

Chemistry 205
Environmental Chemistry
Spring 2008

Instructor: Professor Stephen Dunham
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Lecture: M, W, F 9:10-10:00, 207 Collier
Problem T 9:10-10:00, 207 Collier
Session:

Lab: F 12:45-3:45, 207 Collier

Office Hrs: Announced weekly and by appointment. Feel free to stop by my office anytime for drop-in questions. If I am not available, we will schedule a time to meet.

Required Materials:

Text: Environmental Chemistry, 3rd Edition by Colin Baird & Michael Cann (2005), W.H. Freeman.

Scientific Calculator: Must be able to calculate logs

Black Board Web Site: <http://blackboard.moravian.edu/>

You must enroll in the Chemistry 205 blackboard site.

- Throughout the semester, all handouts will be posted to the course blackboard page.

Lab Goggles: Safety glasses will be provided. They must be worn at all times in the laboratory!

Course Goals:

- Develop principles, theories, and methods learned in General Chemistry to address chemical questions specific to the atmosphere, hydrosphere, and biosphere.
- Obtain hands on experience with instrumental and analytical techniques
- Learn to critical review scientific studies of the environment
- Prepare and present in-depth literature study on a specialized topic in Environmental Chemistry

Attendance: This course requires your participation! The college policy on attendance can be found at <http://www.moravian.edu/studentLife/handbook/academic.htm>. If you anticipate an unavoidable absence, please notify me ASAP before you are absent.

Academic Honesty: Please be familiar with the college policy on academic honesty (<http://www.moravian.edu/studentLife/handbook/academic2.htm>). Because this course involves small group learning activities, each student is encouraged to exchange and share information with classmates. However, any work submitted in your name is to be your work alone.

Learning Differences: Students should contact the Office of Learning Services for disclosure of a learning difference and to request appropriate amendments to this course.

Grading: You are not in competition with anyone else in this class. Your grade will be determined only by the percentage of the total points you achieve. In the event that the class average on any graded activity falls below 75%, that score will be curved so that the class average is 75%.

Percentage Based Grading Scale			
97-100	A !	73-76	C
93-96	A	70-72	C-
90-92	A-	67-69	D+
87-89	B+	63-66	D
83-86	B	60-62	D-
80-82	B-	< 60	F
77-79	C+		

There are a total of 850 pts that will be factored into your final grade in this course. All points count the same amount.

Three Exams	450 pts
10-Assignments	150 pts
10-Labs	200 pts
1-Presentation and paper	50 pts
<u>Total</u>	<u>850 pts</u>

Exams: Two in-class and one final (150 pts each).

Problem Sets & Assignments: These will be assigned throughout the semester and are due one week after being assigned (12 total, 15pts each). The lowest two scores will be dropped at the end of the semester.

Laboratory: Each lab session will have a short write-up submitted for grading (12 total, 20pts each). These will be due at the beginning of the following weeks lab period. The lowest two scores will be dropped at the end of the semester.

Paper & Presentation: Each student will prepare a paper (5-7 pages) and a (10-15 min) class presentation summarizing a recent environmental news event. See: http://pubs.acs.org/journals/esthag/index_news.html for a list of recent environmental news stories in ES&T.

Makeup Quizzes, Labs, and Exams: Missed labs will be counted as one of the “dropped” scores. You are responsible for understanding the content of the material covered during a missed lab. Makeup exams will be given at the discretion of the instructor for absences that have been documented by the Dean of Students Office and/or a health professional.

Class Etiquette:

- Turn off or silence cell phones! NO-text messaging during class
- Do not record or take pictures of classmates or instructors without their permission

Email Etiquette:

Although email may seem like an instantaneous form of communication, it is not. Just because you sent me an email, does not mean that I have
1) read it, 2) understood it, and/or 3) approved it.

- I will reply individually, or as a class response to all email received.
- Assume that email sent between the hours of 10 PM and 9AM has NOT been read

Pace of the Course: The schedule below is a guideline for the course coverage this semester. I will update the reading list for each week.

Date	Anticipated Schedule
Jan 14	CH 1 Stratospheric Chemistry
Jan 21	CH 2 Ground Level Air Pollution
Jan 28	CH 3 Detailed Chemistry of Atmosphere
Feb 4	CH 4 Green House Effect
Feb 11	CH 5 Climate Change Exam 1
Feb 18	CH 6 Alternative Fuels
Feb 25	CH 7 Pesticides
Mar 3	SPRING BREAK
Mar 10	CH 8 Nonpesticide Toxic Organic Compounds
Mar 17	CH 9 Chemistry of Natural Waters
Mar 24	CH 10 Chemistry of Natural Waters
Mar 31	CH 10 Pollution and Purification of Water Exam 2
April 7	CH 11 Toxic Heavy Metals
April 14	CH 12 Hazardous and Municipal Wastes
April 21	CH 13 Radioactivity, Radon, and Nuclear Energy
April 28	Final Exams