

Chemistry 4: Premilla Arasasingham

Fall 2009

Tel: 805-402-0709

email: premilla@earthlink.net

office hours: MTThF 8-8:30 am

Room: Chem 132

(Note: This syllabus may be subject to revision.)

Prerequisite: Math 70 or equivalent.

Required Materials: Cracolice, Peters, Introductory Chemistry, 4th ed.; McLeod, et. al., Chemistry 4 Supplement; Scientific Calculator; Safety Goggles (Instructor Approved).

Chemistry 4- Introductory Chemistry

This class is a college-level introductory or preparatory course for students who later will take a full-fledged general chemistry course. It assumes that this is the student's first chemistry course.

This class is designed with the following broad-based goals in mind for students taking this class. On completing this class the student will be able to do the following:

- Read, write and talk about chemistry, using a basic chemistry vocabulary
- Write routine chemical formulas and equations
- Set up and solve chemistry problems
- Think about chemistry on an atomic or molecular level in fundamental theoretical areas and visualize what happens in a chemical change.

Grading:	Exams (4 x 100 pts)	400
	Quizzes (8 x 25 pts) + 25 pt element quiz	225
	Labs/Exercises (13 x 10 pts)	130
	Home work/attendance	45
	<u>Comprehensive Final</u>	<u>200</u>
	Total	1000

Final letter grades will be assigned approximately to the following distribution:

100-90% = A; 89-80% = B; 79-65% = C; 64-54% = D; < 54% = F

Lab: Bring the lab manual and a blank copy of all report sheets. If you forget the manual, after lab lecture you may borrow another student's lab and make copies in the library (though you may not have time to finish). You must be present for the entire lab lecture to be allowed to do the lab. Late students will receive a penalty or may be asked to leave depending on what was missed. Copying (even a sentence or piece of data) is cheating and may result in a zero. Writing something on another student's lab paper is also considered cheating. Every student must do independent work. Asking another student a quick question is okay; for long or detailed explanations, you should ask the instructor. Students who bring previously graded experiments into the lab will have the experiments confiscated and be asked to leave. Before each lab, I'll give notes on safety, disposal, and important information. Keep these notes on the bench during lab. **Read the experiment before you come into lab.** Absences result in zeros. You must wear appropriate shoes to any experiments involving the burner or chemicals. Don't touch the chemicals until instructor talks about experiment!

Home Work: Homework will be collected randomly and graded according to completion, neatness and presence of all logical steps.

Quizzes and Tests: Missed quizzes/exams result in a zero except in certain situations. To discuss a situation, *you must contact me or leave me a message at least one day before the next class meeting so I can decide the nature of the situation.* Generally, doctors or other appointments are not considered emergencies as they can be rescheduled. You must clear the memory of your programmable calculator before taking a quiz or test. Listening to ipods or any other devices during exams and quizzes is not permitted.

Academic Courtesy: Come to class on time and prepared. Please refrain from side conversations. Questions, comments, and corrections from the class are appreciated. This class is a cell-phone-free environment. Student's who drop the course before the final W drop date will receive a "W". It is the student's responsibility to drop the course to avoid an "F".

Academic Honesty: Studying in groups after class is strongly encouraged. However, quizzes, tests and final exam must be done independently. Anyone caught cheating during a quiz, test or exam will receive an automatic zero and receive an "F" grade. The cheating incident will be reported to the Dean of Natural Sciences Division for further disciplinary actions.

Attendance: Students with excessive absences or lateness may receive a lower grade, and/or receive deductions on the Participation and Attendance points. Students who drop the course before the final W drop date will receive a "W". It is your responsibility to drop the course to avoid an "F". To drop, you must check out of your lab drawer and have a card signed by the stockroom.

How to Do Well: A few students will need remedial math before they can pass chemistry, and a few will have a personal emergency. These situations probably require retaking the course. For others who fail Chem 4, I've noticed one or more of the following: They zone out during lecture, they don't study enough hours or days a week, they have too many time commitments outside of school, they don't try enough problems on their own, and they don't try aggressively to clear up confusion before moving to a new chapter. Don't wait until it's too late! See me or email me if you have any trouble. I want you to succeed!

Please bring textbook to class!

"If you have a documented disability and wish to discuss academic accommodations, please contact me as soon as possible."

Or

"Students with disabilities who believe they may need accommodations in this class are encouraged to contact the Special Resource Center on campus as soon as possible to better ensure such accommodations are implemented in a timely fashion. As well please contact me privately to discuss your specific needs. "

Week	Date	
1	Mon 8/31	Lab-Safety video and safety sheet (Mandatory), Experiment 1, Laboratory Burners (L1) Introduction, Chapter 1
	Tue 9/1	Chapter 2 (Matter). Bring your scientific calculator. Bring the math and measurements section of the supplement through week 2.
	Thu 9/3	Chapter 3 (Measurements)
	Fri 9/4	Chapter 3
2	Mon 9/7	Holiday
	Tue 9/8	Quiz 1 (Chap 2-3) , Chapter 4 (Gases).
	Thu 9/10	Chapter 4
	Fri 9/11	Chapter 5 (Atomic Theory)
3	Mon 9/14	Lab-Experiment 2, Measurements. (L2)
	Tue 9/15	Elements Quiz Chapter 5
	Thu 9/17	Chapter 6 (Nomenclature)
	Fri 9/18	Quiz 2 (Chap 4-5) Chapter 6
4	Mon 9/21	Experiment 7, Charles' Law (L3)
	Tue 9/22	Chapter 6
	Thu 9/24	Chapter 7 (Chemical Relationships), Review for exam
	Fri 9/25	TEST 1 (Chapters 2-6) Chapter 7 (Formulas)
5	Mon 9/28	Lab-Exercise A, Nomenclature -found in the back of your supplement (L4)
	Tue 9/29	Chapter 7
	Thu 10/1	Chapter 8 (Chemical Reactions). Bring the reactions section of the supplement through week 6.
	Fri 10/2	Chapter 8
6	Mon 10/5	Lab- Experiment 5, Hydrates (L5)
	Tue 10/6	Chapter 9 (Chemical Change)
	Thu 10/8	Quiz 3 (Chap 7-8) Chapter 9
	Fri 10/9	Chapter 9
7	Mon10/12	Lab-Experiment 3, Observations (L6)
	Tue10/13	Chapter 10 (Quantity Relationships in Chemical Reactions).
	Thu 10/15	Chapter 10
	Fri 10/16	Chapter 10
8	Mon10/19	Lab- Experiment 6, Chemical Reactions (L7)
	Tue 10/20	Chapter 11 (Atomic Theory Quantum model)
	Thu 10/22	Chapter 11, Review for exam
	Fri 10/23	TEST 2 (Chapters 7-10)

9	Mon10/26	Lab- Experiment 11, Conductivity (L8)
	Tue 10/27	Chapter 12
	Thu 10/29	Quiz 4 (Chap 11-12) Chapter 13 (Structure and Shape)
	Fri 10/30	Chapter 13
10	Mon 11/2	Lab- Exercise B, Models –found in the back of your supplement (L9)
	Tue 11/3	Chapter 14 (Ideal Gas Law)
	Thu 11/5	Quiz 5 (Chap 13) Chapter 14
	Fri 11/6	Chapter 16 (Solutions)
11	Mon 11/9	Lab- Experiment 9, The Ideal Gas Law (L10)
	Tue 11/10	Chapter 16
	Thu 11/12	Quiz 6 (Chap 14) Chap 16
	Fri 11/13	Holiday
12	Mon11/16	Lab- Experiment 10, Titrations (L11) Part 1
	Tue 11/17	Chapter 17 (Acid-Base Reactions), Review for exam
	Thu 11/19	TEST 3 (Chap 11-16) Chapter 17
	Fri 11/20	Chapter 18 (Chemical Equilibrium)
13	Mon11/23	Lab- Experiment 10, Titrations (L12) Part 2
	Tue 11/24	Chapter 18
	Thu 11/26	Holiday
	Fri 11/27	Holiday
14	Mon11/30	Lab- Experiment 12, Qualitative Analysis (L13)
	Tue 12/1	Chapter 19 (Oxidation-Reduction reactions). Bring redox-5 through week 15.
	Thu 12/3	Chapter 19
	Fri 12/4	Quiz 7 (Chap 17-18)
15	Mon 12/7	Lab- Experiment 12- Qualitative Analysis, Unknowns (L14)
	Tue 12/8	Quiz 8 (Chap 19), Chapter 20 (Nuclear Chemistry)
	Thu 12/10	Chapter 20, Review for exam
	Fri 12/11	TEST 4 (Chap 17-19)
16	Mon12/14	Lab- Check out.
	Tue 12/5	Review for final
	Thu 12/17	FINAL
	Fri 12/18	Exam Review and Grade Check