

Chemistry 1A Policies, Fall 2014

INTRODUCTION

We, and the world around us are made of chemicals: molecules and solid-state materials in various physical forms (solids, liquids, gases) render life on earth possible; they provide us with food, shelter, warmth, light, health, and comfort. This course opens the door to an understanding of how atoms come together to form chemical compounds and how these species can change by movement of electrons. By the end of the semester, we hope you will look at the world around you somewhat differently, using your knowledge of chemistry to better appreciate and understand the air you breath, the water you drink, the food you eat, etc.

Topics covered include: Electronic structure of atoms; structure and bonding in compounds; solutions, solids, thermochemistry, equilibrium, electrochemistry.

A working knowledge of high school chemistry and the ability to set up and manipulate simple algebraic equations is helpful. Students who have taken advanced chemistry will be better prepared, but this does not guarantee success in Chem1a and you will still need to study hard to do well.

Rather than a focus on memorizing facts and algorithms, you will be asked to make predictions and provide explanations. While building your knowledge of chemistry, you will be developing an understanding of the scientific process in general that will help you in many other courses. For details on lecture/course content, see the document: *Chem 1A Outline F13* on bSpace.

INSTRUCTOR INFORMATION

	Prof. John Arnold	Prof. Marcin Majda
Lecture	9, 11 AM	1 PM
Email	arnold@berkeley.edu	majda@berkeley.edu
Office	526 Latimer	B40 Hildebrand
Office Hrs	By apt – see calendar on bSpace	MWF 2.10-3 180 Tan

Class Meetings: MWF 9:10-10:00 or 11:10-12:00 or 1:10-2:00 in Pimentel Hall

Course Materials

- Sapling online homework (includes an online textbook)
- iClicker
- Recommended textbook: *Chemistry: A Molecular Approach* by Tro (Prentice Hall) 2nd ed (3rd ed is also ok, as are related texts by Zumdahl, Oxtoby, Atkins, Brown & LeMay, etc)
- Chem 1A Redacted Lecture slides, Preclass Assignments, Study Guide, & Previous exams – will be made available in hardcopy at Copy Central on Bancroft (free on bSpace)
- A nonprogrammable scientific calculator that can handle logarithms and scientific notation; it shouldn't cost more than about \$15. *Graphing calculators or cell phones may not be used during exams.*

Course Website: Chem 1A LEC F14 at bSpace.berkeley.edu

Direct your email messages first to your GSI who is your main point-of-contact for the course. More general questions should be addressed to the Head GSIs at chem1af14@gmail.com. All e-mail to the Instructors concerning Chemistry 1A should have "Chem1A" in the subject line and *must come from your berkeley.edu account*, otherwise it will probably not be answered. Use e-mail for asking simple questions about the course or if you would like to make an appointment to see Prof. Arnold about an administrative matter.

EXAMS: You must take every exam at the scheduled time. Midterm exams are held Tuesdays: September 23, October 21, and November 18 from 7-9 PM. The final exam is scheduled on Monday, December 15 from 3-6 pm.

If you have a schedule conflict with any of the scheduled exam times, do not enroll in Chem 1A. Exams are offered only at the scheduled day and time. There are no make-up exams.

Exams will be administered to student-athletes who are traveling for University sanctioned sport events by an appropriate proctor at the scheduled exam time. If you are a student with a documented disability please visit the

staff at the Disabled Students Program to arrange for testing accommodations. All requests for special accommodations must be received before the first midterm examination.

If you miss an exam you will receive a grade of zero for that exam (except in cases of documented emergencies).

WORKLOAD: A significant time commitment from you is expected both before lecture (doing the pre-class assignments, reading appropriate materials from one (or more) textbooks)) and after (adding to your lecture notes, working problems from homework and textbooks). Note that work at the college level is often quite different from what you might be used to from your high school: see the information in *Resources* on bSpace for more information.

DROP IN OFFICE HOURS: GSIs and Teaching Scholars will hold open office hours in Bixby (just across the walkway outside on the ground floor of Latimer Hall) between the hours of: **TBA**. Additional office hours may be offered before exams – check bSpace for updates.

DISCUSSION SECTIONS: Discussion starts on Tues, Sept 2nd; attendance is strongly recommended. You may need to print out the discussion assignments (check bSpace), do work required in preparation, and bring the printout with you to discussion.

REVIEW SESSIONS: The GSIs will hold review sessions a few days prior to each exam. Updates will be announced in lecture and on bSpace.

GRADE INFORMATION:

	%	Grade	Percent
Midterm 1	15	A	85–100%
Midterm 2	20	B	70–84%
Midterm 3	20	C	50–69%
Final Exam	35	D	45–49%
iClicker, Homework, Discussion	10	F	<45.0%
Total	100%		

The grade you earn is based on the scale above. Note that we do not curve the grades. In doing so, we note that in principle everyone can get a good grade and there is every incentive for working together to help your fellow classmates.

POLICIES

- Lecture attendance and active participation is expected. Points are awarded for iClicker quizzes during lecture.
- You may attend any of the lecture sections (9 AM, 11 AM or 1 PM) without having to change your section on Telebears.
- Your iClicker responses will count for credit in any section you attend, but *you may only vote in one* lecture section on a given day.
- Attendance in discussion is recommended. You must attend your assigned discussion section only.
- Academic honesty policies are strictly enforced. See: asuc.org/honorcode/faq.php and sa.berkeley.edu/code-of-conduct. An online quiz (Sapling) to test your understanding of this issue is required before you can complete any other assignments in the course (homework or exams).

Some practical advice:

- Get to know your GSI. He or she can be of considerable help both during the course and after.
- Our lectures are intended to expose you to important material, so pay close attention; questions on the exams will be based on what we discuss in lecture and on materials from the homework and discussion sections.
- The suggested textbook should be used as a supplement to the lecture material.

- Experience tells us that to do well in this course may require 10 hours/week or more in homework and studying; some students need more, some less. Please bear this in mind when arranging your schedule for the semester.
- Keep up with the material! The weeks will start flying by and you don't want to get behind. Do the preclass assignments, read the study guide and textbook, and start your homework days in advance of the deadline.
- The UC Berkeley Student Learning Center is an excellent resource for the course: slc.berkeley.edu/
- More advice can be found in the Resources folder on bSpace

Questions?

- Check bSpace: it also has a comprehensive FAQ list.

Some notes on how to study chemistry

The biggest challenge you will face in this, and any other courses at Berkeley, is to develop efficient study methods. Here are some suggestions, modified from Dr Adalsteinsson, Santa Clara University.

- **Read before, read after:** skim the chapter before it is covered in lecture; this will help familiarize you with some of the terms associated with each topic. Review each chapter after it is covered in class; this will help you become familiar with the book and make it easier to review before exams.
- **Participate during class:** take notes during class and look over them afterwards. Don't skip class. Ask questions.
- **Do the work:** Do the homework problems as close to the time as when the topic is covered in the class, even when they are not graded; they are designed to help you to increase the depth of your understanding of specific concepts and to give you practice in problem solving. This will also shorten the time you take to solve problems and time is limited during exams.
- **Do not wait until the night before the exam to study:** this approach does not work.
- **Find a group of students to study with:** seek out students dedicated to doing well in the course. These students can be found in drop-in tutoring sessions, or in the library studying. This group will help you stay focused and may assist you when things get confusing. Furthermore, explaining difficult concepts to others is an efficient way to learn yourself.
- **Stay focused:** Find an environment on campus with few distractions to work on the course material. Your dorm bedroom is usually not this space.