

# **SYLLABUS**

## **BIOLOGY 3308 -- Global Ecology**

**Instructor:** Dr. Walter Rast, Program Director, Aquatic Resources, Department of Biology

**Office Location & Hours:** Room 122, Freeman Aquatic Biology (Freeman Bldg. is across the street from Joe's Crab Shack on Sessom Road]; Mon/Tue/Wed/Thur/Fri - 10:00-11:00 am, or by appointment.

**Office Phone:** (512) 245-2284      **e-mail:** wr10@txstate.edu

**Course Objectives:** BIO 3308 (Global Ecology) is an introduction to global, regional and local environmental changes related to the interrelations between humanity and the natural environment. Emphasis is placed on interactions between different biotic (including humans) and abiotic components, associated environmental problems and the root causes of these problems, and their potential impacts on the sustainable use of natural ecosystems and their resources. Although relevant scientific principles are reviewed, a fundamental understanding of biology at the level of freshman biology is assumed for students taking this course.

*In offering this course, I wish to emphasize all of you are attending Texas State University to obtain both a college degree AND an education.* Hopefully, you will leave this university with both entities! Accordingly, I encourage all students to participate **actively** in class discussion. Please feel free to question or challenge anything I present in the class, without fear that you'll be dumped on because of it! And **PLEASE ASK QUESTIONS** if you're unclear or confused about anything covered in this course. There is no such thing in my book as a "stupid question." Indeed, the stupid thing is not to ask a question when you don't know the answer (and my past experience suggests that many of your classmates will be happy that you did it!).

**Course Textbook:** *Environmental Science – A Study of Interrelationships*, 9<sup>th</sup> Ed., by E.D. Enger & B.F. Smith, McGraw Hill Publishers, ISBN 0-07-244000-7

**Course Grade:** A student's grade in Biology 3308 will be determined as follows:

<u>Item</u>	<u>Percent of final grade</u>
Mid-term exam	40
Final exam	40
Student Paper	10
In-class quizzes	<u>10</u>
TOTAL	100

For the mid-term and final exams, students are responsible for all material in the text, as well as any other material covered in class or as class assignments. Grades will be assigned on the scale of <60 = F, 60-69 = D, 70-79 = C, 80-89 = B & 90-100 = A. Any grade curves will be determined at the end of the semester, based on my analysis of the statistical characteristics of your cumulative class grades. **Please note there will be no extra credit assignments for this class.**

A student missing either the mid-term or final exam is expected to provide valid documentation for having missed it. Students needing to take a makeup exam must contact me and schedule a time (preferably during my office hours) in which to take the makeup -- I will not chase you down to make up an exam. Any student who has not taken both the mid-term and final exam prior to the time the final course grade is due to the Registrar's Office will receive an incomplete ("I") grade. This grade will automatically change to an "F" if the student does not make it up by the end of the following semester.

**All students are advised to take the mid-term and final exams as scheduled.** Because I will have already utilized a number of questions in the scheduled exams, and will likely not use them again in a make-up exam, the latter will necessarily contain items not included in the scheduled exams. Any in-class quizzes (pop quizzes) will be given at the discretion of the instructor. Please note that any student found cheating in this course will be disciplined by the Texas State University Student Justice Division.

**Class Absences:** Because class attendance is important for any class, absences can result in grade points being lost. The Biology Department policy is that, upon accumulating nine (9) hours of absence in any Biology course, a student may receive a grade of “F” in the course. For Tues-Thurs classes, this translates into 6 classes. It is **your** responsibility to keep track of your absences.

**Classroom Rules:** You are now upperclassmen or graduate students and common courtesy is expected from all students taking this course. Talking during lectures or other distracting behavior is not acceptable behavior. **Also unless someone is calling you during class because they want to speak with me, please ensure your cell phones and pagers are turned off during class!**

There will be no tobacco use in the classroom. Any drinks or drinking water should be in a closed container. Snacks are available from vending machines in the hall, and students are requested to pick up any paper or other trash from around your seat before leaving the classroom.

**Course Outline:** The course comprises 28 individual class periods of 1-1/4 hours/class. Although subject to change to reflect current events and/or significant activities, the class topics will be covered in the following general order:

<b>Lecture</b>	<b>Topic</b>	<b>Relevant Text Chapter</b>
1	Environment Science & Interrelated Nature of Environmental Problems	1
2	Scientific Principles: Matter, Energy & Environment	4
3	Ecological Concepts	5
4	Ecological Concepts (cont'd)	5
5	Ecosystems & Communities	6
6	Ecosystems & Communities (cont'd)	6
7	Environmental Ethics	2
8	Risk Assessment & Management	3
9	Human Populations and Growth	7
10	Human Population & Environmental Impacts	8 & 12
11	Soil: Its Use & Environmental Implications	14
12	Water Resources & Ecosystems	16
13	Water Pollution & Management	16
14	MID-TERM EXAM	--
15	Agriculture, Food Production & Pest Management	15
16	Agricultural Practices & Environmental Degradation	15
17	Urbanization & Environmental Implications	13
18	Other Land Uses & Environmental Implications	--
19	Solid Waste Management & Disposal	18
20	Hazardous Chemicals	19
21	Energy Use	9
22	Energy Sources & Environmental Implications	10 & 11
23	Air Quality and Pollution	17
24	Global Environmental Activities	--
25	Environmental Policy & our Global Future	20
26	Other Environmental Issues	--
27	Environmental Summary	--
28	FINAL EXAM	--