

Creighton University

***General Chemistry, Chm 203
with Dr. Bruce Mattson
Autumn Semester, 2009***

Syllabus & Course Information

course website: <http://mattson.creighton.edu/>

Catalog Description:

Course in introductory chemistry which includes basic concepts: atomic structure, the mole, stoichiometry, gas laws, bonding theories, molecular structure and properties, thermochemistry and some common reactions. This is the first half of a two-semester sequence.

Course Objectives*:

Students of this course will:

- a. appreciate chemistry for its intrinsic aesthetic value.
- b. understand the ways chemists describe and model the behavior and properties of matter.
 - i. use appropriate theoretical models to explain experimental observations.
 - ii. be able to predict or explain the behavior of a new substance, or of a known substance in a new system, based on the behavior of related compounds and accepted models of structure and of the phenomenon observed.
- c. have knowledge of the fundamental principles and contemporary practices of chemistry, and will be able to use them to investigate, explain, and predict new phenomena.
 - i. be familiar with the principal tools of laboratory research in chemistry.
 - ii. be able to assess experimental data critically.
- d. be aware of the career choices available to chemistry graduates.
- e. be aware of the application of scientific principles, particularly those of chemistry, to societal issues.
- f. behave in an ethical manner.
- g. develop a commitment to a life of learning.
- h. demonstrate the ability to work both independently and in collaboration with others.
- i. develop the ability to formulate relevant questions.

*edited from the former Creighton University Chemistry Department Goals and Objectives

Each student will accept responsibility for her/his own learning in the course and will be prepared to discuss material assigned for each class session.

*"Education is an intensely collaborative process, requiring the interaction of student with teacher.
.....in education, the ultimate responsibility for success remains always with the student."*

-J. A. Nordberg

1. **Introduction.** This course is designed for students with a good background in chemistry and math. Much of the material in Chm 203 should be familiar to you.

This syllabus contains course information that will be of use throughout the semester. Most of the course policies are described herein. Please take a few minutes sometime before the second class meeting to familiarize yourself with its contents. If you have further questions regarding the course organization and policies, please ask. As your chemistry professor, I wish you success in the course. I am here to help you!

2. **Textbook and Accessories.** All of these materials are required for the course:
 1. Text: *Chemistry*, by McMurry and Fay, 5th Edition.
 2. Simple scientific calculator
 3. Large loose-leaf binder for notes, handouts, homework, etc.
3. **Office, Phone, e-Mail.** My office is Hixson 262; phone: (402) 280-2278; e-Mail: brucemattson@creighton.edu Stopping by my office is always the best idea. Contacting me by e-mail also works well.
4. **Attendance Policy.** *I require attendance.* I feel that I have information that will be useful and interesting I know that attending my lectures will help you on the exams.
5. **Homework.** On most days I will assign homework problems to do. Working problems is the single most important way to prepare for tests. Use my office hours to ask questions about these problems. You should work problems on a daily basis and with a few friends as a "Study Group." I do not collect homework, but you are responsible for doing the assigned problems and often appear on exams.
6. **Office Hours.** Office hours are those hours during which I am in or near my office and available for answering questions, discussing studying, chemistry. Usually time is available throughout the day as well so that you may come to my office or e-mail for an appointment. If you would like to come in groups, please do so. If the door is open, you may come in and ask questions! Here are my official office hours:

Mondays: 10:30 – 12:00 and usually available from 1 – 3 pm
Tuesdays: 11:00 – 12:30 and usually available until 2:30
Wednesdays: 10:30 – 11:20 and usually available from 1 – 3 pm
Thursdays: 11:00 – 12:30 and usually available until 4 pm
7. **Course Content.** A day-by-day (calendar) list of activities is included with this information.
8. **Learning Objectives.** I will distribute learning objectives and assigned problems on the first day of each new chapter.
9. **Course website.** This course is supported by a website. The site includes all of the course information, copies of handouts, extra credit, answers to some problems, last year's exams, etc. Link to it from <http://mattson.creighton.edu/>
10. **Unit Exams.** Exams (100 points, 50 minutes) will be given about once every two weeks and will cover two chapters. Taking the exam at the assigned time is expected. If you cannot take the exam at the assigned time, you should have a pre-approved excuse with appropriate paper documentation. Other excuses, regardless of how compelling are unexcused. (The grade entered for the first unexcused absence will be the same as your lowest exam score from the other five exams. Scores for subsequent unexcused absences will be entered as 0s.) The exams are based on the lecture material, assigned material from the text and the homework problems. You will be allowed to use a *non-programmable* calculator on the exams. Each of the exams is worth 100 points. Exams will be returned as soon as possible after the exam date,

usually by the next class meeting. If you are not present when the exams are returned, you may pick it up during my office hours. Uncollected exams will be destroyed after one week.

Re-grading policy. A grade appeal for an exam must be made to me within three school days of the date on which the exam is returned. I make photocopies of your exams and regarding is done from the photocopies.

11. Missed exams. Avoid missing exams! There are two types of missed exams: excused and unexcused.

- Excused exams include documented reasons for being absent, including being out of town for sports participation, attending an important family function such as a wedding or a funeral, court appearances, or being ill with a doctor's excuse. *You must provide me with the documentation (such as a copy of the wedding invitation) in order for it to be considered an excused absence.* Missed exams with excused absences can be made-up as soon as possible after the actual exam, but not any later than after the exams are returned in class.
- Unexcused absences do not have "documentation" and include becoming sick the night before the exam or accidentally sleeping through the exam. No more than one unexcused absence can be made up prior to the return of the exams. A subsequent unexcused absence will result in the final exam counting double and three or more unexcused absences will be given grades of zero.

Exams resulting from excused or unexcused absences that are not made up before the exams are returned in class cannot be made up. The first time this happens, the final will be counted double; after that, the exams will be given a grade of zero.

12. Tutorial Help. Chemistry majors have been hired to serve as tutors. The tutor schedule will be posted on the course website as soon as it is available. Tutors are available Sunday — Thursday evenings from 6 – 9 PM in Harper Hall. I recommend that you use my office hours as your first choice, however.

13. Final Exam. The final exam is a comprehensive exam covering the entire semester and is worth 100 points.

14. E-Mail Grade Distribution. You have the option to receive your grades via e-mail.

15. Grading. The course is worth 600 points in total. The grade you will be assigned can be determined with the following chart. Note: These are the absolute cut-offs; there is no "rounding;" for example, 89.9 is a "B+." The "curve" is never adjusted from the values listed below.

Your Grade:	
A+*	≥ 95.00%
A	≥ 90.00%
B+	≥ 85.00%
B	≥ 80.00%
C+	≥ 75.00%
C	≥ 70.00%
D	≥ 60.00%

**The University does not recognize the "A+" as a grade. It will be recorded as an "A"*

- 16. Cell phones.** Use of cell phones (calling, texting, photography) during class is not allowed. Cell phones must be left in backpacks, purse, etc. during exams.
- 17. Academic Dishonesty.** The University has an established policy on academic dishonesty. The University defines the term to include “representing the work of others to be one's own (cheating on an exam), tampering with the experiments of others, defacing or tampering with library or student materials or facilitating dishonesty on an exam.” The latter point is understood to include situations where you notice cheating occurring but do not report it immediately. In General Chemistry, the most blatant forms of academic dishonesty include: (a) copying the work of others on exams, (b) sharing information with others about exams (both during the exam or between class periods, (c) using notes when notes are not allowed (in calculator slip covers, palms of hands, baseball caps, slips of paper tucked away, and so on), (d) making changes on graded materials that have been returned to you, (e) working together on take-home exam problems when that is expressly forbidden, (f) cell phone photographing or texting exam information or answers, and so on.

Please remember your promise to yourself and to Creighton that you made at the Matriculation Ceremony for new students during Welcome Week. At this event, you signed your name on pages of the College Roll under the pledge:

As matriculated undergraduates in the Creighton College of Arts and Sciences, we recognize that admission to the College entails the following responsibilities, which we freely accept.

- ❖ *We commit ourselves to the pursuit of knowledge throughout our lives and to developing the skills that we have been given.*
- ❖ *We acknowledge our obligation to respect all women and men and to use wisely the resources of the world around us.*
- ❖ *We solemnly promise to uphold the highest moral and ethical standards and thus to bring credit to the College by our life and our work.*

Any act of academic dishonesty tarnishes and diminishes the worth of each of these promises. Remember your promises. Keep your promises. Live up to your promises. Extend these promises into lifelong promises to yourself and others. You will not be disappointed.

In the event that you are accused of engaging in academic dishonesty, you will receive a “0” for the homework, exam or quiz score. The incident will be reported in writing in accordance with the protocol set forth by the College of Arts and Sciences. (For details, see the website <http://puffin.creighton.edu/ccas/policies/acadhonesty.html>.) Students accused of academic dishonesty have the right to an appeal.

The College’s Faculty and Student Senates have drafted a pledge as part of our Academic Integrity Code. The purpose of the pledge is to “promotes a shared culture of integrity amongst Creighton students, while also acknowledging in its language that each of us holds him- or herself accountable for any attenuation or neglect of the conventions that define academic integrity.” The pledge, shown below, will be on all exams given in this course.

Academic Integrity Pledge

In keeping with Creighton University’s ideals and with the Academic Integrity Code adopted by the College of Arts and Sciences, I pledge that this work is my own and that I have neither given nor received inappropriate assistance in preparing it.

Signature: _____

Daily Plan - Chm 203 Dr. Mattson

August, 2009

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			26 Course intro; Chapter 1 Introduction	27	28 Chapter 1 Introduction	29
30	31 Chapter 2 Atoms & ...					

September, 2009

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2 Chapter 2 Atoms & ...	3	4 Review Chap. 1 & 2	5
6	7 Labor Day No class	8	9 Exam One Ch 1 and 2	10	11 Chapter 3 Eq'ns & ...	12
13	14 Chapter 3 Eq'ns & ...	15	16 Chapter 3 Eq'ns & ...	17	18 Chap. 4 Aqueous Rxns	19
20	21 Chap. 4 Aqueous Rxns	22	23 Chap. 4 Aqueous Rxns	24	25 Chap. 4 Aqueous Rxns	26
27	28 Chapters 3 and 4 Review	29	30 Exam Two Ch 3 and 4			

October, 2009

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2 Chapter 5	3
4	5 Chapter 5	6	7 Chapter 5	8	9 Chapter 6	10
11	12 Chapter 6	13	14 Review Ch 5 and 6	15	16 Exam Three Chap 5 & 6	17
18 M	19 I B	20 D R	21 T E	22 E A	23 R K	24 M
25	26 Chapter 7 Covalents	27	28 Chapter 7 Covalents	29	30 Chapter 7 Covalents	31

November, 2009

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 Chapter 8 Thermo- chem	3	4 Chapter 8 Thermo- chem	5	6 Chapter 8 Thermo- chem	7
8	9 Review Chapters 7 and 8	10	11 Exam 4 Chapters 7 and 8	12	13 Chapter 9 Gases	14
15	16 Chapter 9 Gases	17	18 Chapter 9 Gases	19	20 Chapter 10 Liquids and Solids	21
22	23 Chapter 10 Liquids and Solids	24	25 Thanks- giving	26 Thanks- giving	27 Thanks- giving	28
39	30 Chapter 10 Liquids and Solids					

December, 2009

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2 Chapter 9 & 10 Review	3	4 Exam 5 Chaps 9 & 10	5
6	7 Review	8	9 Review	10	11 Review	12
13	14	15 Final Exam				

CHEMISTRY DEPARTMENT MISSION STATEMENT

The Department of Chemistry is committed to excellence in its programs. It works to help both its students and faculty discover their talents and abilities to the fullest, instilling critical and creative thinking. The Department specifically is committed to challenging its students to think and act as scientists and responsible citizens, by offering a diverse set of lecture courses and teaching approaches, as well as a significant amount of experience in laboratory work. The Department is also committed to offering its faculty the opportunity to grow as scholars and teachers. By their example and by presenting opportunities for such activity, the faculty members of the Department encourage students to participate in scholarly endeavors, especially independent research. We emphasize the values of trust, respect for others, and personal and professional integrity by acting in this way and by expecting our students to do the same.