Chemistry 115 - Section 1
Fall, 2006
General Course Information

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Overview

All information concerning this course is available on the course web site, www.chem.umb.edu, which you should visit frequently.

The text for this course (and also Chem 116) is Brown, LeMay, and Bursten's *Chemistry: The Central Science*, 10th ed. The book is available in the bookstore as a special bundle that includes the *Student Solution Manual* to the text.

My office hours this semester will be 7:00 - 8:30, 9:30 - 10:00, and 11:30 - 12:00 on Monday, Wednesday, and Friday. However, I invite students to stop by at any time I am in my office (S/1/078). Occasionally, I may be unavailable during office hours due to meetings, absence from campus, etc. If you have trouble connecting with me, see me after class, call me, or (best) send e-mail to set up an appointment. I always respond to questions sent by e-mail, so that is another way to get your questions answered.

Course Prerequisites

Because lack of proficiency with algebraic manipulations is widely recognized as one of the key elements leading to failure in general chemistry, this course has a strictly enforced mathematics prerequisite:

You must have passed Math 115 or have passed the Math Placement Test for Math 130.

Students who have passed a college course in pre-calculus algebra and analytical geometry (equivalent to our Math 130) or higher mathematics courses (calculus, etc.) are exempt from this requirement. If this work was taken at another university, you may be asked to provide documentation before being signed into the course, unless UMass Boston has accepted your previous courses for transfer credit. Please note that students who have only taken a statistics course (e.g., Math 125) but no higher mathematics courses *are not exempt* from this prerequisite. **If you have somehow enrolled in this course without having met the math prerequisites, please drop immediately.**

Course Structure

Lecture: **The lectures, not the book, constitute the principal source of material for the tests**. The projected overheads that I will use in class are available for print-out on the web site under "Overheads." Most students find it useful to have these in hand during the lecture. However, much of the content of the lectures (e.g., most worked-out examples of problems) are not in these overheads. Therefore, it is imperative that you faithfully attend lectures and take good notes. In addition to mastering the lecture material, you will occasionally be required to learn certain material from the book (e.g., aspects of nomenclature and rules of solubility). Otherwise, use the book to complement the lectures. Examinations ask you to demonstrate your mastery of the material through qualitative (fact- or concept-based) questions and quantitative (number- or model-based) problems. Chemistry is a quantitative subject, so great emphasis is placed on solving problems based on chemical principles. It is not enough to understand the concepts of chemistry; you must be able to apply the concepts to solve chemical problems. One of the best ways to master the material and to prepare for examinations is to try to solve problems like those assigned for homework or similar to those used as examples in class.

Discussion: Discussions are intended to give you opportunities to deepen your understanding of the material, to explain homework problems, and to prepare you for the tests. Homework is not collected or graded. Although you will not turn in your homework, you should always attempt to do the assignment before coming to discussion. **Attendance in discussions will be taken, so always attend your assigned section.** You may miss three sessions without penalty, but each subsequent absence will result in a 10 point deduction from the 50 point maximum for discussion. **Discussions will begin the week of September 11.** If you enrolled for Discussion Section 8, please switch to any other section. Section 8 is for the evening section of Chem 115, which will not necessarily cover the material in the same order or have the same assignments. Discussion Section 7, scheduled for Fridays at 11:30, has ben cancelled.

Laboratory: **Chem 117 is a co-requisite for Chem 115.** You cannot receive credit for Chem 115 without passing Chem 117, unless you previously passed Chem 103 or have transfer credit for a comparable laboratory course from another institution. **Laboratories begin the week of September 11.** All matters concerning laboratory policy and scheduling will be handled by Dr. Leverett Zompa whose e-mail is leverett.zompa@umb.edu. The schedule and handouts for the laboratories are posted on the web site, www.chem.umb.edu.

Calculators

Calculators may be used in all aspects of this course, including examinations. A simple scientific calculator will suffice for Chem 115, but in Chem 116 you may find it useful to have a more sophisticated calculator, such as the Texas Instruments TI-86 or similar models. However, **during a test you may not use any calculator or device that is capable of communicating with any other calculator or device.** Anyone bringing such a device to a test will receive a zero for the test. Be sure you know how to operate your calculator before you have to use it in a test

situation. Before coming to a test, be sure your calculator is working properly and that it has fresh batteries (if needed) or will work in low light (if solar powered). You may bring a back-up calculator or extra batteries to the tests, if you like. **Calculator sharing is not allowed during a test.**

Tests and Academic Honesty

Except in highly unusual circumstances, there are no make-up examinations. The dates for the hour examinations are listed at the end of the Syllabus (p. 4). Tests will be given during the normal lecture hour. If you cannot attend a test for some legitimate reason (e.g., debilitating illness, death in the immediate family, car accident on the way to the university) you must call me or send e-mail in advance of the test or as soon as possible under the circumstances. In cases of real emergency you *might* be eligible to start the test late or to be excused from the examination. *Absence without notice and/or legitimate cause will result in a score of zero for the test.* Make every effort to arrive on time to each test. If you arrive late, you will not be given extra time, except in special circumstances. **No one arriving late to a test will be allowed to take the exam after the first paper has been handed in, unless special arrangements have been made in advance.** Although your lowest test score will be dropped in determining your final grade (see below), you are strongly urged to take every test.

During a test you are allowed to have pencils, erasers, and your calculator (with extra batteries, if needed) – nothing else. You may *not* have notes, open books, or scrap paper. Moreover, you may not store course information in your calculator to use as an electronic "cheat sheet". Where indicated, you must show work that leads to the answers you give. This means that the correct answer with no work or work that does not logically lead to it receives no credit. Do not cheat! Your work must be your own, with no assistance received from anyone else. Furthermore, you should take reasonable precautions to ensure that no one copies from you. **Academic dishonesty will not be tolerated and may result in your failing the test, failing the course, or being expelled from the University, depending on the circumstances.**

Grades

Grades are based on the sum of points earned on the best two of three hour examinations (100 points each), a comprehensive final examination (200 points), and discussion attendance (50 points); i.e., a maximum of 450 points. **I do not "grade on the curve."** As a percentage of the 450 points possible, the minimum for each grade level is 85% = A-, 75% = B-, 65% = C-, 55% = D-. I exercise some discretion near these borders, but no student receiving less than 50% of the possible points in the course should expect a passing grade. However, any student who receives 101 points or better on the final examination will at least receive a grade of D-. You cannot get a grade of "INC" unless (1) you are passing the course, *and* (2) the reason you cannot complete the course is beyond your control.

Syllabus

Detailed reading and homework assignments will be posted each week on the web site: www.chem.umb.edu.

We intend to cover the following chapters and sections in Brown, LeMay, Bursten, *Chemistry: The Central Science,* 10th ed., in the order indicated. Detailed reading assignments will be posted weekly under "Assignments" on the web site. We will occasionally gloss over a section or two in some chapters, which you will be encouraged to read for general interest but on which you will not be tested. These tend to be sections dealing with special topics that are interesting but not essential. In some chapters I will take a different order than the book when presenting the material in class, but if you read the book's presentation straight through you will cover the same material, just in a different order.

Chapter 1	All sections
Chapter 2	All sections
Chapter 3	All sections
Chapter 4	All sections [Read "The Activity Series", pp. 142-144, for interest only.]
Chapter 5	Sections 5.1-5.7 [Read section 5.8 for interest only.]
Chapter 6	All sections
Chapter 7	Sections 7.1-7.6 [Some material in section 7.7 will be discussed.]
Chapter 8	All sections
Chapter 9	Sections 9.1-9.6; sections 9.7 and 9.8 will be covered if time permits.

Test Dates
Test 1 - Friday, October 13
Test 2 - Wednesday, November 8
Test 3 - Monday, December 11.
Final Exam - as officially scheduled

Be sure to download the Course Calendar and other postings under "Information." You should check for new postings under "Assignments" and "Information" on a regular basis. Also check out the documents posted under the other headings.