ENVIRONMENTAL SCIENCE 101: MATTER, ENERGY AND ENVIRONMENT

Cedar Crest College

Spring 2009

OFFICE: Miller #4

OFFICE HOURS: Posted on Office Door

The instructor will be glad to answer any questions or discuss your concerns during office hours or at ANY other time in which he does not have a previously scheduled commitment.

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MEETING TIMES: Monday – 7:00 – 9:30 PM

TEXT: Enger, E.D. and B.F. Smith, **Environmental Science: A Study of Interrelationships,** 11th Edition. McGraw Hill. Current news articles for discussion will be provided in class.

READINGS: You are expected to read the required readings before each class session.

COURSE DESCRIPTION: Lecture: 3 Credits

This course for non-science majors considers the interrelationships between chemistry and the environment occurring in the world around us. It provides an overview of air quality, energy use, water quality, and some uses of chemicals in modern society.

COURSE OBJECTIVES:

1. To develop an understanding of the inter-related issues of environmental systems and resource exploitation.
2. Consideration of the role of environmental ethics and risk based decision making in comparing environment use alternatives.
3. Provision of a background for a scientifically based understanding of the environmental and societal impact of resource exploitation through energy development, air and water quality, and food production. This will help the student to make informed and responsible decisions in his or her "stewardship of the environment."

COURSE OUTCOMES:

Students will develop an ability to identify potential environmental and societal impacts of resource use. Students will enhance their ability to evaluate the environmental and societal costs and benefits of policy decisions by increasing their understanding of the scientific basis of the expected costs or benefits.

ASSESSMENT:

Students will complete 5 classroom exams, 7 homework reading assignments, two semester topical papers and one final exam. They will also participate in critical discussion of current environmental topics.

Grading System:

The grade will be based upon performance with respect to the following items: 3 lecture exams, 1 takehome, 1 topical paper, class participation, and the final exam.

The point totals for each exam, as well as the material covered in each, is as follows:

Exam #1		175 points	-	Chapters 1-3
Exam #2	(take home)	225 points	-	Chapter 4 & Toxicology
Exam #3		200 points	-	Chapters 5 - 9
Exam #4		275 points	-	Chapters 10,16,15
Final Exam	Part I	300 points	-	Chapters 12,13,14, 18- 19
	Part II	200 points	-	Comprehensive

If necessary, the grades for individual exams may be curved in the interests of the students based upon the instructor's discretion. The final exam, will cover the material from the last exam as well as the highlights of the earlier chapters. A review sheet will be provided.

Finally, the student will be expected to write one topical paper. The topical paper will involve an inter-regional or global environmental of the student's choice as approved by the instructor. The paper will cover how the various principles discussed in the course apply to the selected topic. This paper will be worth 140 points and will be **due 12/06** by the end of class.

The maximum possible point source from the exams, the homework and the topical paper is 2200 points. Therefore, each student's final grade will be determined by dividing his total points by 22.

The final letter grade will them be awarded according to the following scale:

93-100 -	A	77-79.9 -	C+	Below 60	-	F
90-92.9 -	A-	73-76.9 -	C			
87-89.9 -	B+	70-72.9 -	C-			
83-86.9 -	B	67-69.9 -	D+			
80-82.9 -	B-	60-66.9 -	D			

The instructor does reserve the right to lower the minimum point requirements for the letter grades if it is in the benefit of the class as a whole.

POLICIES:

Classroom Attendance:
Classroom attendance will be taken on a regular basis. Regular attendance is expected and necessary in order to participate in the discussion. Students must not leave the class early because it is a disruption to the other students as well as the professor. Points will be deducted from the classroom participation accordingly. Students are responsible for all assignments given in class. Students are required to attend class on all testing days. See the testing schedule summary below. If the student has some other important responsibility which prevents her from attending on a testing day, she must inform the instructor in advance and make arrangements for an alternate testing time. If this policy is followed, a make-up test will be given. If an exam is missed with no advance notice, a make-up test may be given at the discretion of the instructor; however, in such instances, a valid written excuse is required. As soon as possible the student should notify the instructor via email as to the reason of the absence. Examples of valid excuses include:

1. from a doctor or the school nurse in case of illness.
2. from the Dean of Students' Office in case of family emergency.
3. from the student giving a satisfactory and reasonable explanation of why the test

was missed.

Arrangements must be made by the end of the class following the missed exam. If these procedures are not followed, no make-up will be given and the student will receive a zero for the missed exam.

Late Turn-In Assignments:
If an assignment is turned in late without the prior approval of the instructor, the instructor reserves the right to automatically deduct up to 10% of the original grade for every class period the assignment is late. The instructor may waive the automatic deduction should the student have a valid reason such as listed in the prior section.

Disabilities:
Students with documented disabilities who may need academic accommodations should discuss these needs with their professors during the first two weeks of class. Students with disabilities who wish to request accommodations should contact the Advising Center.

Honor Code and Plagiarism Policy:
The instructor expects each student to abide by the College's honor code. The honor code applies to all activities associated with this course. I fully support the Cedar Crest College Honor Code and the Classroom Protocol code as stated in the "Customs Book."

The following statement concerning Classroom Protocol is supported by Cedar Crest College Faculty and Administration:

"Appropriate classroom behavior is implicit in the Cedar Crest College Honor Code. Such behavior is defined and guided by complete protection for the rights of all students and faculty to a courteous, respectful classroom environment. That environment is free from distractions such as late arrivals, early departures, inappropriate conversations, and any other behaviors that might disrupt instruction and/or compromise students' access to their Cedar Crest College education."

Please be sure to turn off all cell phones and pagers during class times.

Plagiarism is unacceptable in this course. Penalties for shared work will range from a sharing of the credit (i.e., dividing the grade among the participants) to no credit (i.e., a zero being assigned for that grade item). Offenses may also be referred to the Honor Board.

TENTATIVE CHRONOLOGICAL PLAN FOR COURSE Spring 2009		
Date	Subject	Read Chapter
Week 1	Course Introduction Environmental Relations Environmental Ethics Risk & Cost Elements of Decision Making	0 1 2 3
Week 2	Risk & Cost Elements of Decision Making	3
	Inter-Related Scientific Principles	4 & Instructor Handout
Week 3	Inter-Related Scientific Principles (cont.) ***Exam # 1 (Chapters 1-3)***	4 & Instructor Handout
Week4	Introduction to Toxicology	Instructor Handout
	Interactions Environment & Organisms	5
Week 5	Kinds of Ecosystems & Communities	6
	Population Principles ***Exam #2 (Chapter 4 & Intro. To Toxicology)Take home***	7
Week 6	Energy & Civilization Patterns of Consumption	8
	Exam #2 due	
Week 7	Energy Principles & Sources + Nuclear Energy	9 & 10
	Air Quality Issues	16
Week 8	Air Quality Issues (cont.)	16
Week 9	Water Management ***Exam # 3 (Chapters 5 - 9);***	15
Week 10	Biodiversity & Human Impact on Resources & Ecosystems	11
	Land Use planning	12
Week 11	Soil and its Uses	13
	Exam# 4 (chapters 10,16,15)	
Week 12	Agricultural Methods & Pest Management	14
	Solid Waste Management & Disposal	17
TBD	Regulating Hazardous Wastes	18
	Environmental Policy and Decision Making	19
TBD	***Final Exam Part I(Chapters 12,13,14, 18- 19)/ Part II (Comprehensive)***	