

De Anza College
CHEMISTRY 10
MECHANICS OF THE COURSE
Winter '2018

Due to the high demand for this class, any student missing any class the first two weeks will be dropped to make room for another student. Be sure to be in class on time. Allow extra time to find a parking place. Also any student leaving class early will be dropped.

BE SURE TO PRINT OUT AND BRING TO YOUR FIRST CLASS MEETING

I. Instruction - Mr. Howard Garnel

E-mail: garnelhoward@deanza.edu

II. Office Hours – Tues, Tues, Wed and Thurs Chemistry in Context 11:00 to 11:30 AM

SCI Up Stairs, Faculty Offices, Across from the Chemistry Labs

II. Purpose of the Course – The course emphasizes chemistry as a subject of scientific inquiry and is designed to give the student a general appreciation for chemistry as a science.

III. Textbooks - - "Chemistry for Changing Times", Hill , 14th Ed., 2016

- "Chemistry in Context" 9th Ed

- "Laboratory Manual – Conceptual Chemistry", 5th Edition, Gibson and

Suchochi, 2014 *Do not purchase a used Lab Manual without first checking to determine that all pages for our experiments are present.*

Other Items Needed – Safety Goggles (only the type available in the bookstore are acceptable. NO EXCEPTIONS, and a NON-Programmable (non-graphing) "Scientific" calculator (TI 30A Series recommended) (Needed First day of class)

Cell phones my not be used in class as a calculator at any time. If you have a cell phone out in class you will be asked to leave the class.

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| IV. <u>Grading</u> - | Exams (4) | 100 points each |
| | Homework | 100 point |
| | Lab Final | 50 points |
| | Final Exam | 100 points |
| | Lab Reports 9 | 100 points total |
| | Environmental Report | 30 points |

Nine lab reports will be graded on a 10 point basis, giving 90 points. This will be divided by 0.9 to yield 100 possible points for the Lab portion of this class.

Semester grades will be based on the total number of points accumulated at the end of the semester out of 780 possible points, **90% for an A, 80% for a B, 70% for a C and 60% for**

a D. Grades of incomplete, "I" will be given only for documented extenuating circumstances. These minimum percentages may be lowered at the instructor's discretion, but they will not be raised. **It is the student's responsibility to keep a record of his/her scores on labs, quizzes and exams in order to determine his/her standing in the class.**

Cheating will not be tolerated in any manner. Any evidence of **dishonesty** in class regarding exams and/or lab reports will be used as a potential basis for **dismissal** from this course with a grade of "F". In the lab all students must perform his/her **own** work and only use his/her own data unless approved by the instructor. Use of someone else's data, calculations etc. is dishonest and will be treated as such.

**All work turned in to me asking for your name, must be shown as
LAST NAME, FIRST NAME (-1 point each time if not in this manner)**

V. Homework and Exams –

Homework - Homework will be worth 100 points towards your grade in the class.

Each worksheet will be graded on a 10 point basis. The total number of points accumulated will then be divided by the number of points possible and then multiplied by 100. E.g. If we have 16 worksheets and you have a total of 85 points then your points for homework will be $85/160 * 100$ or 53 points. There will be at least 14 worksheets. Homework (all worksheets associated with that exam) will be due in the beginning of class on the day of the exam at 2:30 PM, after 2:30 PM it is late). Late homework will be graded at half credit up to one class late. No credit after that.

Only original work will be accepted. All work must be neat and legible. Worksheets must be in proper order e.g. Cover sheet, 1, 2, 3, 4 and 5. One staple in the upper left hand corner of all pages. There is **no stapler** in class. No loose sheets will be accepted. Only half credit if difficult to read. **Absolutely no photocopies** of your homework will be accepted.

Environmental Report - Chemistry is largely responsible for the quality of life that we enjoy today. Never before have we benefited so much from the advancement of chemistry (food supply, medicine, transportation just to name a few). This progress comes at a price to the environment and future generations. In addition to a special lecture on this topic, students are required to write a short report on an environmental concern. The report should be no more than 1 or 2 pages (double spaced, Font 12). It should deal with the impact of one area of Chemistry on the environment. The project is designed to promote critical thinking on the part of the student. The student is to propose possible ways to deal with the problem. This is Due on Thurs Mar 16, 2017 at 2:30 PM. After 2:30 PM it will be considered late. Half credit if turned in by 2:30 PM on Mar 21. No credit after that. It will be worth **30 points**.

Exams – Only NON-programmable (graphing calculators are programmable)

Scientific calculators may be used on exams. Make-up exams can be given only for **documented** legitimate cause. If you cannot take a scheduled exam, notification must be given to the instructor **prior** to the exam by e-mail (garnelhoward@deanza.edu). Be sure to leave a **phone number where I can reach you that day**. Unless I approve of your absence a

missed exam represents a **zero** and cannot be erased. Arrangements must be made at this time for a make up. Also **no exams will be dropped** in this class (all exams are used to compute your final grade in the class).

- Please do not attempt to **plea bargain** more points on graded papers (**labs, homework, environmental report & exams**).
- There is no extra credit available in this class.

VI. Instructional Methods - The class is taught in a lecture-discussion format. Much complex material is contained in this class. In order for you to effectively learn this material it is inherent that you properly prepare for each class. **This includes your reading the material prior to coming to class.** This is a very important part of the learning process and will significantly enhance your ability to comprehend the material.

You should plan on study time of **at least 2 hours** for **each hour** of lecture for you to be successful in this class. Trust me this is necessary for the class. **If you cannot commit to this, you will not be successful in this class.**

It is also imperative that you review and practice the material presented as soon as is possible, after each lecture while the material is still fresh in your mind. The longer that you wait the more difficult it will be and will require significantly **more total time.**

You may even find that you will enjoy the class!!!!

VII. Specific Objectives - Students will be expected to answer questions and solve problems similar to those assigned for this class (text and worksheets).

VIII. Other Items –

- **Tardies** - Excessive tardies (**more than two** for the quarter) may result in a **lowering** of your grade.
- **Attendance** - Students are expected to attend all classes. A student may be dropped for excessive absences. See college policy in the **current college catalog**. If a student wishes to drop a class, it is his/her responsibility to complete the drop process **including checking-out in the lab.** If he/she does not do this and is still on the roll at the end of the quarter a grade of "F" will be received in the class. Also I will **not** back date drop slips.
- All **electronic communications & music devices (cell phones, ipods, mp3 players etc.)** must be turned off in both **lecture** and **lab (and no earphone in your ears)**. It is **NOT OK** to leave lecture to answer cell phones. This is disruptive to the class and not fair to your fellow students. **Texting** during class will be grounds for removal from class. Failure to follow these rules will result in **expulsion from this class**. Please do not let this happen.
- Be sure to remove hats, hoods, ear-phones etc in class (Lecture and Lab).
- Shorts may not be worn in the Lab at any time.
- If a student's behavior is disruptive to the class, the instructor may remove the student from the class. If it happens more than once the instructor may drop the student from the class with a grade of "F" in the class.
- Be sure to sit only in the your designated seat for the class.

IX. The Laboratory -

Labs - There will be **9** experiments that must be completed to obtain a passing grade in this class. In order for you to perform these experiments you must...

- 1. Have your own personal Safety Goggles (only the type available in the bookstore are acceptable. NO EXCEPTIONS.** (Keep these in your lab locker)
- 2. Completed Pre-Lab Assignment Sheet-**

Before each new experiment, you are required to write out a pre-lab sheet. This will be due at the beginning of the lab at 11:30 AM. It will be worth 2 of the 10 points possible for each Lab. I do not accept these late (after 11:30 AM). So be sure to be in class on time. **Only use a Pre-lab sheet form that you can find in your documents folder.** They must be **handwritten neatly.** **No photocopies will be accepted.** . Be sure to get your pre-lab assignment sheet **initialed** by the instructor at the beginning of the lab.

You may summarize the procedure, but you should still be able to perform the experiment with this sheet only, **WITHOUT USING THE ACTUAL PROCEDURE AS OUTLINED IN THE Lab Manual.**

There are four reasons why I insist you complete a pre-lab sheet:

- **Safety** • If you have not even bothered to read the procedure for an experiment before coming to class, you are not aware of the hazards you might encounter. You are therefore a danger both to yourself and the other students in class.
- **Courtesy** • If you are not prepared for an experiment and you are constantly asking people around you for help, you are disturbing others – and a hazardous distraction – to those people who did take the time to properly prepare for their experiment.
- **Efficiency** • If you do not review an experiment at least once before coming to lab, you will waste a lot of time trying to figure out how to conduct that experiment, which means you may not have enough time to finish your experiment.
- **Learning** • If you do not read the experiment before lab, you have little chance of retaining anything meaningful from the lab experience. Hence you will not be as well prepared for the lab final in the class.

3. Be sure to get your data page **initialed** by the instructor before leaving the lab.

4. Lab reports will be due at the **beginning of the next lab (7 days later) at 11:30 AM.**

Late “Lab Reports” (after 11:30 AM) will be graded for **half** credit up to one week late. After that they will receive no points. All labs must be completed to receive a passing grade in the course. Lab reports will not be graded for credit after 1 week from the due date. There is no time for making up a lab.

5. In addition the instructor reserves the right to prohibit any student from working in the lab if in the instructor's judgment, a student presents a safety hazard to himself/herself or any other person(s) in the class.

6. In the lab you may work with **one** partner (**ONLY ONE**). Both students are expected to be recording their data throughout the experiment (NO COPYING YOUR PARTNERS DATA AT THE END OF THE LAB -5 points if you do this). Each student is expected to actively participate in performing the entire experiment in the lab.

7. **Missed Labs** - If you are unable to complete an experiment due to absence (for any reason) you may satisfy the requirement for that lab by writing a 2 or 3 page paper on a **full feature article (6-8 pages)**, from **ANY** issue of **Scientific American** on a topic dealing with some **aspect of chemistry**. **Be sure to include a copy of the article with the paper**. The paper is due **one week from the missed lab** and will lose points for being late just like a lab report. The paper must show that you have completely read and comprehend the article. You may also have to discuss the article with the instructor. Only **ONE** missed lab may be made up in this manner. **If a second lab is missed for any reason you will automatically be dropped from the class with a failing grade**. There is no time outside of class for make-up experiments.

8. The last day to turn in **all** lab work is **your last lab** meeting **Tues. Mar. 20 or Thurs Mar. 22**. Lab work will not be graded for credit after that. This includes all lab reports, worksheets and Scientific American Reports (if any).

X. Final Exam – Thurs Mar 29 1:45 – 3:45 PM I will not accommodate requests for an alternate day or time (no exceptions).

BE SURE TO PRINT OUT AND BRING “Safety in the Lab” TO YOUR FIRST CLASS MEETING

XI. Safety in the Lab

- From the American Chemical Society Safety In Academic Laboratories Guidelines, 7th Ed., the following mandatory minimum safety requirements must be followed by all students and be rigorously enforced by all Chemistry faculty:
- **1)** Chemistry Department-approved safety goggles purchased from the De Anza College bookstore (NOT safety glasses) must be worn at all times once laboratory work begins, including when obtaining equipment from the stockroom or removing equipment from student drawers, and may not be removed until all laboratory work has ended and all glassware has been returned to student drawers.
- **2)** Shoes that completely enclose the foot are to be worn at all times; NO sandals, open-toed, or open-topped shoes, or slippers, even with socks on, are to be worn in the lab
- **3)** Shorts, cut-offs, skirts or pants exposing skin above the ankle, and sleeveless tops may not be worn in the lab: ankle-length clothing must be worn at all times
- **4)** Hair reaching the top of the shoulders must be tied back securely
- **5)** Loose clothing must be constrained

6) Wearing "...jewelry such as rings, bracelets, and wristwatches in the laboratory..." should be discouraged to prevent "...chemical seepage in between the jewelry and skin...".

7) Eating, drinking, or applying cosmetics in the laboratory is forbidden at ALL times, including during lab lecture

8) Use of electronic devices requiring headphones in the laboratory is prohibited at ALL times, including during lab-lecture

9) Students are advised to inform their instructor about any pre-existing medical conditions, such as pregnancy, epilepsy, or diabetes, that they have that might affect their performance.

10) Students are required to know the locations of the eyewash stations, emergency shower, and all exits

11) Students may not be in the lab without an instructor being present

12) Students not enrolled in the laboratory class may not be in the lab at any time after the first lab period of each quarter.

13) Except for soapy or clear rinse water from washing glassware, NO CHEMICALS MAY BE Poured INTO THE SINKS; all remaining chemicals from an experiment must be poured into the waste bottle provided.

14) Students are required to follow the De Anza College Code of Conduct at all times while in lab: "horseplay", yelling, offensive language, or any behavior that could startle or frighten another student is not allowed during lab;

15) Strongly recommended: Wear Nitrile gloves while performing lab work; wear a chemically resistant lab coat or lab apron; wear shoes made of leather or polymeric leather substitute.

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• By signing below, I,

• _____

• First Name Family Name

• Acknowledge, that I fully understand and agree to abide by the laboratory safety rules listed above. Further, I acknowledge that my failure to abide by these rules will result in my being dropped from this chemistry class immediately.

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• _____ Signature

Date

Student Learning Outcome(s):

- *Develop problem solving techniques by applying the "Scientific Method" to chemical data.
- *Analyze and solve chemical questions utilizing information presented in the periodic table of the elements.
- *Evaluate current scientific theories and observations utilizing a scientific mindset and an understanding of matter and the changes it undergoes.