

CHEMISTRY 162A, SUMMER 2009
SYLLABUS, POLICIES, AND PROCEDURES
LECTURES: M, T, Th, F 8:30 – 9:30 AM, BAG 131
Web Address: <http://depts.washington.edu/chem/courses/>

Prerequisites: Completed Chem 152 with a grade of 1.7 or higher.

Add or Drop: Go to Bagley 292 (undergraduate services)

Instructor: Dr. Andrea Carroll Office: CHB 204K Telephone: 616-5319
E-mail: ageddes@u.washington.edu
Office hours: Tues 10:00-12:00 or by appointment

Teaching Assistants:

<u>Section</u>	<u>Name (email)</u>
AA	Alicia Key (akey7@u.washington.edu)
AB	Vladimir Vlaskin (trypto@u.washington.edu)
AC, AE	Joshua Gregersen (jagreger@u.washington.edu)
AF	Christopher Moss (cmoss@u.washington.edu)

MATERIALS

Except where indicated, all are required and available from the University Bookstore

- ❑ Zumdahl, *Chemical Principles*, Sixth Edition, Houghton Mifflin.
- ❑ Kelter, *Study Guide, Chemical Principles*, Sixth Edition (optional).
- ❑ *UW Chemistry 162 General Chemistry Laboratory Manual*.
- ❑ Lab coat, safety goggles, and a laboratory notebook with numbered pages and carbonless duplicate pages. You may continue to use a notebook from a previous quarter if it meets the stated criteria and has at least 30 pages remaining.
- ❑ Scientific calculator (graphing calculator is NOT required) and WebAssign access card. WebAssign access can also be purchased online at <http://www.webassign.net>.

COURSE DESCRIPTION

The course consists of:

- 4 lectures a week
- 1 quiz section a week
- 1 three-hour laboratory session most weeks of the quarter (6 total).

Attendance at ALL course components is essential to obtain a satisfactory grade in this course.

COURSE OBJECTIVES

The central themes in the course are:

- ◆ covalent bonding: orbitals
- ◆ chemical kinetics
- ◆ liquids and solids: structure and intermolecular forces
- ◆ properties of solutions
- ◆ representative elements - group 1A - 8A
- ◆ transition metals and coordination chemistry
- ◆ organic and biochemical molecules

We will cover chapters 14-19 and 21 in the textbook.

In the lab portion of the course (1/5 of course) you will conduct laboratory exercises that:

- ◆ emphasize and apply the concepts learned in lectures.
- ◆ develop laboratory, data analysis, and scientific writing skills.

ACADEMIC ETHICS

Original work performed in good faith is assumed on all laboratories/exams/worksheets.

It is presumed that the data you record and report in laboratory is your work. University rules (Handbook, Vol. IV, Part 9, Chapter 1, Executive Order #61) define scientific and scholarly misconduct to include the following forms of inappropriate activities:

- Intentional misrepresentation of credentials
- Falsification of data
- Plagiarism

Failure to adhere to this code of ethics will result in prosecution to the fullest extent (see <http://www.washington.edu/students/handbook/conduct.html> for specifics). In short, if you have not done something yourself, do not attempt to pass it off as original work.

<i>GRADING</i>	2 midterm exams (50 min. each)	30 %
	Quizzes (lowest quiz score dropped)	8 %
	Homework	8 %
	Laboratory	20 %
	Final exam (2 Parts: 55 min. each)	34 %
	<hr/> TOTAL	<hr/> 100 %

Grade Distribution – The undergraduate program committee policy states that the final mean GPA in Chemistry 162 should fall within the range 2.6 +/- 0.2. It is the Chemistry Department's policy not to make grade changes of 0.1 after final class grades are submitted to Records.

Late Policy - *No extensions are given for WebAssign assignments. For lab report policies, refer to the policy pages in the lab manual.*

LECTURES

An approximate schedule of the chapters to be covered each week is on page 7.

You are responsible for material covered in class AND in the textbook. Attendance at lectures is expected.

Out of respect for your classmates, please observe the following rules:

- Arrive on time. If an emergency causes you to arrive late, please enter quietly through the rear doors accessible from the 2nd floor.
- Do not begin to pack up your books etc. before the end of lecture.
- Do not have conversations with your neighbor during lecture.
- Turn off your cell phone or pager.

LABS

The lab consists of a pre-lab exercise, lab work, and post-lab report. The lab schedule is on page 7.

Attendance: *You must attend every laboratory session.* If you miss more than one lab without an excused absence, you will fail the class. The same policies described for missing an exam apply here. If you do miss lab, please contact your TA (if possible in advance of the lab) and the stockroom (Bagley 271). We will try to schedule you into an alternate lab time. See Dr Harvey, Bagley 294, if you need to be excused (there is no alternate time, or you need to be assigned a make up lab). See the laboratory manual for more details.

Safety: There is an element of hazard in any laboratory course. You are required to follow the safety instructions as outlined in your laboratory manual. In particular, you are required to wear **approved safety goggles and a lab coat** during all the experiments. If you do not dress appropriately, you will not be allowed to attend the lab session. **No open-toed shoes, no bare legs or ankles will be permitted, nor will any clothing that interferes with lab activity.**

Pre-labs: The information necessary to prepare yourself for each lab is available via the 162 Lab link on <http://depts.washington.edu/chem/courses/>. This course uses internet-based pre-labs, except for lab #5. You will both receive and submit these assignments online via the internet. For more details, see the WebAssign description under homework. *Check the due dates for the pre-labs to avoid being shut out.* You must score at least 3.5 points (out of 5 total) on the WebAssign pre-lab before the due date, which is set to coincide with the first scheduled lab period of the week. If you don't have the required 3.5 point score by the due date, you will have 15 points deducted from your grade for the lab report. *The purpose and procedure sections of your notebook must be completed before your lab period.*

Lab Notebook:

Bound laboratory notebooks (not loose leaf) with numbered pages **and carbonless duplicate copies** are available at the bookstore. *Please note the special nature of this lab notebook.*

- All recording and reporting must be in this notebook **IN INK**. Line through your errors neatly instead of erasing or whitening out.

- On the first available page of your notebook write (i) your name and student number, (ii) Summer Quarter 2009, (iii) the course number, Chem. 162A, and (iv) your section.
- Write your name, section, and experiment number on each page you use.
- ***Be prepared to hand in the duplicate pages at the end of each lab period.***

During Labs: Perform only assigned work. If any deviations are necessary, consult your TA first. Record observations (data), perform all necessary calculations, and, based on your results, come to some conclusion.

Before You Leave the Lab:

Your TA will check and make sure that you have done all assigned work. He/She will initial your lab notebook and ask for a duplicate copy of your work.

Post-Lab Reports:

The post-lab report and instructions are accessed online via the “162 Labs” link on the following website: <http://depts.washington.edu/chem/courses/>.

QUIZ SECTIONS— Be on time! See page 8 for the time schedule.

Part of the quiz section will be devoted to a quiz on the material covered since the previous quiz/exam. The remainder of the quiz section is devoted to helping you with difficulties in understanding the lecture and lab materials.

HOMEWORK— This course uses internet-based homework exclusively.

You will both receive and submit your assignments online via the internet. Assignments will be available at least one week before they are due. You are responsible for keeping track of the due date *and* time for all homework. In addition, internet-based services generally do not employ an atomic clock to determine the time; therefore, do not wait until the last second to turn in your work! The internet interface is called “WebAssign” and can be found at <http://www.webassign.net/washington/login.html>.

How to access WebAssign:

- 1) Go to www.webassign.net/washington/login.html
- 2) Click on the button labeled “Log In” which takes you to the UW NetID weblogin page:

UW NetID:	<input type="text"/>	←	Your UW Net ID (e-mail address without the "@u.washington.edu")
Password:	<input type="text"/>	←	Your UW Net ID password

- 3) Click on the “Log In” button which takes you back to WebAssign.

NOTES:

- Each student must purchase an access code to use WebAssign.
- Access codes can be purchased either in person at the UW bookstore, or online at WebAssign's website. Enter the code in the assignment titled "WebAssign Registration." There is a 2-week grace period before access codes are enforced.
- Click on the "Student Guide" for information about how to use WebAssign. Also, the "Intro to WebAssign" assignment will help you learn how to use WebAssign.
- If you need additional help, see your TA or go to the Chem Study Center (BAG 330).

HELP RESOURCES

- **Instructor:** See instructor's office hours on the front page.
- **Teaching Assistant:** Your teaching assistant (TA) will advise you of his/her office hours during the first week of the quarter. Your TA is an important person to your success.
- **Chemistry Study Center, Bagley 330:** The study center is open M to Th from 9:00 am to 6:00 pm and 9:00 am to 2:00 pm on F. The study center is staffed with experienced teaching assistants.
- **Undergraduate Services, Bagley 292/294:** The staff can help with scheduling problems, clicker or WebAssign problems, or issues that arise during the course.

EXAMS

There are 2 midterm exams and a final. The final will be broken into two parts and given during the last two class days of the quarter. The dates for the exams are provided in the course schedule on page 7 of the syllabus. Chemistry knowledge is cumulative so questions on exams will often depend on knowledge from earlier chapters.

Exam Rules

1. Bring a number 2 pencil, your calculator, and a photo ID to all exams.
2. You must sit according to the *seating charts*, posted on the walls in the front of the classroom a few days before the exam.

Grading

- One hour exams will be graded and returned in quiz section.
- Keys to exams will be posted on the Chem 162A bulletin board in Bagley Hall.

Re-grading

- If it is a simple addition error, show the exam/report to your TA for correction.
- **Regrade must be for ≥ 5 pts!** To have your exam/report re-graded, it must be given to your TA **within 48 hours of its return to you** along with a note explaining what you want regraded.
- We reserve the right to regrade the entire exam/report, so you may lose rather than gain points. Note that we will be Xeroxing a subset of the exams, and will compare your exam to the Xerox of the original. Any discrepancies will be treated as academic misconduct (see above).

Absences

If you are absent from a midterm examination through sickness or other valid unavoidable cause, the weight of your final exam will be increased proportionately in calculating the course grade.

Examples of unavoidable causes include: illness, death or serious illness in the immediate family, and, provided previous notification is given, observance of regularly scheduled religious obligations and attendance at academic conferences or field trips, or participation in university-sponsored activities such as debating contests or athletic competition.

Proper Procedures:

1. Report your absence from an hourly examination within 72 hours to Dr. Tracy Harvey in Bagley 294, and
2. Bring proof of your unavoidable cause (a doctor's note, an accident report, a memorial folder, or similar documentation). The documentation must include a contact name and telephone number.
3. Dr. Harvey will notify the instructor of the status of your absence. If your absence does not meet the above criteria, you will be given a zero for the exam.

Note: If you are absent from the final examination, and you are ineligible for an incomplete according to the UW regulations, a course grade of 0.0 will be given. If an incomplete is given, you must take the final exam for the same course in the next regular academic quarter in which it is offered to remove the incomplete.

Keys to Success

1. Attend ALL classes, pay close attention and take notes.
2. Chemistry is sequential and hierarchical. You must learn and digest today's lecture before you can expect to understand tomorrow's lecture. Study at least two hours for each hour of lecture. Spend one hour for every hour of lab. Find a place that allows for periods of uninterrupted study. Skim through chapter or sections to be covered in the next lecture.
3. Make daily, weekly, and quarterly plans and follow the plan.
4. Practice what you are to do on the exams. Work many problems.
5. Talk chemistry with fellow Chem. 162 students. The study center (Bagley 330) is a good meeting place.

If you would like to request academic accommodations due to a disability, please contact the Disabled Resources for Students Office, 448 Schmitz, 206-543-8924 (V) or 206-543-8925 (TTY). If you have a letter from Disabled Student Services indicating you have a disability that requires academic accommodations, please present the letter to Dr. Tracy Harvey in BAG 294 to discuss the accommodations you might need for this class.

COURSE SCHEDULE:

The lecture schedule is approximate and may be altered slightly as we progress through the quarter. However, the dates for exams, homework/prelab/lab report deadlines, quizzes, and labs will not change.

Week	Lectures (M,T,Th,F) 8:30-9:30 am	Quiz Section (Wed)	Lab Schedule (W or Th)	Exams 8:30-9:30 am	Work Due
1 6/22	Chapter 14 No class: Fri	Qz 1: Review of 142 & 152 topics	No lab		
2 6/29	Chapter 14 No class: Mon, Tues, Fri	Qz 2	Lab 1* Models/Magnets		Prelab 1* HW 1
3 7/6	Chapters 14 & 15	Qz 3	Lab 2 Kinetics		Prelab 2 Lab 1 report HW 2
4 7/13	Chapters 15 & 16	Review for Exam	Lab 3* Intermolecular Forces	Exam 1: Ch 14-15 Thurs 7/16	Prelab 3* Lab 2 report HW 3
5 7/20	Chapters 16 & 17	Qz 4	Lab 4 Fract. Cryst. & Solubility		Prelab 4 Lab 3 report HW 4
6 7/27	Chapters 17 & 18	Qz 5	No lab		HW 5 (Prelab 5 - CSC)
7 8/3	Chapters 18 & 19	Review for Exam	Lab 5* Periodic Trends	Exam 2: Ch 16-18 Thurs 8/6	Prelab 5* Lab 4 report HW 6
8 8/10	Chapters 19, 18 & 21	Qz 6	Lab 6* Spectrochemical Series		Prelab 6* HW 7
9 8/17	Chapter 21	Review for Exam		Final Pt. 1: Ch 18,19,21 Thurs 8/20 Final Pt. 2: Cumulative Fri 8/21	HW 8

*These labs have **in-lab reports** due before the end of the lab period **for part or all of the experiment.**

DISCUSSION AND LAB SECTIONS

Note: The rooms and times for the lab and quiz sections are listed in the table below. The rooms are subject to last-minute changes by the university during the first few days of the quarter. On the day of your first attendance to these sections, please check your schedule on MyUW to verify the room assignment.

<u>Section</u>		<u>Day</u>	<u>Time</u>	<u>Location</u>	<u>TA</u>
AA	QZ	W	1200-100	CHL 105	Alicia Key
	LB	W	830-1130	BAG 291	
AB	QZ	W	110-210	CHL 105	Vladimir Vlaskin
	LB	W	830-1130	BAG 291	
AC	QZ	W	940-1040	BAG 106	Joshua Gregersen
	LB	W	1200-300	BAG 291	
AE	QZ	W	1050-1150	BAG 106	Joshua Gregersen
	LB	TH	1200-300	BAG 291	
AF	QZ	W	940-1040	CHL 105	Christopher Moss
	LB	TH	1200-300	BAG 291	