

# Introduction to General, Organic and Biochemistry I

[Be Kind]

## (Chem. 30A:61,62 F18) Syllabus

Lecture: T/Th 5:30 PM – 7:20 PM -- Room SC1102

Lab Room: SC2204: 61-T: 7:30-10:20 PM; or 62-Th: 7:30-10:20 PM

**Instructor :** Dr. James Maxwell, phone: (773) 454-7779 (texts also), email: maxwelljames@fhda.edu ,  
office: SC1 second floor, just a desk not an office.  
Tu. & Th. 4-5 pm.

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

**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
Lab Clean-up	20
1 Lab Final (100 pts)	100
3 Exams (100 pts each)	300
1 Final (200 pts)	200

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<b>Total</b>	<b>900 points</b>
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Letter grades will be assigned according to the *approximate* scale:

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

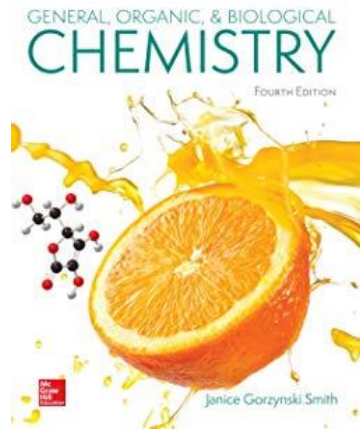
**Attendance:** Your attendance is urged for all lectures and required for all quizzes, exams and labs. Unexcused exam, quiz and lab absences score 0. It is the responsibility of the student to contact the professor regarding missed work. If an absence is anticipated, the student should make arrangements 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.

**Take Home Quizzes:** For Take-Home quizzes you are expected to work independently. You may use your note, our text, or ask your instructor questions. You are not to use any other sources including your fellow student. Please abide by this or there will not be any additional Take-Home Quizzes. Take Home Quizzes are due on the date announced, generally the next class session, **without exception.**

**Exams:** There will be three exams and one final exam. You must bring your own scientific calculator (if you need one), pencil and eraser, or pen for exams. 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 ask your professor. **No Mobile Phones during Exam! Answer Keys will be available after the exam.**

**Lecture Text:** Janice G. Smith, **General, Organic and Biological Chemistry**, 4th ed, 2016, McGraw-Hill. Other editions are okay.



**Lab Experiments:** The lab experiments are located at the Schoology.com link for this class.

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

**Lab Notebook:** You will need to purchase **TWO** *Composition notebooks*. (See Photo) They are about \$1. The pages are sewn into the binding. Not spiral bound. Not perforated pages. Lined or graphical pages are okay. Be sure you buy the correct *Composition notebook*, no other notebook will be allowed. First, number **all** pages, front and back, at the upper right hand corner. **Number ALL pages.** Number every single page.

**Contents of book: (These composition books can be used on your lab final. Keep them up to date.)**

- Front page, put your name, Course and section number and a phone number or email in case lost.
  - After you complete any page, you will sign and date that page at the bottom right.
  - Mistakes are lined out with a single line, for example: ~~single~~ single. Don't make a huge mess if you make an error. A simple single line or X is adequate. **Do Not Use WHITE-OUT correction fluid or erase.**
  - Front page: Table of Contents, give the title of the experiment and beginning and ending page.
- For each Experiment** (Before you come to class have the following in your notebook, and get a star stamp from your professor for these items **before** you begin lab):
- Title
  - Learning Outcomes
  - Brief Introduction to the experiment
  - Experimental Design
  - Supplies, Procedure
  - Data Table (Blank)

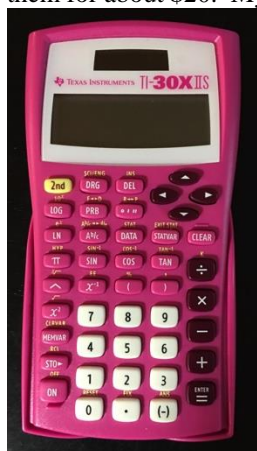
**Receive a stamp from the instructor it indicate these items are in place**  
**After class and before the experiment is graded complete the following.**

- Results, Summary (including analysis or errors-sources of error and how to prevent them)
- When you arrive at lab, you will receive a stamp to indicate that you have *Title, Learning Outcomes, Brief Introduction, Experimental Design, and Empty Data tables*. This is worth 5 points. The week after the experiment is completed, your book will be inspected for completion of the experiment, worth 15 points.

**Composition Notebook:** You need **TWO (2)** of these. See photo below. This book is available at most grocery and drug stores for a few dollars.



**Calculator:** A scientific calculator, not our smart phone, will be necessary to complete quizzes and exams. You can purchase them for about \$20. My favorite is the TI-30XIIS shown here:



**Absences:** Missed labs cannot be made up. You will lose 10 lab points if you miss a lab day. I can give you half credit for your lab write-up. Missed quizzes can be made up BEFORE the key is published. You must talk to the professor. Late quizzes will score zero. Missed Exams must be made up BEFORE the key is published. Talk to your professor. An attendance sheet is available each class and lab. Please sign in. Please let your professor know of any absence as a courtesy.

**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](http://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 before your absence, if possible, otherwise within 24 hours afterwards.**

**Dropping the Class:** If you drop this class, you are responsible for checking out of lab. If you cannot check-out of lab on the day assigned, you must make arrangements with the Laboratory Manager, Michelle Doan at [doanmichelle@fhda.edu](mailto:doanmichelle@fhda.edu).

**Final Grades:** DeAnza will publish your final grades. **Please do not ask your professor.** If there are extenuating circumstances requiring your final grade early, please discuss with your professor before you take the final exam.

**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.

**Important Dates:**

**OCTOBER 7:** Last day to drop classes with no record of "W"

**OCTOBER 19:** Last day to request "Pass/No Pass"

**NOVEMBER 12:** Veterans Day - Campus Closed

**NOVEMBER 16:** Last day to drop classes with a "W"

**NOVEMBER 22-25:** Thanksgiving Holiday - Campus Closed

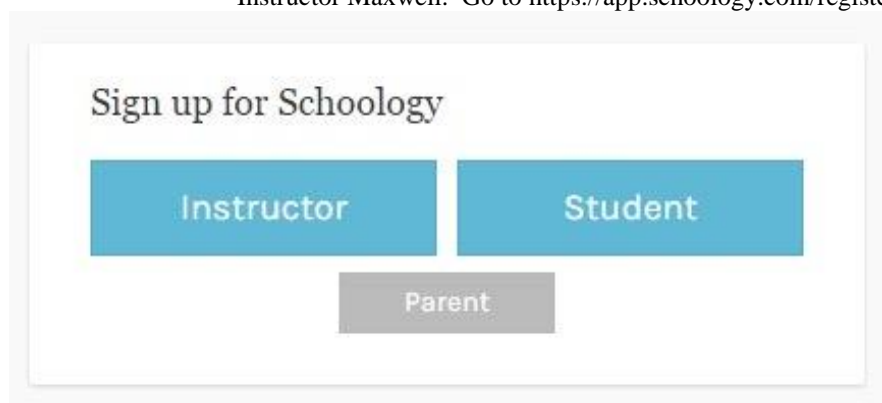
**DECEMBER 10-14:** Final Exams

**DECEMBER 14:** Last Day of Fall Quarter

**Schoology:**

We will be using Schoology.com to communicate during this course. You will find PowerPoint presentations, the Syllabus, the lab experiment, exam keys, quiz keys, and other important information here. Please sign up using the instructions below. Please let me know if you have any problems.

Following these instructions using the access code given to sign-up for Schoology for Chem 30A.61,62 F18, Instructor Maxwell. Go to <https://app.schoology.com/register.php> and click Student.



Enter your Access Code. This is your 10-digit code Access Code

**Q2GR6-BKZ6S**

Sign up for Schoology

[Back](#)

Access Code

Enter the access code provided by your instructor

**Continue**

- Fill out the form with your information correctly. Be correct about your age. Incorrect information blocks the site for everyone.
- Click **Register** to complete.

**Class Calendar**

<b>Date (T)</b>	<b>Lecture Chapter (RM SC1102) 61:Lab Experiment (RM SC2204)</b>	<b>Date (Th)</b>	<b>Lecture Chapter (RM SC1102) 62:Lab Experiment (RM 2204)</b>
25 Sept	Lecture: Intro to Course and Lab; & Math Skills Ch. 1: Matter and Measurement <b>Lab Check-in</b>	27 Sept	Lecture: Ch. 1: Cont. Ch. 2: Atoms and the Periodic Table <b>Quiz: Math Skills (Take-Home)</b> <b>Lab Check-in</b>
2 Oct	Lecture: Ch. 2: Cont. <b>61 Lab 1: Measurements</b> <b>Quiz 1: Ch. 1</b> <b>Quiz Math Skills: DUE</b> <b>61 Lab Safety Statement Due</b>	Oct 4	Ch. 3: Ionic Compounds <b>Quiz 2: Ch. 2</b> <b>62 Lab 1: Measurements</b> <b>62 Lab Safety Statement Due</b>
9 Oct	Lecture: Ch. 3: Cont. Ch. 4: Covalent Compounds <b>61 Lab 2: Nomenclature</b>	Oct 11	Lecture: Ch. 4: Cont. <b>Quiz 3: Ch. 3</b> <b>62 Lab 2: Nomenclature</b>
16 Oct	Review Exam 1: Chap 1-4 <b>Quiz 4: Ch. 4</b> <b>61 Lab 3: Models</b>	Oct 18	<b>EXAM 1: Chap 1-4</b> <b>62 Lab 3: Models</b>
23 Oct	Lecture: Ch. 5: Chemical Reactions <b>61 Lab 4: Hydrate (part 1)</b>	25 Oct	Lecture: Ch. 5: Cont. Ch. 6: Energy Changes, Reaction Rates and Equilibrium <b>62 Lab 4: Hydrate (part 1)</b>
30 Oct	Lecture: Ch. 6: Cont. Ch. 7: Gases, Liquids, and Solids <b>Quiz 5: Ch. 5</b> <b>61 Lab 5: Hydrate (part 2)</b>	1 Nov	Lecture: Ch. 7: Cont. <b>Quiz 6: Ch. 6</b> <b>62 Lab 5: Hydrate (part 2)</b>
6 Nov	Lecture: Ch. 8: Solutions <b>61 Lab 6: Molar Volume</b>	8 Nov	Lecture: Chap 8: Cont. <b>62 Lab 6: Molar Volume</b>
13 Nov	Review Exam 2: Ch. 5-7 <b>Quiz 7: Ch. 7</b> <b>61 Lab 7: Conductivity (Vernier)</b>	15 Nov	<b>EXAM 2: Ch. 5-7</b> <b>62 Lab 7: Conductivity (Vernier)</b>
20 Nov	Lecture: Ch. 9: Acids and Bases <b>Quiz 8: Ch. 8</b> <b>61 Lab 8: Acid-Base Titration (part 1)</b>	22 Nov	<b>Thanksgiving Holiday: No Class or Lab</b>
27 Nov	Ch. 10: Nuclear Chemistry <b>Quiz 9: Ch. 9</b> <b>61 Lab 9: Acid-Base Titration (part 2)</b>	29 Nov	Lecture: Ch. 10: Cont. Review for Exam 3: Ch. 8-10 <b>Quiz 10: Ch. 10</b> <b>62 Lab 8: Acid-Base Titration (complete)</b>
4 Dec	Review for Exam 3: Ch. 8-10 Review for Final: Ch. 1-10 <b>Quiz 11: Ch. 1-10 (Take-Home)</b> <b>61 Lab: Lab Final</b> <b>61 Lab: Check-Out</b>	6 Dec	<b>Exam 3: Ch. 8-10</b> <b>62 Lab: Lab Final</b> <b>Quiz 12 DUE</b> <b>62 Lab: Check-Out</b>
11 Dec	<b>Final Exam: Ch. 1-10</b> <b>***6:15-8:15 PM***</b>	13 Dec	<b>Class Over (No Class)</b>

**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 (**2/4 October, 2018**). 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.** 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**. NO 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 up all water, and replace all chemicals and materials to their original storage spaces. Remember: there is not such thing as **"NOT MY JOB."** *Everything is everyone's job if you are enrolled in this class.*
28. *If I get a nasty email about the lab not being cleaned after we leave the lab, I will gladly share it with you.*
29. Thanks for a safe and clean lab.
30. **Be Kind**



**Student Learning Outcome(s):**

\*Solve stoichiometric problems by applying appropriate molar relationships.

\*Identify the differences between elements and compounds and describe the chemical bonding in compounds- ionics vs. covalent.