Introduction to General, Organic and Biochemistry I
(Chem. 30A:61,62) Syllabus

Lecture (Maxwell): T/T 5:30 PM – 7:20 PM -- Room **SC1102**
Lab (Subramaniam): Room SC2204. 61-T: 7:30-10:20 PM; or Lab: 62-Th: 7:30-10:20 PM

Instructor (Lec): Dr. James Maxwell, phone: (773) 454-7779 (texts also), email: maxwelljames@fhda.edu , office: SC1 second floor, office hours Tu-Th 4-5 pm.

Instructor (Lab): Dr. Ram Subramaniam, phone: (408) 864-8517, email: subramaniamram@fhda.edu, office: SC1222, office hours: TBA.

Description: An introduction General Chemistry for Allied Health Fields with Laboratory.

Student Learning Outcomes:

1. Solve stoichiometric problems by applying appropriate molar relationships.
2. Predict the behavior of ideal gasses using Kinetic Molecular Theory.
3. Apply acid-base chemical principles to biological processes.

Evaluation: Your grade will be based on your performance in the following:

10 best Quizzes out of 12 quizzes (10 pts each)	100 points
9 Labs (20 pts each)	180
1 Lab Final (100 pts)	100
3 Exams (100 pts each)	300
1 Final (200 pts)	200
Total	880 points

Letter grades will be assigned according to the *approximate* scale:

A	90%
B	80%
C	70%
D	50%
F	< 50%

Attendance: Your attendance is urged for all lectures and required for all quizzes, exams and labs. Unexcused exam, quiz and lab absences score 0. It is the responsibility of the student to contact the professor regarding missed work. If an absence is anticipated, the student should make arrangements to complete the missed assignments prior to the absence. In an emergency, it is the student's responsibility to contact the instructor within one class period of an exam. *There are no laboratory make-up days*. Please sign the attendance sheet each class.

Quizzes: Quizzes will be given during class on Tuesday or Thursday as scheduled in syllabus, and will have a time limit. Answer keys will be available after the quiz. *If you miss the quiz, you will **not** have a chance to make it up.* The best 10 quiz scores will be used in determining your final grade.

Exams: There will be three exams and one final exam. You must bring your own calculator (if you need one), pencil and eraser for exams. You are permitted to bring a molecular model kit, the instructor must approve if it is assembled in any way. Cell phones may not be used at any time during the exam. **Calculators** may be used if approved by instructor. Once the exam begins you may not leave the room unless you turn in the exam, so plan to take a bathroom break ***before*** class. **No Mobile Phones during Exam! Answer Keys will be available after the exam.**

Lecture Text: Janice G. Smith, **General, Organic and Biological Chemistry**, 3rd ed, 2016, McGraw-Hill.

Lab Experiments: The lab experiments are located at this link: http://deanza.edu/chemistry/pdf/30A/

Labs: All 9 labs count towards your grade. No make-up labs. Late labs will incur a penalty. You **MUST** wear eye protection during lab.

Academic Dishonesty: "Academic dishonesty is a serious offense, which includes but is not limited to the following: cheating, complicity, fabrication and falsification, forgery, and plagiarism. Cheating involves copying another student's paper, exam, quiz or use of technology devices to exchange information during class time and/or testing. It also involves the unauthorized use of notes, calculators, and other devices or study aids. In addition, it also includes the unauthorized collaboration on academic work of any sort. Complicity, on the other hand, involves the attempt to assist another student to commit an act of academic dishonesty. Fabrication and falsification, respectively, involve the invention or alteration of any information (data, results, sources, identity, and so forth) in academic work. Another example of academic dishonesty is forgery, which involves the duplication of a signature in order to represent it as authentic. Lastly, plagiarism involves the failure to acknowledge sources (of ideas, facts, charges, illustrations and so forth) properly in academic work, thus falsely representing another's ideas as one's own."

Word Processing: If you are looking for a **free** word processor compatible with WORD, checkout www.openoffice.org .

Online Help: Some suggested websites for help. **http://chemistry.about.com/od/homeworkhelp/a/chemistry101.htm** or **http://antoine.frostburg.edu/chem/senese/101/tutorials/**

Absences: **In case of any absence, please contact me as soon as possible. Contact your instructor efore your absence if possible, otherwise within 24 hours afterwards.**

Changes to Syllabus: This syllabus may change according to the instructor and the needs of the class. Please check with the syllabus posted in the Course Studio. Changes will be noted by a date. Use the most current date.

Class Calendar

Date (T)	Lecture Chapter (RM S56) 61:Lab Experiment (RM 2204)	Date (Th)	Lecture Chapter (RM S56) 62:Lab Experiment (RM 2204)
10 Jan	Lecture: Intro to Course and Lab; & Math Skills Ch. 1: Matter and Measurement Lab Check-in	12 Jan	Lecture: Ch. 1: Cont. Ch. 2: Atoms and the Periodic Table **Quiz 1: Math Skills (Take-Home)** Lab Check-in
17 Jan	Lecture: Ch. 2: Cont. Lab 1: Measurements **Quiz 2: Ch. 1** **Quiz 1: DUE** **Safety Statement Due**	19 Jan	Ch. 3: Ionic Compounds **Quiz 3: Ch. 2** Lab 1: Measurements **Safety Statement Due**
24 Jan	Lecture: Ch. 3: Cont. Ch. 4: Covalent Compounds Lab 2: Nomenclature	26 Jan	Lecture: Ch. 4: Cont. **Quiz 4: Ch. 3** Lab 2: Nomenclature
31 Jan	Review Exam 1: Chap 1-4 **Quiz 5: Ch. 4** Lab 3: Models	2 Feb	**EXAM 1: Chap 1-4** Lab 3: Models
7 Feb	Lecture: Ch. 5: Chemical Reactions Lab 4: Hydrate (part 1)	9 Feb	Lecture: Ch. 5: Cont. Ch. 6: Energy Changes, Reaction Rates and Equilibrium Lab 4: Hydrate (part 1)
14 Feb	Lecture: Ch. 6: Cont. Ch. 7: Gases, Liquids, and Solids **Quiz 6: Ch. 5** Lab 5: Hydrate (part 2)	19 Feb	Lecture: Ch. 7: Cont. **Quiz 7: Ch. 6** Lab 5: Hydrate (part 2)
21 Feb	Lecture: Ch. 8: Solutions Lab 6: Molar Volume	23 Feb	Lecture: Chap 8: Cont. Lab 6: Molar Volume
28 Feb	Review Exam 2: Ch. 5-7 **Quiz 8: Ch. 7** Lab 7: Conductivity (Vernier)	2 Mar	**EXAM 2: Ch. 5-7** Lab 7: Conductivity (Vernier)
7 Mar	Lecture: Ch. 9: Acids and Bases **Quiz 9: Ch. 8** Lab 8: Acid-Base Titration (part 1)	9 Mar	Lecture: Ch. 9 cont. Lab 8: Acid-Base Titration (part 1)
14 Mar	Ch. 10: Nuclear Chemistry **Quiz 10: Ch. 9** Lab 9: Acid-Base Titration (part 2)	16 Mar	Lecture: Ch. 10: Cont. Review for Exam 3: Ch. 8-10 **Quiz 11: Ch. 10** Lab 8: Acid-Base Titration **(complete)**
21 Mar	Review for Exam 3: Ch. 8-10 Review for Final: Ch. 1-10 **Quiz 12: Ch. 1-10 (Take-Home)** **Lab: Lab Final** **Lab: Check-Out**	23 Mar	**Exam 3: Ch. 8-10** **Lab: Lab Final** **Quiz 12 DUE** **Lab: Check-Out**
28 Mar	**Final Exam: Ch. 1-10** *****6:15-8:15 PM*****	30 Mar	**Class Over (No Class)**

INSTRUCTIONS for the Laboratory:

1. Print out, read, sign and return to your instructor the **Lab Safety Statement**. This must be returned by the **second** laboratory period **(17/19 Jan. 2017).** You can download a copy from the Course Studio under Files: **Laboratory Safety Statement**. If you are late turning this signed document in, you will be assessed one penalty point per class period you are late (lecture and lab).
2. You must do your laboratory work at the time assigned. Attendance will be taken. Study the experiment carefully before coming to class so that you don't waste time going through the procedure during the lab. **NO MAKE UP LABS**.
3. You must do your own work unless you are told to work in pairs for an experiment. If you need guidance, let the instructor know.
4. Always think through the next step you are going to perform before starting it.
5. **Record all data in ink while you work.** Do not write data on paper towels or other pieces of paper, even temporarily. Make sure your data is complete. **Do not forget to write your name or record any unknown number**. Pay attention to significant figures and units. If you make a mistake, cross it out neatly with a **single** line.
6. All laboratory reports are due one week after the experiment is performed.
7. **Children or visitors** are not allowed in the lab.
8. **No eating or drinking in the lab at all at any time!**
9. **ALWAYS WEAR YOUR EYE PROTECTION. ALWAYS WEAR YOUR EYE PROTECTION. ALWAYS WEAR YOUR EYE PROTECTION. ALWAYS WEAR YOUR EYE PROTECTION. ALWAYS WEAR YOUR EYE PROTECTION. ALWAYS WEAR YOUR EYE PROTECTION.** Failure to wear your eye protection will lead to dismissal from lab and a zero or lowered grade for that experiment.
10. **WEAR SENSIBLE CLOTHING**. INO SHORTS, NO LOOSE LONG HAIR, NO LOOSE FLOWING CLOTHING, NO SANDALS OF OPEN TOE SHOES. If you wear shorts, sandals, or other clothing that is not consistent with safety, you will not be admitted to the laboratory and receive a zero for the lab. Wear a lab apron or gloves if you have them.
11. Always work with clean equipment. Clean also means **DRY**.
12. Carefully measure the quantity of each material to be used in the experiment.
13. Always place reaction vials, test tubes or flasks in a clean beaker when standing them on a laboratory bench.
14. Do not take reagent bottles to your laboratory work area. Use test tubes, beakers, or paper to obtain chemicals from the dispensing area. Take small quantities of reagents. You can always get more if you run short.
15. Check carefully the label on each reagent bottle to be sure you have the correct reagent. The names of many substances appear similar at first glance.
16. To avoid possible contamination, never return unused chemicals to the reagent bottles. Never interchange spatulas or droppers.
17. Do not insert droppers into large reagent bottles. Instead pour a little of liquid into a small beaker.
18. Be neat in your work; if you spill something, clean it up immediately.
19. Wash your hands with soap anytime you get chemicals on them and at the end of the laboratory period.
20. Keep the mass balances and the area around them clean. Follow the directions given by the instructor on the proper weighing technique to use. Otherwise, do not place chemicals directly on the balance pans; place a piece of weighing paper or a small container on the pan first, and then weigh your material. Never weigh an object while it is hot.
21. Do not heat graduate cylinders, burettes, pipettes, or bottles with a burner flame.
22. Do not look down into the open end of a test tube in which the contents are being heated or in which a reaction is being conducted.
23. Do not perform unauthorized experiments.
24. After completing the experiment, clean and put away your glassware and equipment. Clean your work area and make sure the gas and water are turned off. A clean lab is a safe lab.
25. Dispose solid waste such as filter paper, litmus paper, and matches in the wastebasket, not in the sink. Dispose broken glass in the broken glass waste boxes. Dispose all other solid chemicals as directed by your instructor. Pour all the toxic liquids into the waste bottles provided or as directed by instructor. DeAnza can be penalized if disposal procedures are not followed. I will get disciplined if disposal procedures are not followed. You will get disciplined if disposal procedures are not followed.
26. WASH YOUR HANDS with soap and water before leaving lab.
27. Leave the lab and balance room in pristine condition. If this becomes a problem, the entire class will be assessed penalty points to your lab grade. Wipe up all spills in the lab and balance room, close all the doors on the balances, wipe of all water, replace all chemicals and materials to their original storage spaces. Remember: there is not such thing as "NOT MY JOB." Everything if everyone's job if your are enrolled in this class.
28. Thanks for a safe and clean lab.