

Welcome to Chemistry 30A, General, Organic and Biochemistry I, Spring 2018

Instructor:

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Sections:

CHEM 30A-Section 61

Lecture: MW 5:30PM-7:20 PM, S55

Lab: M 7:30 PM-10:20 PM, SC2204

CHEM 30A-Section 62

Lecture: MW 5:30PM-7:20 PM, S55

Lab: W 7:30 PM-10:20 PM, SC2204

This class is divided into two separate instructional periods: a **lecture period** devoted to the primary course material and a **lab period** focusing on experimental techniques and conducting lab experiments. One registration code automatically enrolls you in both periods. Everyone will have the same lecture period, but a different lab period depending on which code you used for enrolling. **At De Anza College the lab and lecture cannot be taken as separate courses under any circumstances. Once you are enrolled you may not switch lab lecture or lab periods whether on a temporary or on-going basis.**

Office Hours:

MW: 30 minutes before lectures and 30 minutes after lab - per request

Required Materials:

1. Janice G. Smith, **General, Organic and Biological Chemistry**, 3rd ed., 2016, McGraw-Hill.
2. A scientific calculator that has at least log and exponential functions is required (~ \$20). **NO GRAPHING CALCULATORS.**
3. ANSI approved **laboratory safety goggles from the De Anza Bookstore**. Other types of goggles will not be permitted.
4. **Latex or Nitrile Gloves** available from the bookstore.

Registration, Attendance, and Conduct Policy:

Registration: Due to safety concerns, enrollment in each section is strictly limited to 30 students per section. Class spaces are filled in accordance with the official class roster from Admission and Records, followed by the official wait list. Any errors with registration or status must be addressed directly to Admission and Records. Please note that if you are placed in a section from the wait list, you will not be assigned a laboratory locker or be allowed to perform experiments until you are **officially** enrolled in the class.

Attendance: Attendance is expected during all lectures, all lab lectures, and all laboratory periods. Students are expected to be prompt and to leave only when lecture or lab is concluded. Arriving late to lecture is disruptive to the class and **strongly** discouraged. **If you miss lecture, laboratory lecture, or a laboratory period for any reason within the first two weeks of class, you will be dropped from the course.**

Dropping the Course:

If you choose to drop the course **at any point** during the quarter, it is **your** responsibility to withdraw from the course through Admissions and Records by the appropriate deadline. You are required to officially check out of your lab locker

whether you remain in the course or drop the course. Failure to check out of lab by the scheduled check-out date will result in an administrative fee and a block will be placed on your future registration.

OTHER IMPORTANT POINTS:

IF YOU MISS LABORATORY LECTURE OR A LABORATORY PERIOD FOR ANY REASON WITHIN THE FIRST TWO WEEKS OF CLASS, YOU WILL BE DROPPED FROM THE COURSE. TWO OR MORE UNEXCUSED ABSENCES FROM LAB WILL RESULT IN AN AUTOMATIC "F" FOR THE ENTIRE COURSE.

IF YOU FAIL TO CHECK OUT OF LAB YOU WILL ALSO BE CHARGED AN ADMINISTRATIVE FEE AND A BLOCK WILL BE PLACED ON YOUR REGISTRATION.

Conduct: The ringer on all cell phones and beepers must be turned off during lecture and lab periods. Please only answer your cell phone if it is an emergency. Please notify me if you need to leave the lab for any reason. Students are also expected to abide by the Academic Integrity policy as outlined in the De Anza College catalog at all times. Students caught cheating or plagiarizing on any assignment will be expelled from the course and receive a grade of "F." If collusion between students to cheat can be demonstrated, each student will receive this same penalty.

Assignments

:	2 Quizzes (25 pts. Each)	50
	Homework (10 points for each chapter)	90
	7 Labs (10 pts each)	70
	1 Lab Final (50 pts)	50
	2 Exams (100 pts each)	200
	1 Final (100 pts)	<u>100</u>
	Total	560

All grades will be assigned according to the following percentage scale:

A+ ≥ 98% A ≥ 92% A- ≥ 89% B+ ≥ 85% B ≥ 82% B- ≥ 79% C+ ≥ 75% C ≥ 68% D ≥ 64% D- ≥ 58% F < 58

Dr. Martinovic reserves the right to change exam dates as well as modify the grade scale at any point during the quarter.

Tentative Exam Dates:

Exam dates are provided on page five along with the lab schedule. All lecture and lab exam dates are tentative. The final exam date is not tentative. The date and time for the final exam is set by the college and can not be changed. You may find the final exam schedule on the De Anza website. **NO EARLY, LATE, OR MAKE UP EXAMS WILL BE GIVEN.**

Lecture Schedule and Homework:

The first 9 chapters in the textbook are covered in Chem 30A. Given that this is a 12-week course this means that we cover about a chapter per week. The homework is assigned and inspected for completeness on the day of the exams. Here are a few tips for studying chemistry

- 1) **Read** each chapter carefully before coming to class. Not every detail will be covered in lecture, but you are still expected to understand the whole chapter.
- 2) As you read the chapter, attempt to do the in-chapter sample and follow up problems and the corresponding end-of- chapter practice problems. Exam and quiz questions will often be very similar to the problems mentioned above; therefore, make sure you can do all of these problems **comfortably** before an exam. Try to first do these problems without looking at the solutions. This is very important since you will not have a solutions manual/answers on an exam!! **Educational research tells us that it is just as important for your brain to see mistakes as it is for your brain to figure out the correct pathway. It also tells us that you must see the same information at least three times within 48 hours in order to retain that information.**
- 3) **DO NOT FALL BEHIND WITH THE READING OR HOMEWORK!!** This is the number one mistake you can make. Concepts in chemistry are like building blocks. Initially, you learn one topic to build up to larger concepts. If you are shaky on a topic early on, your whole foundation will be unstable. To avoid this, try to read ahead of the scheduled lecture topics and keep up with the homework.

Lecture Exams:

There are two lecture exams and one final exam. Material covered in lecture, in the assigned reading, homework, and activities will be on the exam. Make sure you can do **all** the assigned homework **without** struggling. Exam questions will always include questions that are similar to homework problems in addition to conceptual questions and **one or two questions that will challenge your understanding of the material (meaning you may have never seen this type of problem in the homework).**

Each lecture exam is worth 100 points. **No early, late, or make-up exams will be given.**

The final exam is **cumulative** and is worth 200 points. The final exam is **not** one of the exam scores that may be dropped out of your overall course score. **No early, late, or make-up final exams will be given.** If you feel that any of your exams are graded incorrectly, you are always welcome to turn the exam in for a **complete re-grade at the end of the lecture or laboratory period on the day the exam is passed back.**

Laboratory Lecture

Students are expected to attend **all** laboratory sessions. You must complete **all** of the laboratory experiments, and you must also participate in the **entire** laboratory session in order to receive credit

There are no make-up labs. If you are unexcused from a lab period or fail to perform any part of a laboratory experiment, you will receive zero credit for the corresponding lab report. It is also your responsibility to understand the theory and use of the chemicals and equipment for any laboratory period that you miss in order to be prepared for the lab final. **If you have a medical emergency or some other emergency that prevents you from attending lab, you will be asked to supply written documentation in order for the absence to be excused. Be sure to contact the instructor as soon as possible if you miss a lab session.**

If you miss laboratory lecture or a laboratory period for any reason within the first two weeks of class, you will be dropped from the course. Two or more unexcused absences from lab sessions will result in an automatic grade of "F" for the entire course.

Laboratory Prep. and Reports:

In order for lab to go smoothly it is important that you come to lab prepared. The beginning of each laboratory session is used to review the objectives, procedure, safety and waste disposal information for each experiment. You must arrive on time in order to perform the scheduled experiment. In addition, you are also required to write a hand-written outline of the experiment that is due at the beginning of lab.

Each experiment is accompanied by worksheets that will be turned in for your lab reports. These are due at the end of the lab period unless other wise noted by the instructor.

There are a total of 7 lab reports.

Laboratory Exam/Final

There is one lab exam for this course worth 50 points. The laboratory exams will be given during your regularly assigned laboratory sessions toward the end of the quarter. **No early, late or make-up lab exams will be given and all lab exam scores will count toward your overall course grade.**

Tentative Laboratory, Lecture, and Exam Schedule

WEEK	Tuesday	Thursday
4 / 9	CHECK-IN	CHECK-IN
1	Ch. 1: Matter and Measurement	Ch 1: Matter and Measurement Ch 2: Atoms/ Periodic Table
4/16	MEASUREMENTS	MEASUREMENTS
2	Ch 2: Atoms/ Periodic Table	Ch 3: Ionic Compounds Quiz 1: Ch. 1+2
4/23	NOMENCLATURE	NOMENCLATURE
3	Ch 3: Ionic Compounds Ch 4: Covalent Compounds	Ch 4: Covalent Compounds
4/30	MODELS	MODELS
4	Ch 4: Covalent Compounds	EXAM 1: Chp 1-4
5 / 7	HYDRATES (PART 1)	HYDRATES (PART 1)
5	Ch 5: Chemical Reactions	Ch 5: Chemical Reactions Ch 6: Energy and Reactions
5 / 1 4	HYDRATES (PART 2)	HYDRATES (PART 2)
6	Ch 6: Energy and Reactions Ch. 7: Gases, Liquids, and Solids	Ch. 7: Gases, Liquids, and Solids Quiz 2: Chp 5+6
5/21	MOLAR VOLUME	MOLAR VOLUME
7	Ch 8: Solutions	Ch 8: Solutions
5/28	MEMORIAL DAY HOLIDAY no lab nor lecture	CONDUCTIVITY Ch 8: Solutions
6/4	CONDUCTIVITY	ACID/BASE (1)
8	Ch 8: Solutions	EXAM 2: Chp 5-8

6 / 1 1 9	ACID/BASE (1) Ch 9: Acids/Bases	ACID/BASE (2) -extra day Ch 9: Acids/Bases
6/18 1 0	LAB FINAL/CHECK OUT	LAB FINAL/CHECK OUT

Final Exam: Monday: 6:15-8:15 p.m

Partial List of Laboratory Safety Procedures

- Students must comply with all safety procedures and precautions when attending a laboratory session.
- There are no provisions for making up a lab; therefore, you are expected to attend all scheduled lab sessions.
- You must have your laboratory procedures written prior to starting an experiment. Lab notebooks will be checked during lab and will be awarded between 1-5 points depending on completeness.
- Laboratory notebooks **must be written in ink** and all data must be written in the laboratory notebook. Scraps of paper containing data will be confiscated. Do not use “white-out.” Use one line to cross out incorrect data.
- Lab lecture will consist of a discussion concerning safety for the experiment being conducted that day as well as information regarding experimental techniques.
- Eating and drinking is not permitted in the lab. **Do not** bring food or drinks to the lab even if they are in closed/sealed containers.
- If you are pregnant or think you are pregnant, it is your responsibility to consult with your physician before taking this course and performing the laboratory experiments.
- You must wear OSHA approved safety goggles and gloves at **all times** while in the laboratory. Failure to comply with this rule will result with your being expelled from the course and receiving a grade of “F.”
- Appropriate attire must be worn in the laboratory. Shorts, open toed-shoes, and sleeveless shirts (“spaghetti straps”) are **not** considered safe clothing for the laboratory. Clothing made of natural fibers are less of a hazard than those made of synthetic fibers.
- Do not begin the laboratory experiment (e.g. place any chemicals or glassware on the lab benches, turn on Bunsen burners, etc.) until the safety introduction is complete and everyone is wearing their goggles and gloves. The instructor will let you know when it is time to begin the experiment.
- In some cases it will be necessary for the instructor to examine your “set up” before you begin the experiment. In these instances, the instructor will inform you of proper procedures at the beginning of class.
- If you come into contact with a chemical flush the affected area with water immediately for 15 minutes. Depending on the degree of contact with the chemical and the location on the body you may need to do this in the sink or safety shower. When using the safety shower you must remove the clothing over the area that has come into contact with the chemical. The instructor will ask the other students in the class to leave the room for privacy.
- You will be wearing safety goggles at all times, but should you get a chemical in your eye, flush your eyes in the eye wash for at least 15 minutes.

- If your clothing or hair catches on fire use the safety shower immediately. If this is not possible “stop-drop- and –roll.”
- If you are hurt or think you have come into contact with a chemical, notify the instructor immediately (or send a lab partner to fetch the instructor) while following proper safety procedures.
- Know where the eyewash, safety shower, and fire extinguishers are located. (You should be able to do this with your eyes closed!)
- Chemicals should never be taken back to your lab bench. They must be kept in the fume hood in their proper storage containers. All chemicals and waste bottles must be capped after use. **Never** leave a chemical bottle or waste container uncapped.
- If a chemical spill occurs, notify your instructor so that she may help you follow the proper measures for cleaning up chemical spills.

- All waste must go into appropriate waste containers. Never throw anything down the sink or in the regular trash receptacles.
- Never pick up broken glass with your hands. Always use a brush and dust pan to sweep up broken glassware.
- If at any time the instructor feels that you are being unsafe and have not followed proper safety precautions and procedures, you will be asked to leave the lab, and you will receive zero credit for the laboratory report and notebook. You may also be expelled from the course and receive a grade of "F."
- After completing an experiment clean up your lab space as well as glassware. Return all cleaned glassware and other equipment (e.g. Bunsen burners, clamps, steel rods, etc.) to the appropriate cupboards or stockroom.
- After you have completed an experiment and cleaned up your bench space and glassware, check out with the instructor.
- Remember to wash your hands immediately after completing the experiment and checking out. Also, change your clothes as soon as possible. This is especially important if you have children.

No make up labs are allowed and no late lab reports will be accepted.

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.