POLICIES
EEOS 120 (Fall, 2011)
Introduction to Environmental, Earth and Ocean Sciences

Instructor: Bob Chen, Environmental, Earth and Ocean Sciences
Course #: 2859
Office: S-1-065; (617) 287-7491; bob.chen@umb.edu
Lectures:
Time: TuTh 11:00 am-12:15 pm
Room: Science-2-03A (Lipke Large Science Auditorium)
3 credits
Office Hours: TuTh 12:15-1:15 pm. You may also stop in any time or call or e-mail for an appointment.
Text: Miller-Living in the Environment, 17th edition, Global Environment Watch
Other Requirements—Spiral Notebook, I-Clickers (more info to follow)
Prerequisites: none
Co-requisite: EEOS 121--Introduction to Environmental, Earth and Ocean Sciences-Lab (required for EEOS majors and minors)
Teaching Assistant: Keith Cialino (keith.cialino001@umb.edu)
Office Hours, TuTh??? 2-3 pm, Science-1-012 (EEOS Main Office)

Introduction: This handout contains a statement of all policies that I will follow as well as a syllabus and other information. You will be responsible for knowing and observing its contents. You are therefore urged to *READ THIS HANDOUT NOW* and *KEEP IT*. If you have any questions about this handout or any other aspect about this course, please *ASK* about it in class or office hours.

Description: This course offers a broad overview of physical, chemical, biological, geological, principles of environmental sciences, and serves as a core course for EEOS majors. Examples will focus on linked watershed and coastal marine systems. The student will be introduced to natural processes and interactions in the atmosphere, in the ocean, and on land. There is a focus on biogeochemical cycling of elements as well as changes of these natural cycles with time, especially with recent anthropogenic effects. Topics include plate tectonics, global climate change, ozone depletion, water pollution, oceanography, ecosystem health, and natural resources.

Course Objectives: This course serves as a pre-requisite for many of the advanced EEOS 200, 300, and 400 level courses as well as a core requirement for the EEOS major. It also fulfills the General Education requirement in the Natural Sciences. The goal of this course is to offer students the opportunity to learn about their environment through direct and indirect observations, formation of hypotheses, and experimental methods. Lectures will be supplemented with a 1 credit lab where students will experience hands-on exercises both independently and in groups. Students will also gain an understanding of the evolution of scientific knowledge, the role science plays in society, and how technology can help answer scientific questions.

Grading:
The course grade will be determined from two midterm exams (20% each) and a comprehensive final (30%). Exams will consist of critical thinking problems, stressing skills and knowledge that

you should have to live in today's society. In addition, in-class participation is mandatory. Your consistent attendance, active learning, and peer instruction are critical to your learning of environmental science and will be rewarded. One and five minute in-class and take home problems and writing exercises will count for 30% of your grade. Again, your grade will reflect your consistent, individual and group learning rather than simply your performance on one or two specific exam days.

Extra Credit:
An optional 5-10 page paper on some aspect of environmental science of interest to the student may be written to increase the course grade. If well-written, the final grade may increase by as much as two-thirds of a letter grade (for example from C to B-). The instructor will be available to suggest topics and provide direction for this project. Keith Cialino or Bob Chen must approve your paper topic by Nov 22. Papers are due Dec 13, the last day of classes.

Exams: There will be two Mid-Term Exams (20% each) and a Final Exam (30%). A sample of exam questions is attached. Exams are designed for you to demonstrate your skills at solving environmental science problems rather than memorizing many bits of trivia. They will be posted on the web the same day that they are handed out in class.

Midterm: The midterms will be comprised of three parts. *Part I*: Individually, you will be given 5 days to answer 5 critical thinking questions (Mid-term handed out Thursday, Sept 29th to be turned in Thursday, October 6th, @11:00) to solve the 5 questions. You may use any information (internet, text book, library, **BUT** no human resources—you may not speak to anyone about these questions) and as much time as you need within those 5 days to answer these questions. Material for exams will be drawn mainly from lecture material, the text, study lists, and the world around you. *Part II*: On Tuesday, October 6th, you will select your own group of 3-4 and will work together on the questions based on those that you answered individually. Collaboratively, each group will complete the follow up questions (30-45 min). All group members must participate in the formation of the answers, agree with the final answers, and will sign a statement to that effect. If a group member does not participate, other group members may include an estimate of what fraction of participation each group member had. There will be an additional short answer (individual) part 3 (20 min). Exam grades will be composed of 50% take home, 30% group response, and 20% in class individual. Midterm 2 will be handed out Tuesday, November 3rd.

Final: Parts I and II while be similar to the midterm. Part I will be handed out on Dec 9th and will be due the day of the final. Part II will take place the day of the final (to be scheduled) for the first 90 minutes. In addition, on the day of the final exam you will be given additional multiple choice, multiple/multiple choice and short answer questions (Part III--see Sample Exam Handout) the day of the final (second 90 min). Part III is closed book, but a calculator will be allowed although not necessary.

Missed Exams: Because of the nature of these exams, there will be no make-ups exams. A missed exam is graded as ZERO. Part I of the exam will be posted on the course web site the same day that it is handed out in class. If you cannot participate in Part II for any reason, you must arrange to take Part II before the date of the midterm, and you will be graded on your individual response. Under exceptional circumstances, and if the instructor is notified well in advance of the exam, the instructor may make individual arrangements.

Reading: The textbook is an incredibly complete reference for the course, the exams, and future investigations of environmental science. You should use this resource consistently. It is not recommended that you read chapters straight through at a single sitting, however. Please skim the assigned chapters before the lecture to which they are assigned (except for the first class meeting). This should take about 15 minutes. You should come to class with 1 or 2 questions regarding the reading, current events, or the world around you as they pertain to the daily topics. These questions will serve as the basis for the discussion that day, and will give you control of what you learn. Besides the textbook (Miller: Living in the Environment, 17th Edition, Cengage), Global Environment Watch, various newspaper articles and other journal articles may be assigned.

Research: You are encouraged to explore the vast amount of information available about environmental problems and solutions. Please use websites, journal articles, newspapers, discussions with friends and family, etc to explore environmental topics that interest you. You are welcome to share your findings with the rest of the class. To focus some of your efforts, the Global Environmental Watch has been supplied to give some connect you to some of the available resources. You may use this resource (and any other non human resource) on the take-home part of your exams.

Notebook: You should maintain a spiral notebook (not a 3-ring binder) for EEOS 120. I would recommend a 3-hole variety that you can place inside a 3-ring binder to keep all class materials organized. In this notebook, you can take class notes, but more importantly, write down questions from the reading for discussion at the beginning of class. Also, other thoughts, questions, reflections that you may have at any time. Please date each entry. This notebook will serve as a record of your progress in this class as well as help you organize both in-class as well as out-of-class work. The notebook may be collected in the middle of the semester as well as at the end of the course and graded for consistency of effort.

Attendance: Attendance will be taken at each lecture. Attendance will be reflected in the 30% of your grade based on class-participation. It has been my experience that grades are directly correlated with active learning in class. You will be held responsible for all material covered in class including what was written, shown, or discussed and all administrative changes to the class.

Lectures will start promptly at 11:33 and will end at 12:15. It is requested that you arrive on time and not leave early. If there are unusual circumstances that require a deviation to these times, please make every effort to avoid interrupting the class. Cell phones are to be turned OFF. Disruptive behavior of any kind is grounds for dismissal from that class period.

I-Clickers: You are responsible for bringing your I-clicker to class each day. Attendance will be taken and questions will be asked. If you are present participating, that will be reflected in the 30% of your grade based on class-participation.

Web Site: The course web site: The Blackboard Learning System, Vista
will contain information about course material, assignments, activities and an attempt will be made to update this after each class period.

Student Responsibilities: You are required to attend lectures and discussion sections and come to class willing and ready to engage in learning. This may take the form of taking notes, discussing

topics, writing thoughts on paper, or simply thinking about environmental sciences. You are also required to read assignments on time and take the exams.

Instructor's Responsibilities: I will be available for answering any questions that you may have in or out of class regarding the content or administrative aspects of this course. You can catch me at office hours, e-mail, or on the phone. I will be prepared for class and show up on time. I will also be open to any suggestions that you may have for making class a better environment for learning. Suggestions can be made in class, in private or on the mid-semester evaluation.

Honesty: You are taking this course to learn as much as you can about science, specifically environmental science. You can learn from lecture, section, office hours, discussions with others, playing with ideas, or observations of the environment in which we live. An effective method of learning is discussions with peers, in pairs, small groups or large groups. However, you will be graded on the content and skills that you have taken in, digested and are able to present as your own. Material that is not internalized (that is understood in some framework of your own or your peer's lives) is not learned and should not be presented as such on exams or papers. Credit for other people's ideas should be given where appropriate. You may not consult any human resource for answering Part I of either exam. You may not directly quote any resource (internet, book, individual) without " "s and a proper citation on any exam (Part I or II) or written assignment. Copying from the book, the internet or others on a writing assignment or an exam (or representing others words, sentences, or ideas as your own) will not be allowed and may result in removal from the class or University. Knowledgeably allowing someone else to copy your work and represent it as their own is also grounds for dismissal from the course or the University. We have given "0"s or dismissed students from this course in the past but prefer that everyone helps create a proper learning environment.