

## Preparation for General Chemistry, CHEM 25, Summer 2017

### Instructor

Dr. Ian W. Jones

Email: [jonesian@fhda.edu](mailto:jonesian@fhda.edu)

Office Hours: M,T,W,Th: 1:00 - 2:00 PM (S43, Come find me!)

### Lecture

M,T,W,Th: 5:30 PM – 7:20 PM Room S32 (Sections 61 and 62)

### Lab

M,T,W,Th: 2:30 PM – 3:45 PM Room SC 2208 (Section 61)

M,T,W,Th: 4:00 PM – 5:15 PM Room SC 2208 (Section 62)

### Textbook

Introductory Chemistry: Concepts and Critical Thinking, Charles H. Corwin, Seventh Edition, Prentice Hall ISBN-13: 978-0-321-80490-7 ISBN-10: 0-321-80490-2

Note: Older editions of this book are acceptable. If you have an older edition, follow the topics of the lessons instead of the chapters indicated.

### Other Supplies

Lecture notebook, laboratory notebook, goggles, and scientific calculator

### Course Description

This class is meant as a preparation for the General Chemistry classes (CHEM 1 series) and is also a pre-requisite for some Biology classes. No previous chemistry knowledge is required for this class. There are two components to this class- a lecture and a laboratory. In the lecture, following a brief review of scientific measurements, we will discuss various simple chemical concepts such as model of an atom and the periodic table. We will learn to write some simple chemical reactions as well as perform calculations based on these reactions. We will then study some basic properties of solids, liquids, and gases, and finally conclude with a discussion of acids and bases. Several sections from chapters 1-15 of your text will be covered during this quarter. In the laboratory, we will learn to make various measurements, examine some simple chemical reactions, and learn various common laboratory techniques.

### Learning Outcomes

1. Assess the fundamental concepts of modern atomic and molecular theory.
2. Evaluate the standard classes of chemical reactions.
3. Demonstrate a fundamental understanding of mathematical concepts pertaining to chemical experimentation and calculations.

## **Academic Integrity**

Please refer to the De Anza College Student Handbook:

<http://www.deanza.edu/studenthandbook/academic-integrity.html>

To summarize the policies provided in the handbook- 1) no cheating will be tolerated 2) consultation of any form must be authorized by the instructor 3) cheating will be reported to appropriate officials 4) cheating will result in an automatic "F" in the class.

## **Class Policies**

**Daily Homework:** Homework assignments consist of the odd-numbered exercises in the back of the textbook chapters.

*Note:* The answers to the odd-numbered exercises are given in the back of your text. Use these to check your work and correct your mistakes. The answers that you turn in should show work or provide more of an explanation than the answers in the back of the text. It should be clear to the instructor that you completed the assignment before checking your work.

*Note:* My suggestion is to complete and turn in every assignment. Do not shy away from the more challenging material, since completing the homework problems will help you to succeed on the exams. The best time to complete the homework assignment is immediately after class when the material is still fresh in your mind!

**Mid-term Exams:** There will be four mid-term exams during the quarter. The midterm exams will be held during the first hour of the lecture. You will have 1-hour for the exams. The exams will contain numerical problems and short answer questions.

## **Attendance Policy**

You are expected to attend all lecture and laboratory classes. Strong data exist that indicate that the success of a student is directly related to her/his class attendance. You will be given an "F" grade for unexcused absences in THREE or more lectures and/or TWO or more lab periods. If you have an unexcused absence during the first week of the quarter, you will be dropped from the class.

*Excused Absence:* If you know in advance that you will need to miss a class, please notify the instructor and provide proof of the excuse. If you have already missed a class, please follow up with the instructor as soon as possible and provide a proof of a valid excuse. Valid excuses are: birth/death in the family, work-related travel, illness/medical emergencies, conference travels, jury duty, accidents, legal issues, or traveling to represent De Anza College at meetings/other events. Other excuses will be considered on a case-by-case basis. Please note that verifiable documented proof of the excuse is essential to grant a make-up.

**THIS IS A POSITIVE ATTENDANCE CLASS, ATTENDANCE WILL BE TAKEN!!!**

**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 ARE DROPPED FROM THE COURSE DURING THE FIRST TWO WEEKS OF CLASS YOUR LOCKER WILL BE INSPECTED AND MAY BE REASSIGNED TO ANOTHER STUDENT. YOU WILL BE HELD RESPONSIBLE FOR ANY BROKEN OR MISSING LAB EQUIPMENT PRIOR TO REASSIGNMENT.**

**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.**

**Cell Phone Policy**

Use of cell phones is strictly prohibited during class. There is to be no text messaging, browsing the Internet, or voice conversations. If you must take a call or text, please step outside the class to do so.

**DSS Policy**

<http://www.deanza.edu/dss/>

## Grading

Lecture Lab

### *Grading Scale*

In order to obtain the final letter grade for the class, your total lecture score will be added to your lab score and a percentage score will be computed based on the total. This percentage score will be rounded to the nearest whole number and a letter grade will be assigned as per the following table. Grades will not be based on a curve. Please note that regardless of your overall score, if you do not complete all the lab assignments you will receive an F grade in the class.

100 - 85% A

70 – 85% B

55 – 70% C

<55% F

## Lab

Safe lab practices are of utmost importance. Please read the section in your laboratory on safety issues carefully. The following rules are applicable while in the lab:

- You may not be in the laboratory unless an instructor is present
- Notify the instructor immediately in cases of illnesses while in the lab
- Eating and drinking are strictly prohibited inside the lab
- Open-toed shoes and shorts are not permitted inside the lab
- Personal headphones may not be used while in the lab
- Dispose off waste material and broken glassware as per instructions from your instructor
- Safety goggles must be worn at all times

## Lab Notebook & Pre-Lab

\*All work that you turn in for lab must be done in ink. Please do not use pencil or crayon.

Required Goggles:

<http://books.deanza.edu/MerchDetail.aspx?MerchID=1341936&num=4&start=1&end=12&type=1&CategoryName=GENERAL%20MDSE&CatID=5322&Name=GENERAL%20MDSE&Catalog=966>

Required Notebook:

[http://www.amazon.com/Student-Lab-Notebook-Spiralduplicate/dp/1930882742/ref=sr\\_1\\_3?ie=UTF8&qid=1435345737&sr=8-3&keywords=lab+notebook](http://www.amazon.com/Student-Lab-Notebook-Spiralduplicate/dp/1930882742/ref=sr_1_3?ie=UTF8&qid=1435345737&sr=8-3&keywords=lab+notebook)

Pre-Lab Notebook – *to be completed before lab and signed by lab instructor at the beginning and end of each lab:*

- 1) Write down the objective of the experiment.
- 2) Write down the outline of the procedure.
- 3) Write down blank data tables.

4) *Proper keeping of a lab notebook will be explained and demonstrated by the instructor.*

Pre-laboratory Assignment Sheet - *to be completed before lab and turned in at the beginning of each lab:*

- 1) There will be no time to complete this assignment during lab hours.
- 2) You must show your work for any problems on the pre-lab assignment. No credit will be given for just the answer.
- 3) Please remove the rigid edges from the sheet before turning it in.
- 4) You will get your graded assignment returned to you at the beginning of lab on the following day.

### **Lab Reports**

\*All your answers and calculations must be written legibly. If you do not have handwriting that others can easily read, please use a computer to type your Lab Reports.

During lab, you will generate data tables in your lab notebooks. These will not be the product that you turn in for a grade. Your graded reports will consist of the following:

#### 1) Data Table from Lab Manual

These are to be filled out at home, in ink, with no white-out or erasing. If you must cross out an answer, please cross it out with a single line. Do not include calculations on this sheet.

#### 2) Calculations

All calculations must be shown in detail on a separate sheet of paper.

#### 3) Post-Lab Worksheet from Lab Manual

All problems must be worked out in detail. No credit will be given for just the answers.

### **Due dates of Lab Reports**

Lab reports are due at the beginning of the lab period following completion of the experiment (your next lab class). No late work will be accepted.

### **Loss of Lab Credit**

The following will result in ZERO credit for a particular experiment.

1. Improper lab attire (no shoes or no long pants/skirts or tank-tops)
2. Lack of lab preparation
3. Being late by more than 10 minutes
4. Absences that do not have a documented excuse

Note: Each lab exercise is divided into more than one day. You must come to lab every day. Please do not rush to finish an exercise in a single day.

### **POLICY CHANGES**

All the information contained in this document is subject to change at the discretion of the instructor. Changes will be noted in class.

## Lecture and Lab Schedule

Date	Lecture	Exam	Lab
July 3	Ch 1: Intro and Measurements		Check In
<b>July 4</b>	<b>Holiday, No Class</b>		<b>Holiday, No Lab</b>
July 5	Ch 2: The Metric System		Metric System + Density
July 6	Ch 3: Matter and Energy		Metric System + Density
July 10	Ch 4: Models of the Atom		Physical and Chemical Props
July 11	Ch 4: Models of the Atom	<b>Exam #1 (Ch 1, 2, 3)</b>	Physical and Chemical Props
July 12	Ch 5: Periodic Table		Periodic Table
July 13	Ch 6: Language of Chemistry		Periodic Table
July 17	Ch 6: Language of Chemistry	<b>Exam #2 (3, 4, 5)</b>	Alum Analysis
July 18	Ch 7: Chemical Reactions		Alum Analysis
July 19	Ch 7: Chemical Reactions		Penny Analysis
July 20	Ch 8: The Mole		Penny Analysis
July 24	Ch 8: The Mole	<b>Exam #3 (5, 6, 7)</b>	Decomp. Baking Soda
July 25	Ch 9: Chemical Equations		Decomp. Baking Soda
July 26	Ch 9: Chemical Equations		Electrical Conductivity
July 27	Ch 10: Gases		Electrical Conductivity
July 31	Ch 11: Liquids and Solids	<b>Exam #4 (8, 9, 10)</b>	Vinegar Analysis
Aug 1	Ch 11: Liquids and Solids		Vinegar Analysis
Aug 2	Ch 12: Chemical Bonding		Vinegar Analysis
Aug 3	Ch 13: Solutions		Vinegar Analysis
Aug 7	Ch 14: Acids and Bases		Check Out
Aug 8	Ch 14: Acids and Bases		Check Out
Aug 9	Lecture Review		Lab Review
<b>Aug 10</b>	<b>Comprehensive Final Exam</b>	<b>All the chapters!</b>	<b>Lab Final</b>