosystems	3
4	Feb 6	Exam 1 Chapters 1-3	
5	Feb 11	Species Interaction and Succession	4
5	Feb 13	Population Dynamics	4
6	Feb 18	Human Populations: Size and Distribution	5
6	Feb 20	Urbanization	5
7	Feb 25	Biodiversity and Species	6 & 7
7	Feb 27	Exam 2: Chapters 4-7	
8	Mar 3	Energy	10
8	Mar 5	Sustainable Energy Solutions	10
	Mar 10-14	(Spring Break)	
9	Mar 17	Soil and Soil Conservation	8
9	Mar 19	Food Production and Pesticides	8
10	Mar 24	Toxicology and Risk	11
10	Mar 26	Biohazards and Risk Assessment	11
11	Mar 31	Exam 3: Chapters 8, 10, 11	
11	Apr 2	Hazardous Pollutants	
12	Apr 7	Air Pollution	12
12	Apr 9	Climate Change and Ozone Depletion	12
13	Apr 13	Water Resources	9
13	Apr 15	Water Pollution	9
14	Apr 20	Exam 4: Chapters 9, 12	
14	Apr 22	Solid and Hazardous Waste	13
15	Apr 27	Environmental Economics	14
15	Apr 29	And Politics	14
		Comprehensive Final Exam:	

Tentative Laboratory Schedule for BIO 106, Spring 2008

Date	Topic	Taking Sides*
Jan. 17	Video	
Jan. 24	Your Ecological Footprint - Investigation #1	
Jan. 31	Ecology - Investigation #2	Issue 2, 3
Feb. 6	quiz and in-class lab report for #2	Issue 4, 5
Feb. 14	Water Quality - Investigation #3	Issue 6, 7
Feb. 21	quiz and in-class lab report for #3	Issue 8, 9
Feb. 28	Biodiversity - Investigation #4	Issue 10, 12
Mar. 6	Biodiversity data collection	Issue 13, 14
Mar. 13	(Spring Break)	
Mar. 20	quiz and in-class lab report for #4	Issue 16, 17
Mar. 27	Soil - Investigation # 5	Issue 20, 21
Apr. 3	quiz and in-class lab report for #5	
Apr. 10	Pesticides - Investigation #6	
Apr. 16	quiz and in-class lab report for #6	
Apr. 23	Oral reports from Taking Sides	
Apr. 30	TBA	

***Taking Sides reports** will be in two parts. First, each pair of students will present the two sides of one of the issues in the first part of lab each week. This will take no more than 5 minutes and then we will have a few minutes for discussion. After that, each issue must be researched to find out what the current presidential candidates' positions are (and their parties'). On April 21, each pair of students will present a brief presentation, (probably Powerpoint) on the issue and the candidates' positions. This will be followed by a brief Q&A with the class. The final portion of this assignment is a one-page summary of the topic due on the last lab day.

Taking Sides: Clashing Views on Environmental Issues

Potential issues to be covered (numbers coincide with the book)

1. Is the Precautionary Principle a sound basis for international policy?
2. Is sustainable development compatible with human welfare?
3. Should a price be put on the goods and services provided by the World's ecosystems?
4. Is biodiversity overprotected?
5. Should environmental policy attempt to cure environmental racism?
6. Can pollution rights trading effectively control environmental problems?
7. Should the military be exempt from environmental regulations?
8. Should the Arctic National Wildlife Refuge be opened to oil drilling?
9. Should the US be doing more to combat global warming?
10. Will hydrogen end our fossil-fuel addiction?
12. Is it time to revive nuclear power?
13. Do falling birth rates pose a threat to human welfare?
14. Is genetic engineering the answer to hunger?
16. Should DDT be banned worldwide?
17. Do environmental hormone mimics pose a potentially serious health threat?
20. Is a large-scale shift to organic farming the best way to increase world food supply?
21. Should the Endangered Species Act be strengthened?

Choose three of the above topics and be prepared to sign up for one of them.

1. You and a partner will give a brief overview on the two sides of the argument, one Pro and one Con, for the class at the beginning of an upcoming lab and be prepared to answer questions.
2. You and your partner will make a 5 minute Powerpoint presentation to the class during lab at the end of the semester presenting both sides of the argument and with supporting information.
3. You will research all the presidential candidates' positions on your particular topic and write a one-page report due at the end of the semester.

Research on the project is expected to be from the library and online. Wikipedia is not acceptable as a resource, but links found in Wikipedia might be. Information based on opinion is not acceptable. Resources must be published in reputable newspapers or journals, but not blogs or other uncited and unsubstantiated sources.

To obtain presidential candidates' positions on these topics, you will very likely need to make phone calls to their field offices. Few of these topics are hot-button issues for voters because of the general lack of information available.

The three components of this project are equal to an exam grade (10, 40, and 50 points respectively)