

# Chem 102C (General Chemistry I) - Course Syllabus

Spring 2012

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Office Hours: Mondays, Wednesdays at 10:00 – 11:30 AM,  
Tuesdays 3:30 – 4:30 PM; and by appointment

## Course Information

### When and Where to Meet:

- Lectures: Tuesdays and Thursdays 1:00 – 1:50 PM in 100 NL (Noyes Laboratory)
- Discussions: Wednesdays and Fridays (please check your assigned section for the time and location)

This course meets 4 times per week, two lectures and two discussions. The lectures will be used to introduce chemical concepts and principles, and the discussion that followed each lecture will serve to strengthen your understanding of the lecture material and to help you develop problem solving skills.

Most students are required to take Chem 103, General Chemistry Laboratory, concurrently with Chem 102. This 1-hour lab course provides active demonstration of principles covered in lectures and introduces experimental skills.

### Course website:

- Go to <http://www.chem.illinois.edu> ; then select “Course Web Sites” (on the left hand side menu); then click on the link for “Chemistry 102c”.

### Required Materials:

- **Chemistry**, 8<sup>th</sup> ed. by Zumdahl & Zumdahl (Any earlier edition will work as well, but may not correspond to the assigned practice problems)
- Calculator with log function
- i-clicker with the capability to answer multiple choice questions  
(\*don't forget to register your i-clicker during the first week of classes)

### Recommended Material:

- **Partial Solutions Guide for Chemistry**, 8<sup>th</sup> ed., Hummel, Zumdahl and Zumdahl

### **Guidelines for Classroom Conduct**

Out of respect for the instructor and your fellow students, please mute (or turn off) your cell phones, or any other electronic devices that may make a noise. Please refrain from talking, texting, listen to music (or any activities that may disturb your fellow students) during lecture.

## Grading Guidelines

The following table shows the point distribution for this course.

1.	Online Homework	75
2.	Clicker Points (in class)	25
3.	Quizzes (120 for LON-CAPA quizzes, and 30 for discussion questions)	150
4.	Hourly Exams (150 pts each x 3)	450
5.	Final Exam	300
	Total	1000

The points from quizzes, hourly exams and the final exam will be scaled (to a percentage) so that A = 90-100; B = 80 – 89; C = 70-79, D = 60-69; and F= 0=59.

At the end of the semester, the course instructor will assign course grade based on the total number of points you have and assign overall course grades according to the criteria below (with the plus/minus grading scale is shown in parenthesis):

A = 900 – 1000	(A+ = 970 – 1000; A = 930 – 969; A– = 900 – 929)
B = 800 – 899	(B+ = 870 – 899; B = 830 – 869; B– = 800 – 829)
C = 700 – 799	(C+ = 770 – 799; C = 730 – 769; C– = 700 – 729)
D = 600 – 699	(D+ = 670 – 699; D = 630 – 669; D– = 600 – 629)
F = 500 – 599	

*\*Keep in mind that depending on the distribution of points at the end of the semester; the cutoff /borderline criteria for the plus/minus letter grades may be shift slightly lower, but never raised. All grades will be entered into an electronic grade book accessible from our course website.*

### 1. Online Homework

You'll have access to online homework assignments in the second week of the semester on the UIUC LON-CAPA (*The LearningOnline Network on CAPA*) system. These homework assignments are accessible using the common browser program (Firefox, Internet Explorer, etc.). You can also get to LON-CAPA through a link on the course website. The timeframe for completing each of the assigned homework is one week (it will start on Thur. at 5:00 pm and close the following Thur. at 5:00 pm).

Your online homework grade (out of 75 points possible) will be determined by the number of problems that you complete correctly; and you'll need to complete the weekly homework in the allotted time. Any work done after the deadline will not be given credit. The LON-CAPA system will keep a tally of the points you've earned during the semester. At the end of the semester, we will take the percentage of the points you earned in LON-CAPA and adjusted to the 75 points scale. For example if you completed all of the questions correctly (i.e. 100%), then you'll receive 75 points; and if you answered 90% of the questions correctly, you will receive 68 points.

***\*Because you are given ample time (one week) and multiple tries (99 times) to attempt all the problems, there is no reason why you shouldn't be able to receive most of the points possible (75 pts). Please beware that the online homework are only a representative sample of the types of problems you are expected to master. It is important that you also work on the practice problems and discussion***

## 2. Clicker Points

There are 25 points assigned as “Clicker Points”; these are points that can only be obtained by answering the “Clicker” questions during lecture by using a registered i-clicker device. Therefore, you must bring your i-clicker to every lecture. On the course website you will find a link that you **must** use to register your i-clicker, and you should have this done before the end of the first week of classes. Registration is required so that points can be assigned to you when you answer the “Clicker” questions correctly.

The purpose of these questions is to encourage you to attend lectures; and to reward those who have been keeping up with course material, pay attention in lecture and participate in class. Therefore, it is not wise for you bring your friend’s (or friends’) i-clicker(s) and attempt to earn these points for them (it’s just not cool).

### How Clicker Points Work

- 0.2 pts will be awarded for participation in each lecture. These points are awarded only the **First time** you use the clicker regardless if you answer the question correctly or not.
- 0.4 pts will be awarded for each of the questions you answered correctly; if you answered incorrectly you will be awarded 0.1 pts for participation.

Example: There are two “clicker” questions in lecture and you answered both of them correctly, you will receive 0.2 pt for participation, and  $0.4 \times 2 = 0.8$  pt for answering correctly, and for this lecture, you will have earned 1.0 point. If you only answered one of them correctly, then you will receive 0.7 pt ( $0.2 + 0.4 + 0.1$ ). If you struck out both times, then you will at least have 0.4 pt.

At the end of the semester, clicker points will be tallied and points earned over 25 points will be bonus points added to your overall points earned over the semester. For example, if you earned 35 “Clicker” points at the end of the semester, then 10 bonus points ( $35 - 25$ ) will be added to the overall points you have accumulated.

There will not be any “Clicker” points awarded the first week of classes so you have time to register your i-clicker device. If your i-clicker is lost, broken, or stolen (or you simply cannot remember where you put it), please let me (Dr. Tina Huang) know ASAP before you purchase another one.

## 3. Quizzes

Starting the second week of classes and throughout the course of the semester, you will take 12 quizzes (each worth 12 points; and the two lowest quiz scores will be dropped). The purpose of the quizzes is to help you study course material and to prepare for the hourly exams. In addition to test your knowledge on course content, the quizzes will also allow you to practice time management skills in a testing environment. The quizzes will be administered using LON-CAPA, you’ll receive announcements from me about when the quiz will be available to you. The LON-CAPA quiz is timed, and once you start the quiz you must complete it, you cannot finish one question and go back to it at a later time. Thus, make sure you have everything ready, calculator, scratch paper, go to the bathroom, etc, before you start the online quizzes.

Any missed quiz without a legitimate and valid documented excuse will receive a score of zero. There will not be any makeup quizzes (NO EXCEPTIONS, unless you have a valid, documented

excuse). If you missed a quiz due to extenuating circumstances or medical reasons **and** have a valid documented excuse (from the Dean, the health center or other valid medical institutions); please contact your TAs or Dr. Tina Huang immediately. The missed quiz may be dropped or an excused grade (an average score of your other quizzes) will be assigned at the instructor's discretion.

#### 4. Hourly Exams

The dates of the three hourly exams are:

- Thursday, 2/16/2012
- Thursday, 3/15/2012
- Thursday, 4/19/2012

All exams are from 7:00 – 8:15 p.m. (in locations to be announced later). Conflict exams will be held at 5:30 – 6:45 p.m. on the same dates. You **must** sign up for conflict exams **in advance** (the sign-up sheet will be across from 101 Chemistry Annex) and please bring a picture ID to the exams

**NO MAKE-UP** exams will be given, if you must miss both the regularly scheduled and conflict exam times, you need to contact Dr. Tina Huang immediately. If you have a **valid, documented excuse** (please see the University regulations at [http://admin.illinois.edu/policy/code/article3\\_part2\\_3-202.html](http://admin.illinois.edu/policy/code/article3_part2_3-202.html)), your hourly exam scores will be prorated. Format of the hourly exams will be multiple-choice and graded using a test scoring machine (i.e. a Scantron). Answers to the hourly exams will be posted on LON-CAPA.

#### 5. Final Exam

The final exam for Chemistry 102C (TBA)

The final exam is **required** of every student who wants to receive credit for this course (keep in mind that you also need to achieve overall points of 600 or better to receive course credit). If you have to miss a final exam please refer to the University's policy on missing final exams (shown below).

“(b)Undergraduate Students

(1) Undergraduate students must obtain the approval of the dean of their college to defer a final examination. Undergraduate students who must miss a scheduled examination should report this fact to the dean of their college as soon as possible and before the examination period.

(2) For satisfactory reasons, students may be “excused” by the dean of their college and examined later by their instructor. Absence from a final examination for any other cause is reported as a final grade of “absent” (ABS) in the course and counts as a failure. (See § 3-103.)”

### Discussion Sections

The study of chemistry and this course particularly, requires you to take responsibility for your own learning. Thus, in the beginning of each week, a worksheet that contains problems on the topics to be covered that week will be posted on the course website. Because most of learning in chemistry is through problem solving, it is imperative that you attempt the worksheet problems **BEFORE** attending the discussion sections. Any questions/issues that you may encounter while trying to work on these problems should be raised during the discussion section. Please remember that your

TAs already knew the materials covered in General Chemistry; therefore, it is not to your advantage to ask them to solve the worksheet problems for you, they will get better, not you! The discipline of Chemistry and the learning of this science is not a SPECTATOR sport! you must do most of the work.

At each of the discussion, your TA will give you a question/problem to be graded, you will receive 3 points for the correctly solved answer, and 2 points for doing most of the work (but not correct answer), and 1 point for trying. At the end of the semester, the total points you accumulated will be converted to percentage and will be part of your quiz grade (30 points of the 150 points possible).

## **Additional Information**

### Chemistry Learning Center(CLC)

The CLC is located at 212 Chemistry Annex, it houses the chemistry educational computing service and our tutoring facilities. At specific times, a chemistry TA is “on call” at the CLC to answer questions and/or assist with problem solving. There are a variety of resources available (either in book form or on-line tutorials) to help you. For more detail please go to <http://www.chem.illinois.edu>.

### Course Expectations

- For each lecture period, you are expected to put in at least two to three hours of study time (you may need more study time if the concepts and principles are new and unfamiliar to you). And I mean “quality” study time, you can’t really learn through “osmosis” by simply having the textbook open, and the TV on at the same. Or trying to do a problem at the same time while watching your roommates playing World of Warcraft or Guitar Hero!!

### Suggested Practice Problems from Zumdahl, 8<sup>th</sup> ed.

- These problems will not be collected or graded. The solutions to most of these problems are available in the recommended supplement called **Partial Solutions Guide for Chemistry**. Please use this guide in a mature and appropriate manner (i.e. you should refer to it when checking the work you have done). One of the biggest mistake I see with General Chemistry students is to try to solve a problem backwards, i.e. randomly putting numbers and equations together so you get the same answer as the solution guide.

### Miscellaneous

- While my office hours are stated on the syllabus, I typically have an open door policy; i.e. **if my door is open**, and I am not with other students or faculty/staff members, you are welcome to drop by and ask questions/help. If I will be away during my regular office hours, I will let you know ASAP and reschedule an alternative time for that week).

The learning of chemistry is similar to learning how to play a sport (or a music instrument). To be successful, you must practice, practice, practice. To use the sports analogy, you should think of the practice problems as “practices”, these are opportunities to hone your skills (*just as athletes have to physically attend the practices, you can’t get good at batting, kicking soccer ball or throwing a football by just watching tapes of Alex Rodriguez, Mia Hamm or Joe Montana!*). The quizzes are like the games you play in a regular season, the hourly exams are the playoff games, and the final exam is like the NCAA Final Four!!