

# Chemistry 1B: General Chemistry

## Summer 2020

### Instructor:

Dr. Cinzia Muzzi

Phone: 408-864-5790 (I only receive messages at this number)

### Synchronous Zoom Hours:

Monday-Thursday Lab: 9:00 AM-10:20 AM

Monday-Thursday Lecture 10:30-11:45 AM

### How to Contact Me:

#### Email

I generally am able to answer emails within 24 hours Monday-Thursday between 8:00AM-5:00PM. Emails sometimes may take up to 48 hours for a response if you email on a Tuesday or Thursday where I am in on-line class most of the day. Please note that I may not answer email on the weekends depending on time and internet availability.

Always use the **In Box** in the lefthand tool bar to send emails. When you communicate through the **In Box** I am sure to see your email. Otherwise your email potentially could be lost in the 25-75 emails I receive per day at my general email address. If for some reason you need to email me outside of Canvas, my email address is [muzzicinzia@fhda.edu](mailto:muzzicinzia@fhda.edu)

### Course Information:

This class is divided into two separate instructional periods: a **lecture period** devoted to the primary course material and a **lab period** for conducting lab experiments (which we will be doing on-line this quarter!). 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.**

### **Required Materials:**

- *Chemistry: The Molecular Nature of Matter and Change, 8th edition* by *Martin Silberberg* (McGraw-Hill)
  - - Chapter and Appendices for Chem 1B Only ISBN: 9781307600964-\$30
    - Access to the Complete Text for 1 year ISBN:-\$90
- A scientific calculator that has at least log and exponential functions is required (~ \$25). Graphing calculators are fine also, but not required.
- Any device that will allow you to browse the web and take photos, preferably a tablet or computer.
- Google Chrome or Firefox Web Browser
- Any App that will allow you to convert photos to pdf files. See below. Genius Scan, CamScan, and Notes (Apple) are free, easy options.

### **Registration, Attendance, and Conduct Policy:**

**Registration:** 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.

**Attendance:** Lecture and Lab will be provided via Zoom. Lecture and lab are offered synchronously, and attendance is expected during all lectures and all laboratory periods. While there are synchronous components to the course, most assignments will be asynchronous (meaning you can complete them off line by the given deadlines).

**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 MyPortal by the appropriate deadline.

**Conduct:** 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.

## **Class Grade Format:**

### **Grading and Exam Schedule (Exam dates are tentative):**

Lecture Exams (200 points) (The lowest exam score will be dropped) **400 pt**

Final Exam **200 pt**

Chem101 Assignments (20 pt each) (lowest score will be dropped) **200 pt**

Canvas Prelab Assignment (5 pt each) (Lowest score will be dropped) **35 pt**

Canvas Laboratory Reports (15 pt each)(Lowest score will be dropped) **105 pt**

Lab Exam **70 pt**

### **Grade Scale:**

<u>% of Total Points Possible</u>	<u>Grade</u>
98-100	A+
92-97	A
89 - 91	A-
85 - 88	B +
82 - 84	B
79 - 81	B-
75 - 78	C +
68 - 74	C
64 - 67	D +
61 - 63	D
58 - 60	D-
less than 58%	F

**Dr. Muzzi reserves the right to change exam and quiz dates as well as modify the grade scale at any point during the quarter.**

## Lecture Schedule and Homework Assignments

Students should plan to read 2-2.5 chapters per week. Chem101 Assignments will be assigned each week through an on-line platform. These are small assignments (10-15 problems or so) meant for you to do a self-assessment after you complete the **end-of-chapter odd** problems. The Chem101 assignments ARE NOT COMPREHENSIVE. This means that they do not cover every topic or type of calculation that we will cover on an exam. **To do well on an Exam you should...**

1. **Read** each chapter carefully before attending Zoom Lecture. Not every detail will be covered in lecture, but you are still expected to understand the whole chapter.
2. Do the **red practice problems** at the end of each chapter up to (but not including) the Comprehensive Problems section. If you feel you have a particular concept down, it is not necessary to do every red problem, but do practice the end-of-chapter red problems before you attempt the Chem101 Assignment.
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.

**Each Chem101 Assignment is worth 20 points and your lowest assignment score will be dropped.** You have three attempts to complete the assignment by the due date, so it is possible to achieve 20 points on each assignment! No late assignments will be accepted.

## Lecture and Final Exams:

There are three lecture exams and one final exam. Material covered in lecture, in the assigned reading, end-of-chapter problems and on Chem101 Assignments will be on the exam. Each lecture exam is worth 200 points. **Only your top two lecture exam scores will count as part of your overall course grade. 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 submit the exam for a **complete re-grade at the end of the lecture or laboratory period on the day the exam is passed back.**

## **Pre-lab**

Pre-Lab questions will be assigned for each experiment.

**Only your top 9 lab prep scores will count toward your overall course grade.**

## **Laboratory**

Students are expected to attend **all** laboratory sessions. This is a synchronous portion of the course. During your assigned lab time we will discuss the theory behind the on-line simulation or video you will watch asynchronously. You will be provided a series of pre-lab questions which you will work on in groups in Zooms breakout rooms. These assignments are designed to prepare you for asynchronous lab activity. At the end of lab you will convert the pre-lab assignment to a pdf file and upload it to Canvas.

**Pre-lab assignments are due at the beginning of of each lab period and only your top nine 5-point pre-lab assignment will count toward your overall course grade. No late assignments are accepted.**

**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.**

## **Laboratory Reports:**

Most reports will be worksheets completed after asynchronously viewing a video or simulation. Sometimes you will be provided with data and asked to use that data as part of your report. The reports will be turned in as pdf files that are uploaded to Canvas by the due date. You will generally have until the following lab period to view the video or simulation and complete your report. Although each report requires a different amount of work/effort, they are all worth the same amount of points because the topics are all equally important.

**Only your top nine 15-point lab reports/worksheets will count as part of your overall course grade. No make-up lab reports will be allowed or accepted.**

## Laboratory Exam

There is one laboratory exam for this course worth 70 points. The laboratory exam will be given during your regularly assigned laboratory sessions at 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.**

## Laboratory Safety Document

Please read the this [safety document](#) as it contains important information regarding work performed in the laboratory.

## Tentative Lecture and Exam Schedule\*

(\*Be aware that Lecture exam and assignment dates may change depending on the timing of the material presented in lecture. The final exam date is set by the college and will not change.)

### Week 1

6/29

- Lecture: Chapter 5 and Intro to Chem 101
- Lab: Safety Introduction

6/30

- Lecture: Chapter 5
- Lab: Safety Pre-Lab Due

7/1

- Lecture: Chapter 12
- Lab: Lewis Theory/VSEPR Review

7/2

- Lecture: Chapter 12 (Chem101 Assignment Due 7/5)
- Lab: Safety Lab Report due.

### Week 2

**7/6**

- Lecture: Chapter 12
- Lab: Intro to Gas Law Lab

**7/7**

- Lecture: Chapter 12
- Lab: Gas Law Pre-Lab due

**7/8**

- Lecture: **Exam 1** (Chapters 5 and 12)
- Lab: Review and Lab discussion

**7/9**

- Lecture: Chapter 16 (**Chem101 Assignment due 7/12**)
- Lab: Gas Laws Lab Report Due/ Molar Volume Intro

### **Week 3**

**7/13**

- Lecture Chapter 16
- Lab: Molar Volume Pre Lab due

**7/14**

- Lecture: Chapter 16
- Lab: Molar Volume Lab Report due

**7/15**

- Lecture: Chapter 16
- Lab: Kinetics Lab Intro

**7/16**

- Lecture: Chapter 17 (**Chem101 Assignment due 7/19**)
- Lab: Kinetics Pre-Lab 1 due

## Week 4

7/20

- Lecture: Chapter 17
- Lab: Kinetic's Pre-Lab 2 due

7/21

- Lecture: Chapter 17
- Lab: Kinetics Lab Report due/ Intro to Beers Law/Green Crystal

7/22

- Lecture: **Exam II** (Chapter 16 and Chapter 17)
- Lab: Beer's Law Pre-Lab due/Green Crystal

7/23

- Lecture: Chapter 18 (**Chem 101 Assignment due 7/26**)
- Lab: Beer's Law Lab Report/Green Crystal due/ Intro to Kc lab

## Week 5

7/27

- Lecture: Chapter 18
- Lab: Kc -PreLab due

7/28

- Lecture: Chapter 18
- Lab: Kc Lab Report due/Ka lab experiment Intro

7/29

- Lecture: Chapter 20
- Lab: Ka Lab Prep due

7/30

- Lecture: Chapter 20 (**Chem 101 Assignment due 8/2**)
- Lab: Ka Lab Report due/Intro to Calcium hydroxide exp



## Week 6

8/3

- Lecture: Chapter 20
- Lab: Calcium hydroxide Lab Prep Due

8/4

- Lecture: **Exam III** (Chapter 18 and 20)
- Lab: Calcium Hydroxide Lab Report Due

8/5

- Lecture: Review (Chem 101 Assignment due)
- Lab: **Lab Final**

8/6

- **Final Exam 9:20AM-11:20AM**

## **Instructions for Converting Photos to pdf Files**

There are numerous apps that allow you to convert a photo to a pdf file easily. Some are free and some are not. Pdf files are what you will be uploading to Canvas for the pre-lab assignments and laboratory reports. You may choose any app that fits your budget and privacy level. As with any App some collect information that you may or may not be willing to share. Examples of apps are **Adobe Scan, Cam Scanner, GeniusScan etc.**

If you have an **iPhone**, the **Notes App** will allow you to create pdf files.

1. Launch the Notes App.
2. Tap the New Note button in the lower right.
3. Hit the photo icon.
4. Choose Scan Documents from the list of pop ups.
5. Line up the document you wish to scan in the view.
6. You'll see a yellow rectangle over the document, and if you hold your iPhone or iPad steady, it should take the photo automatically. If not, you can press the shutter button.

7. The scan will move down to the lower left; you can tap it to see how it came out, and then press *Done* or *Retake* at the top of the screen. To make a single multi-page document, just keep taking scans of additional pages. When you're done, press the *Save* button in the lower-right, which will show how many pages you've scanned.
8. You can then press the share button in the upper left corner and email the pdf file to yourself or choose the *Save to File* and upload the document to Canvas by using the Canvas App.



**Student Learning Outcome(s):**

\*Evaluate the principles of molecular kinetics.

\*Apply principles of chemical equilibrium to chemical reactions.

\*Apply the second and third laws of thermodynamics to chemical reactions.