

CHEM1A, General Chemistry

Su21 June 28-Aug 6

Syllabus

INTRODUCTION:

- Instructor: Burcak Artun, PhD (artunburcak@fhda.edu)
- Course Website: Canvas
- Times- [Zoom Links can be reached here](#)
 - Lecture: MTWTh 2:30pm-3:45pm
 - Lab: MTWTh 11:30pm-12:20pm
 - *Office Hours MTWTh 12:30pm-1:00pm*

STUDENT RESOURCES

Important Dates

- JUNE 28 First day of summer session
- JULY 5th Offices closed, no classes
- AUG 6th Final exam

Online Education Center

<https://www.deanza.edu/online-ed/students/> (Links to an external site.)

COURSE SCHEDULE (List of Exercises and Important Dates at a Glance)

- [Su21 Chem 1A Schedule.pdf](#) download

COURSE OVERVIEW AND LEARNING OBJECTIVES:

- *Overview:*

This course provides an introduction to the structure and reactivity of matter at the molecular level, as well as an application of critical reasoning to modern chemical theory and structured numerical problem-solving. Students will learn the development of molecular structure from rudimentary quantum mechanics, including an introduction to ionic and covalent bonding; chemical problem solving involving both formula and reaction stoichiometry employing the unit analysis method, and be introduced to thermochemistry and a discussion of the first law of thermodynamics.

- *Prerequisites:* CHEM 25 or CHEM 30A or satisfactory score on Chemistry Placement Test; MATH 114 or MATH 130 or equivalent
- *Advisory:* EWRT 1A or EWRT 1AH or (EWRT 1AS and EWRT 1AT) or ESL 5.

- **Units:** 5 Units
- **Hours:** Lec Hrs: 36.00, Lab Hrs: 72.00
Out of Class Hrs: 72.00
Total Student Learning Hrs: 180.00

REQUIRED MATERIALS:

- **Lab will be a combination of simulations, pre-recorded data for certain experiments, and hands-on exercises performed from prepackaged materials (Science Interactive-previously-Hands On Labs).**
- **You will need to have a stable internet connection to be able to follow and participate in Discussions, Lab simulations and Lab Exercises.**
- **Please let me know as soon as possible if you need assistance.**

- **Textbook:** *The Molecular Nature of Matter and Change*, 9th Edition by Silberberg and Amateis (*McGraw-Hill*) This textbook is used for the Chem 1 A-B-C. Earlier Editions may be used. Check with me and let me know if you have an earlier edition
- **Calculator:** A simple scientific calculator with natural log functionality is necessary and sufficient for this class. You can use previously purchased ones, but graphing functionality will not be necessary to use.
- **Supplemental Texts:**
 - Any necessary and additional handouts/reading material can be downloaded from the canvas course website.
 - OpenStax Chemistry, 2nd edition.
 - Available **free** online at <https://openstax.org/details/books/chemistry-2e>

COURSE WORK AND GRADING*

- **Work Expectation:**

Each week there are 4 x 75min synchronous lectures, and 4 x 45min synchronous lab sections. You should expect to spend 1-2 hours asynchronously for labs. Expect to spend an additional 8-12 hours a week on the course.

You will spend additional time preparing for the labs (PreLab), Studying on Chem101 (see below for explanation), answering quiz questions, completing reports and writing up the results from the labs (Lab WriteUp or Post Lab

Activity), as well as preparing for Quizzes and Midterms. You are expected to join class having done some related reading and chapter assignments.

- *Grading is based on the following breakdown:*

Lecture 70% of Total Grade

- *Quizzes and Midterms* 60 % of Lecture
- *Homework Assignments (Chem 101)* 20 % of Lecture
- *Final* 20 % of Lecture

Lab 30% of Total Grade

- *Pre and Post Labs Exercises* 40 % of Lab
- *Lab Notebook/Record Keeping* 15 % of Lab
- *Lab Report* 15 % of Lab
- *Lab Final (Lab Quiz 1+2+3)* 20 % of Lab
- *Lab Conduct (participation, attendance)* 10 % of Lab

- *The Following Grade Scale will be used:*

A+	97.00 - 100.00 %	B+	80.00– 82.99 %
A	93.00 – 96.99 %	C+	75.00– 79.99 %
A–	90.00– 92.99 %	C	70.00 – 74.99 %
B+	87.00 – 89.99 %	F	0 - 69.99 %
B	83.00– 86.99 %		

Notes on Grading

- **There will not be a curve in general.**
- **Final Exam is cumulative**
- **A grade of “C” (% 70) or better is required to pass the course**
- **You will need to pass both lab and lecture to be able to pass the course**

Note on Safety:

- Proper use and disposal of hazardous reagents, and equipment is mandatory. Instructions on how to safely handle materials used in this class will be provided with each HOL exercise.

- You are expected to follow all directions as indicated in the lab exercises and discussed in class.
- Policy: https://www.ue.ucsc.edu/academic_misconductLinks to an external site.

LECTURE

- *Midterms - 50% of Lecture Grade*

There will be two “Midterms” . The schedule will be provided. The assessments will consist of the material covered in lectures, and will also assess your problem solving skills. *I will provide Study Guides . I will be testing for concepts as well as problem solving and critical thinking skills.*

- *Final Exam - 25% of Lecture Grade*

The final exam is a cumulative exam, covering all of the lecture material, and is worth 15% of your lecture grade. No make-up exam will be given if you miss the final. **The final exam will take place in the last week of class. Will be posted based on the assigned final exam date .**

- *Assignments - 25 % of Lecture Grade*

Coverage In Chem 1A the following Chapters will be covered in order from *Silberberg: Chapters 1-4, 6 -11*

Assignment grade will be based on assigned end-of-chapter problems, as well as Chem101, an online learning system.

Reading: Please read the assigned textbook chapters carefully **before** coming to lecture.

Problem solving: Additionally, you might be assigned problems from the textbook to follow up and to reinforce your knowledge of the topics. These problems will help increase your grasp of the material. Please make sure to work on and understand the sample problems available to you in your textbook before you attempt the assignment problems. Chapter assessments may include similar problems.

Do not hesitate to drop in to the office hours if for any reason you think you are falling behind, need reinforcement of material or simply to say hi. Office hours are a crucial part of the support system the students have.

Remember “practice makes perfect” and “mistakes are the stepping stones to learning”. It is essential that you attempt as many problems as possible

LAB

Lab will be combination of dry data, at home experiments (Hands on Lab-HOL), and in class activities, and simulations. HOL information will be provided separately.

[MSDS Information \(Links to an external site.\)](#) can be found here.

- *Pre and Post Lab Exercises - 40% of Lab Grade*

Please read very carefully . We will go over the lab expectations within the first lecture.

PreLab

Before you start any lab related activity, you will create a “Prelab” and submit electronically. List of prelabs are scheduled in the Lab Schedule.

Include the following in your PreLab:

- Name and date on each page.
- Title write the title of the exercise at the top.
- Page number as in A1-1, A1-2 (for exercise A1 page 1, etc)
- Purpose/Abstract in your own words, state the goals for doing this experiment in abstract form. Purpose should be specific to the experiment being done. It should not be a general statement about an experiment or the topic.
- Information about the activity. This can be a *summary* of procedures or instructions, in a flowchart form.
- There will be a notebook check at the end of the summer session in which you will record a video of your lab notebook pages.

Post Lab

- Post Lab might be one of two things
 - HOL Final Evaluation (needs to be submitted as a pdf)
 - Post Lab questions
- *Lab Notebook (15% of lab grade)*

You are required to keep a Lab Notebook that you designate for lab. It could be an old lab notebook you have at home, or any bound notebook. I will ask you to send me pictures of your notebook periodically.

What goes in a Lab Notebook:

- First couple of Pages should be left blank for a **Table of Contents** - which basically lists the experiments we are doing with the corresponding page numbers for the start of the Experiment.
 - **PreLab for each experiment** should also be written here. You need to submit a photo of your prelab BEFORE you start doing the lab simulation or exercise.
 - Record your observations in the lab notebook.
 - ***ALL DATA RECORDINGS GO IN YOUR BOUND LAB NOTEBOOK Use ink to record your Data. Mistakes can be crossed out with a simple line through. Use of white-out during Data Collection is prohibited. Data needs to be recorded in the lab notebook first, and a photo of your data should be submitted.***
 - *You will be asked to submit "snapshots" of your experimental set ups and progress as you are doing them as well*
- *Lab Report (15 % of Lab Grade)*

What goes in the Lab Report:

- There will be one "Lab Report" which is to be submitted to me online after the experiment is concluded on the due date indicated on your schedule (version 1). I will let you know which experiment. You will have a chance to make edits to your lab report and resubmit (version 2). Your lab report grade will be the average of the two.
 - The Lab Report should be typed on a separate word (or similar) document and will state the purpose of doing the experiment/simulation in your own words, abstract for the experiment (brief description), data, results and calculations, discussion, and a conclusion.
 - Lab Report will be submitted electronically as a pdf.
- *Lab Final - 20% of Lab Grade*
 - There will be 3 lab quizzes administered throughout the quarter, which make up the Lab final exam grade. Quizzes will cover the concepts/calculations and core techniques. Dates are posted on the schedule.

- ***Participation/Lab Notebook - 10% of Lab Grade***
 - You will receive points based on your performance in the lab class that will take into account the following:
 - whether you are prepared for the lab;
 - whether you demonstrate that you have a strong understanding of the lab exercises;
 - your general interaction with the class material.

POLICIES

- ***Registration: Enrollment is strictly limited to 30 students per section.*** Spaces are filled in accordance with the official class roster from Admissions and Records, followed by the official wait list. Any errors must be addressed directly with Admission and Records. Waitlisted students **sign-in to the zoom meeting** for the first day of class, but may not be assigned a code until someone drops the course within the first two weeks
- ***Policy on attendance: This is a synchronous class.*** Attendance of **both** the Lecture and scheduled Labs are required for the successful completion of this course. Unexcused absences will affect your grade. ***Attendance is expected for all lectures, all lab lectures and all labs.***
- ***Policy on missing class: Since we are doing lecture and lab synchronously,*** If you need to miss class you must notify the instructor **at least 24 hours in advance** for approval. Missing a lab period may affect your grade negatively. If you have an excused absence, we can talk about ways to compensate for the missed lab. ***You will be dropped from the course for any unexcused absences during the first two weeks of class.***

Absences from lecture or lab will be evaluated on a case by case basis. It is your responsibility to contact the Instructor for any absences. Clear Communication is the best whatever the reason is. If I don't know your reasons, I can't be reasonable...

- ***Policy on late assignments/lab notebooks/lab report:*** Items turned in late will receive an automatic 3% deduction per day in points. If the assignment is late over a week, the most you can get out of that assignment is 75%

ALL assignments, lab write-ups, reports, and exams must be completed and turned in to receive credit for this course. No exceptions. It is the responsibility of the student to arrange for make-ups for missed work.

- ***Policy on Final exams:*** Final exam dates are determined by the De Anza College and cannot be changed. Please find the exam dates from your course calendar, and put all of the dates into your calendar.
- ***Dropping the course:*** Dropping the course must be done through the Admissions and Records office. ***It's the student's responsibility to withdraw from the course by the deadline set by the Admissions and Records Office.*** Dropping the course after the deadline will result in a (W-withdrawal) on your transcript.

Policy on plagiarism There's a zero tolerance policy for cheating and academic misconduct. You should remember as a De Anza College student, you agreed to abide by the policies of the De Anza College Rules of Conduct. It is expected that you are familiar with the code of conduct and disciplinary actions that may result from academic misconduct. ***All submitted work should be your own, and should represent your own grasp of the material. Cheating will not be tolerated.***

If you have any questions about what constitutes unfair collaboration or cheating, please contact the instructor.

These policies are found in the De Anza College manual:

<https://www.deanza.edu/studenthandbook/academic-integrity.html> (Links to an external site.)

Students who violate academic integrity policy (e.g. are caught cheating or plagiarizing) will be reported to the Dean of Student Services. Any plagiarized material will receive a 0.

More information about student rights and responsibilities can be found at

<https://www.deanza.edu/student-complaints/rights-responsibilities.html>

Student Learning Outcome(s):

- *Identify and explain trends in the periodic table.
- *Construct balanced reaction equations and illustrate principles of stoichiometry.
- *Apply the first law of thermodynamics to chemical reactions.