

# Summary of CHM 109 Syllabus

SS I 2010

The syllabus for CHM 109 has become so long that many students do not take the time to read any of it. Both your life in this course and mine will proceed more efficiently if you are aware of certain features of the course. This page summarizes most of those.

## Attendance

1. There is no attendance requirement for lecture activities except the 2 midterm exams and the final exam. However, you are responsible for all activities that occur in every lecture, and if a quiz occurs in lecture on a day that you have missed, there is **no option to make up that quiz**.

2. Attendance at laboratory is required. You may not hand in a laboratory report for credit if you were not present in class to perform that laboratory activity. Recitation instructors will establish attendance criteria for recitation. These may differ slightly between sections.

## Grading

1. 61% of your grade in CHM 109 is determined by your exam scores. The laboratory accounts for 25% of your grade. The remainder is homework assignments and quizzes based on outside of class reading assignments. The ***dates of these quizzes will usually not be announced*** before they are given.

2. Most students in the class are required by their major (nursing! and education?) to have a C or better in this class. By the drop date (June 17) you will have close to 50 % of your grading elements determined. This is usually enough to make an accurate prediction about your grade for the course. You should see your instructor any time you need to know more about your grade status in this course. If by 06/17/10 you think you are likely to get lower than a C in this course it is probably much more ***to your advantage to withdraw than to risk permanent exclusion from the program*** of your major.

3. No exam scores can be dropped. There is no "extra credit." ***Copying comment!!!***

## Learning outside of class

1. There will be reading assignments designed to be done outside of class, before lecture.
2. The Academic Support Center has a tutoring program (It is free!!!)
3. There will be optional help sessions before each exam designed to help you succeed.

## Classroom decorum

1. During the first ~12 years I taught at USC Upstate I observed very few problems with civility in the classroom. However, during the past 5-6 years students in some lecture sections behaved in ways that limited other students' capacity to learn. This is not acceptable. The most common form of this behavior is talking. When you talk in class you limit the capacity of those around you to hear and therefore their ability to learn. Another common disruption is walking across the front of the room (instead of finding a seat nearer the door) when you come to class late. If I observe behavior that is inappropriate, I will contact the student to let them know. If the behavior continues after that point I will contact the Dean of Students to make arrangements to have that student removed from the class.

2. If someone in the class is behaving in a way that is limiting your ability to learn, please see me outside of class. My hearing and sight are not infinitely acute, and I may not hear/see all disruptions. You are paying a lot of money to attend classes, and you should not have to put up with other students making learning more difficult.

3. Remember to turn your cell phone off at the start of class. (Comment re. emergencies.) Texting and laptop use during class is not permitted. See instructor if you have disability related issues.

# The Chemistry of Living Things

# CHM 109

## Lecture Schedule/Syllabus SS I 2010

*Objectives:* Students will develop an understanding of the chemical processes carried out by all living things. Students will demonstrate mastery of the material by solving written and lab problems on these topics and by being able to describe the major chemical jobs that living things perform. Emphasis is on kinetic and equilibrium approaches to solve problems.

This course is designed for non-science majors.

*Instructor:* Dr. Rick J. Krueger

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*Office hours:* Sm 406, M 10-12, & 3-5, Fridays???

*Class Meetings:* Lecture —Th 12-2:45, Lab/rec Tu-Th 8-11 AM (sect 001) & 3-6 PM (sect 002)

*Materials* Optional textbook: Chemistry by Karen Timberlake, 10<sup>th</sup> ed. 2009

Required for laboratory: *Chemistry 109 Lab Manual (available Wednesday)*, Z87 safety goggles (\$3.49? at USC Upstate Bookstore), and appropriate clothing for lab.

*Class Organization:* The purpose of the lecture is to present topics in sufficient detail for students to be able to solve basic chemistry and biochemistry problems. Recitation will be used both to present new material in the form of written modeling or problem based exercises and to **provide practice on problems** introduced in lecture. A minor aspect of recitation will involve review of previous laboratory work and brief introductions to future laboratory experiments. The laboratory exercises are used to reinforce the principles developed in lecture, and to acquaint students with some of the techniques used in a chemistry lab.

Recommendations for success in CHM 109

1. Read the assigned material ***before*** you come to lab/recitation/lecture.
2. Ask questions during lecture, recitation, and lab when you do not understand.
3. Do practice problems on web page and the assigned homework questions. **SI**
4. Get help with the questions you did not understand.
5. Go over the study guide ~5 days before the exam. Allow enough time to develop ***understanding*** in weak areas identified from homework and the study guide.
6. Get help on study guide questions you did not understand.
7. Carefully review your graded exam when it is returned to you. If you still do not know how to answer an exam question at this stage, see me or others for help.

**CHM 109 is likely to be a relatively labor intensive and to be different than other science courses you may have taken! How will it be different? \_\_\_\_\_**

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# Calendar

# Summer I, 2010

## May

Sun	Mon	Tue	Wed	Thu	Fri	Sat
23	24 1st Lecture Intro, Sci, Meas, Chem	25 Atom struc Safety & Spreadsheet	26 Atom stabil Basic Lab Techniques	27 States of matter, VSEPR	28	29

## June

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	31 No class, <u>Memorial</u> <u>Day</u>	1 <sup>†</sup> Weak inter, Solutions Gas Laws	2 More solns Chm rxns Cu Chem	3 Kinetics No lab! Help Sess!	4	5
6	7 Lecture EXAM 1 Video	8 Kinetics Molecular Modeling	9 Kinetics Vinegar Titration	10 Equilibrium Kinetics, Lab quiz #1	11	12
13	14 Acid-Base	15 Biochem Equilibrium	16 Proteins CINAHL: Library	17 <sup>‡</sup> (w/d) No lab! Optional Help Sess!	18	19
20	21 Lecture EXAM 2 Video	22 Enzymes Enzyme Kinetics	23 Lipids/Carb DNA 1:CSI Yekatarinburg	24 DNA DNA 2: W-C Base Pairs	25	26
27	28 DNA, Central Dogma	29 DNA, Genomics Last lecture Lab quiz	30 Help Sess? Maybe Tues aft?			

## July

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 Final EXAM	2	3

red = lecture, blue = lecture related help sessions, black = lab <sup>†</sup> Last day to withdraw w/o a W. <sup>‡</sup> Last day to withdraw w/o penalty.

\*Disclaimer: If unforeseen circumstances occur, the syllabus may be changed.

## Explanation of Grade Determination and Exam Structure

*Grade determination.* You will receive numerical grades for all of the work you do during the semester. The sum of these numerical grades will be used to assign the letter grade that goes on your transcript.

<u>ACTIVITY</u>	<u>POINT VALUE</u>
Homework	10
Exam I	17
Exam II	17
Final Exam	27
Quizzes	4
<u>Laboratory</u>	<u>25</u>
Total	100

Anticipated curve: A  $\geq$  88, B+  $\geq$  85, B  $\geq$  78, C+  $\geq$  75, C  $\geq$  68, D+  $\geq$  65, D  $\geq$  58

*Homework, Exam, etc. details.*

1. *Homework.* Each homework assignment will have a 1 to 2.5 point value. These assignments will be designed either to test your understanding of a subject or to test whether you can identify terms, figures, *etc.* that have been covered in the text or discussed in lecture. The policy for grade reduction on late homework is: **20% subtraction of credit** for work that is less than 3 days late. No assignments will be accepted after graded work is returned to the class or that are more than 3 days late, whichever comes 1st. Assignments must be submitted as hardcopy. ***Do not email homework. Careful re. copying!!! XF***

2. *Exams I and II.* The main objective of these exams will be to test your understanding of the concepts and problems in the indicated chapters. Generally, the emphasis will be on problem solving, *not memorization*. However, for the more descriptive areas (e.g., metabolic processes), more memorization is required. If you have missed an exam for a legitimate reason, you will be permitted to take a ***cumulative makeup exam*** outside of lecture time during the week of 6/28. A legitimate reason for missing an exam would be physical illness (not just a runny nose) or severe emotional trauma, such as the death of a close relative. Documentation for your absence may be required. As soon as you suspect that you may not be able to take an exam, contact me by phone or e-mail to make sure that your absence from the exam is for an appropriate reason. **There is no option to drop either of the midterm exam grades.**

3. *Final exam.* The final exam will be cumulative, but will have a slightly heavier emphasis on weeks 5-6, since you will not have a midterm exam covering this material. It will generally emphasize problem solving and understanding more than memorization, but see above (#2) regarding the more descriptive subjects.

4. *Quizzes.* These will be very brief, unannounced, and designed to determine whether you have read assigned material before coming to class. The one lowest quiz score will be dropped. These quizzes cannot be made up if you miss them.

5. *Lab/recitation.* See lab/rec syllabus. Turning in a lab report for a lab you did not attend is considered a violation of the student honor code.

6. *Missed work.* A zero is assigned when work is missed due to an unexcused absence.

## Attendance:

Laboratory and recitation: Generally, you are expected to attend all laboratory and recitation meetings. The instructor for each lab/recitation section determines attendance guidelines. See the lab/recitation syllabus for your section for details. You are responsible for making up work for classes that you miss. See also the USC Upstate 2009-2010 Catalog, p. 51.

Lecture: No attendance requirement except for exams. ***This does not mean I am inviting you to miss class!*** If you miss a quiz you may not make that up for any reason.

## Electronic resources:

The usefulness and truthfulness of materials posted on the world wide web varies tremendously. While we will refer to some web resources, always consider the purpose/quality of the source when using it to draw conclusions.

**Civility/Behavior guidelines:** *civility*- politeness, consideration, courtesy.

Items related to lecture and (usually) recitation: Also see the USC Upstate 2009-2010 Catalog, pp. 45-6.

1. Get to class on time. If you are late, try to sit near the door. Do not walk across the front of the room if seats are available in the back or sides.
2. When class starts, stop any conversation and turn your full attention to class.
3. I very seldom end class early or run over the allotted class time. Do not start shuffling papers, loading your book bag, *etc.*, before class ends. The noise disrupts class.
4. If you know that you will need to leave class early for any reason (eg. doctor's appointment, childcare) sit near the door to minimize disruption when you leave.
5. Turn off all electronic devices (cell phones, beepers, watches, CD or tape players, *etc.*) that generate sound when you come into class. *Cell phone, pager, etc. use is prohibited during exams.* Do not even have them out on your desk.
6. Do not sleep in class. Even if you don't snore, this is rude. Sleeping, reading a newspaper or novel, or any activity other than being fully involved in the class is inappropriate.
7. Dress code: On exam days you may not wear sunglasses or a hat (an example would be a baseball cap) that has a bill or brim in the front. (I will allow exceptions for medical/religious reasons.) There are also safety-related dress requirements for lab (see safety video and lab packet).

*Remember: The reason that all of this is necessary is that you are not the only student in class. The other students have paid a lot of money to be here. You are hurting their education and perhaps eventually their ability to make a living if you are disrupting class.*

*Regarding getting along with your instructors in CHM 109:*

1. Please communicate, particularly if you don't understand or if something is bothering you. Outside of class, email will often get a more rapid reply from me than will phone calls.
- 2.a) ***You are paying for part of my time, so use it, but please use it efficiently!!*** Have your questions organized when you come to see me during office hours. The more efficiently you use my time, the more I will be able to help you.

b) While I encourage you to stop by my office when you have questions, my job description is only 50% teaching. I have set aside Monday and Friday for research and service. Avoid contacting me on those days (particularly Friday) except in case of emergency.

## Disability Issues

If you have (or suspect you have) an academically relevant disability, please see the Office of Disability Services to set up the paper work and make sure that we can accommodate your disability appropriately. Remember that you must have approval of the Disability Services Office for each semester, and you must discuss with them any services that you require for CHM 109.

## Academic Honor Code Issues

The USC Upstate Academic Integrity Code can be found in the *USC Upstate Student Handbook*. Please refer to the *Handbook* if you are unfamiliar with the Code. Also see the USC Upstate 2009-2010 Catalog, p. 45.

While the faculty anticipate that you will apply the Academic Integrity Code to all areas of the course, we have noticed in previous years that some Homework assignments & lab reports do not appear to have been prepared independently. To clarify: 1) If you performed an experiment as part of a group, your data should be the same as other students in the group. 2) However, if a large amount of other portions of your lab report is identical to that of another student, the simplest explanation for this is that copying was involved in preparation of at least one of the reports. 3) Even if a question in the lab report asks for an answer that could be given by quoting the explanatory material given with the lab (or from the textbook), do not copy the answer verbatim. Even using quotes and a citation is not appropriate. Instead, restate the information in the answer using your own words.

***Do not copy homework assignments or lab reports from other students and do not let other students borrow your work, as their copying of your work could compromise your academic integrity.***

If you have uncertainty at any time about whether a piece of work or particular activity might be a violation of the Student Honor Code, ask! For copying associated with lab reports, students usually receive a warning for the first offence. Depending on the nature of the first offense, credit for that work may be reduced. A second offence usually is taken first to Dean of Students and then Honor Court. In past semesters students have received an F for the entire course for a second violation associated with lab work.

*USC Upstate has recently added the XF grade. This goes on the official transcript and indicates that the student has failed the course as a result of an honor code violation. Please consider the effect this would have on a potential employer as you consider your approach to the course this semester. A student in one of my CHM 109 sections has received an XF grade.*

## Calculators and Proficiency in calculator use

We will supply the calculators that you will use for the two midterm exams and the final exam. You will have opportunities in recitation to practice using these calculators prior to the exams.

# Info

lab section \_\_\_\_\_

(AM or PM)

Your name (1<sup>st</sup> & last) as you prefer to be addressed: \_\_\_\_\_

Your major/year \_\_\_\_\_

Hobbies \_\_\_\_\_

Favorite (or least favorite) Color \_\_\_\_\_

Book \_\_\_\_\_

Movie \_\_\_\_\_

Television show \_\_\_\_\_

Musical group/genre \_\_\_\_\_

How many hours per week you will study for CHM 109 outside of class time \_\_\_\_\_

## CHM 109 Algebra survey

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Please write ***your name on the back of the page.***

Solve for the variable indicated for each problem. Solve means rearrange the equation so the indicated variable is by itself.

0. Example: Given  $a + b = c$ , solve for  $b$        $\rightarrow$        $b = c - a$

1.  $d = m/v$  solve for  $m$

2.  $r - s = t$  solve for  $s$

3.  $g/h = w$  solve for  $h$

4.  $(x-y)z = k$  solve for  $x$