

Chemistry 221 (sec 1)

Syllabus Fall 2012

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Office Hours: tentatively, Mon 12-1, Wed 9-10, Fri 9-10

Text: Chemistry, A Molecular Approach, Tro, 2nd edition, Pearson/Prentice Hall (2010).
You may use the 1st edition but you are responsible for determining if problems differ from the new edition. Clickers will be required, available at the bookstore.

Exams: There will be two one-hour midterms, two short quizzes and a two-hour final (see schedule). The final exam will be cumulative. The material to be covered during each exam is shown on the schedule.

Homework: There will be regular problem assignments given during class. These will *not* be turned in for grading. Some quiz and midterm problems may be taken from these problems sets. The answers to these problems are provided in the back of the text and in the solutions manual. **Success in this course is strongly correlated with effort spent working problems.**

Participation: There will be four ways for students to earn participation points. These points will be earned for effort in completing activities and are viewed as developmental learning work. (1) All students will be expected to complete three of four on-line activities assigned through D2L. (2) In-class points will be awarded for answering clicker questions. Two points will be awarded for each response; an additional point is earned for a correct answer. (3) Students may enroll in CH 284, General Chemistry Workshops or (4) complete the Mastering Chemistry (MyLabsPlus) assignments. MC assignments not submitted by 5:00 pm on the due date will lose 25% each day late and must be submitted by the next lecture date. Earning 80% of points possible for participation will confer full credit for participation. *See lecture 1 notes for more details.*

Mastering Chemistry URL: <http://psu.mylabsplus.com>

Use your PSU ODIN ID and password to log in

Select this chemistry course

Enter your purchased access code (only needed one time)

General Info: You are responsible for all information given during class times. This includes homework assignments and any special announcements or schedule changes.

Grading: Grades will be based on the cumulative scores of exams and quizzes, plus participation points (approximately 15% of the grade, participation points will be scaled appropriately). The following scores guarantee the grade shown; however, the instructor may choose to revise these percentiles downwards if class performance warrants it. Plusses and minuses will be given. Typically, the average grade in this course is a B-/C+.

Points:

Quizzes: $25 \times 2 = 50$ points

Midterms: $100 \times 2 = 200$ points

Final Exam: 200 points

Participation: 75 points total (activities scaled roughly 1/3 D2L activities, 1/3 Mastering Chemistry or Workshop, 1/3 Clicker points)

Total: 525 points

Students earning an A in this course are able to complete problems similar to those assigned in the homework, including those similar to the problems in the *Cumulative Problems* section at the end of each chapter. Some problems from this section will be assigned with each homework assignment. The ability to take concepts learned and apply them to problems not seen before but of similar difficulty is expected. *Challenge Problems* are more difficult than those on exams and provide additional practice at this skill.

Grade Score	A	B	C	D	F
	$\geq 90\%$	$\geq 80\%$	$\geq 65\%$	$\geq 55\%$	$< 55\%$

Policies: 1. Missing an Exam (or Quiz): If you miss an exam, please contact me within 24 hours. I will allow you to reschedule your exam only if your absence was excused, EXCEPT in the following cases, where you will need to take the exam ahead of time:

- a) School-sponsored field trips or athletic events
- b) Previous commitments, as allowed by instructor

Illness, work conflicts and family emergencies are considered excused absences. Other instances will be evaluated on a case by case basis. All exams must be made up before the exams are passed back in class. In cases where it is not possible to schedule a makeup exam and your absence is excused, your final exam may be used to count for the missed midterm. Failure to notify me of the reason for your absence, as well as unacceptable excuses, will result in a score of zero for that exam.

2. Professional Demeanor: It is expected that you will act with professional demeanor and attitude at all times. This includes, but is not limited to, being respectful at all times to the instructor and to your colleagues. It also expected that you refrain excessive talking, improper internet surfing or game playing, etc., on your computer or cell phone use in

class. Please note that respectful communications are also expected when using email or the course discussion board. As a general rule, please refrain from any comments that you would be reluctant to say in person.

3. Dishonesty: I trust that the work you do in this course is your own. Academic dishonesty will not be tolerated in this course. Cheating during any exam will be reported and the student will receive an “F” for the exam.

4. Accommodation: If you have a physical or learning disability and you need extra accommodation, please be certain you are registered with Disability Services and make appropriate arrangements with me in a timely manner.

5. “Margin of Error Percent”: Mistakes are sometimes made while grading exams; the good news is that they are usually addition errors, which I will happily “fix at no charge.” On any given exam, you may not perform up to your potential and your exam may not show how much you know. Exam scores have a margin of error. If you believe there has been a serious mistake on grading your exam, you may ask me to regrade the exam *up to one week after the exam is returned*. If I determine there has been an error in grading your exam and it increases your score by 5 or more points, I will again happily “fix at no charge”. If there is not a significant error on your exam and you have asked for a regrade, you will lose your 2% margin of error points. On the other hand, if you choose not to ask for regrades on exams (this does not include addition errors or grading errors I determine), a bonus of 2% is added to your overall score at the end of the term. *It is also possible to lose your margin of error percent due to unprofessional behavior.*

Email and Discussion Board Etiquette:

- When you are talking face to face or by telephone you get immediate feedback, however when using email you will not get this feedback. Take extra time to write your email, keep it short and to the point. Consider whether or not your message might be better suited to a phone call or in person meeting.
- Try this test on your email: Would you say this to the individual in person?
- Create subject lines that are descriptive enough for the reader to easily sort and filter the items. Indicate that you are a CH 221 student.
- If your message is important, mark it that way. Many software packages have this feature.

Chemistry 221

Lecture and Exam Schedule (Subject to Change)

Week 1

Date	Meeting/Day	Activity	Chapter	Material
Sept 24	1 / M	Lecture	1	Introduction Class Structure
Sept 26	2 / W	Lecture	1	Density/Metric Units
Sept 28	3 / F	Lecture/Problem	1	Gasoline problem

Week 2

Date	Meeting/Day	Activity	Chapter	Material
Oct 1	4 / M	Lecture/Problem	2	Periodic table - Mole
Oct 3	5 / W	Lecture	2 & 3	Compounds
Oct 5	6 / F	Problem/ Quiz	3/1 & 2	Chamomile Problem

Week 3

Date	Meeting/Day	Activity	Chapter	Material
Oct 8	7 / M	Lecture	3	Nomenclature / mass %
Oct 10	8 / W	Lecture	3	Empirical Formulas – Balanced Reactions
Oct 12	9 / F	Review	1-3	Fertilizer problem

Week 4

Date	Meeting/Day	Activity	Chapter	Material
Oct 15	10 / M	Midterm	1-3	
Oct 17	11 / W	Lecture	4	Stoichiometry - Limiting Reactants
Oct 19	12 / F	Lecture	4	Molarity/Titrations

Week 5

Date	Meeting/Day	Activity	Chapter	Material
Oct 22	13 / M	Lecture	4	Solutions/Solubility
Oct 24	14 / W	Lecture/Problem	4	Neutralizing Problem
Oct 26	15 / F	Quiz/Lecture	4/7	Quantum Mechanics

Week 6

Date	Meeting/Day	Time	Activity	Material
Oct 29	16 / M	Lecture	7	Quantum Mechanics
Oct 31	17 / W	Lecture	7	Hydrogen Atom
Nov 2	18 / F	Lecture	8	Periodic Table/Electrons

Week 7

Date	Meeting/Day	Activity	Chapter	Material
Nov 5	19 / M	Lecture	8	Periodic Table
Nov 7	20 / W	Lecture	8	Periodic Trends
Nov 9	21 / F	Review	4,7-8	

Week 8

Date	Meeting/Day	Activity	Chapter	Material
Nov 12	22 / M	Holiday	4,7-8	
Nov 14	23 / W	Midterm	4,7-8	
Nov 16	24 / F	Lecture	9	Electron Densities/Bonding

Week 9

Date	Meeting/Day	Activity	Chapter	Material
Nov 19	25 / M	Lecture	9	Lewis/Covalent Bonds
Nov 21	26 / W	Lecture	10	Bonding/Geometries
Nov 23	27 / F	Holiday		

Week 10

Date	Meeting/Day	Activity	Chapter	Material
Nov 26	28 / M	Lecture	10	Hybridization
Nov 28	29 / W	Lecture	10	Bonding Models / MO
Nov 30	30 / F	Review	1-4,7-10	All

Final Exam

Date	Day	Time	Activity	Material
Dec 5	W	10:15-12:05	Exam	Chap 1-4, 7-10

Disclaimer:

As the instructor of this course, I reserve the right to change the tentative schedule of topics, number and length of examinations, point distribution, course requirements, and percentages required for letter grades in order to better facilitate the learning process.