CHEMISTRY 1B: General Chemistry II
Summer 2026 Syllabus

Instructor: Tim Karpishin, Ph.D. Email: karpishintimothy@fhda.edu

Office Hours: Meet with Professor Karpishin either before or after lab and/or lecture.

CRN: 00213 (Section 25)

Section	Class	Instructor	Time	Location
25	Lecture	Karpishin	M,T,W,Th 2:30 - 3:45 pm	G6
25	Lab	Karpishin	M,T,W,Th 11:30 am - 2:20 pm	SC2204

Prerequisite: Chemistry 1A with a grade of C or better

Required Materials:

1) **Textbook:** *Introductory Chemistry, 7th edition by Nivaldo J. Tro (Pearson: 2023, ISBN-13: 9780138198411 (**available on Pearson.com**)*
2) **Computer** with internet access
3) **Scientific Calculator**—Make sure you can do scientific notation (EXP, EE, log, and ln).
4) **Lab Notebook** - Any style of lab notebook is appropriate as long as the pages measure 8.5 x 11 inches.
5) **Safety goggles**. They are **required** during lab experiment sessions. However, there are goggles available for use during labs. They are available in the campus bookstore or Amazon if you want to own a personal pair.

Important Registration Deadlines:

- **Course Add:** Sunday, July 5th (add code required)
- **Course Drop:** Sunday, July 5th

I. Course Description

This course is a continuation of an introduction to the principles of chemistry covering the investigations of intermolecular forces and their effects on chemical and physical properties. Also covered are investigations of reversible reactions from the standpoints of kinetics, thermodynamics, and equilibrium. Investigation and application of gas laws. Transferable to both UC and CSU**.**

II. Procedures

Exams. All exams must be taken in-person.

Exam 1: Monday, July 13 from 2:30 pm to 3:45 pm (*covers lectures up to and including July 9*) **ROOM G6**

Exam 2: Monday, July 27, from 2:30 pm to 3:45 pm (*covers lectures from July 14-July 23*) **ROOM G6**

Final Exam: Thursday, August 6, from 11:30 am to 1:30 pm (*cumulative)* **ROOM SC2204**

Labs. You must attend all lab sessions and must not arrive late. **If you miss 3 or more lab periods with unexcused absences, you will receive an F for this course.** To participate in a lab session, you must have completed the prelab and be wearing appropriate lab attire. Appropriate lab attire includes flat close-toed shoes and fully covered feet, legs, and torso (stomach). Hair needs to be secured with a hair tie if it is shoulder-length or longer. See the 'Laboratory Policies' section for more details. If you are unable to make it to a lab session, contact the instructor via Canvas/email to let them know as soon as possible.

After you finish a laboratory experiment, you must complete the lab report and turn it in on Canvas one week later. Lab reports can be turned in up to one day late for a 25% penalty. After that, there will be a 50% penalty. Lab Reports will be accepted until August 7th.

III. Course Requirements and Grading

Grade Components:

Component	Points	% of Grade
Prelabs (7)	70	8.6
Lab Reports (8)	190	23.5
Exam 1	150	18.5
Exam 2	150	18.5
Final Exam	250	30.9
TOTAL	**810**	**100**

Grade breakdowns are as follows:

Grade Percentage	Letter Grade	Grade Percentage	Letter Grade
95-100%	A+	71-76%	C+
90-94 %	A	62-70%	C
87-89%	A-	60-61%	D+
84-86%	B+	52-59%	D
80-83%	B	50-51%	D-
77-79%	B-	<50%	F

IV. Academic Honesty

- Cheating will result in a 0 grade for the assigned work. Further cheating will subject you to increasing disciplinary measures, including referral to the Vice President of Student Services.
    - Do not look directly at other students' work or let others look directly at your work.
    - Do not use a phone, computer or other tech device during exams

V. Accommodations for Students with Disabilities

The mission of Disability Support Programs and Services (DSPS) is to ensure access to the college's curriculum, facilities, and programs, and to promote student success in realizing individual educational and vocational goals. DSPS includes on- and off-campus programs and services offering students with disabilities a comprehensive array of accommodations, educational assistance classes and support services. Find out more about their services by going to Disability Support Programs and Services (DSPS). You can sign up to speak with a counselor online or request assistance by email (dss@deanza.edu) or phone [(408) 864-8838].

VI. Flexibility Clause

There may be a need to make changes to this syllabus over the course of the semester. Students will be given as much notice as possible if any changes need to be made.

VII. Tentative Lecture Schedule with Textbook Chapters

	Monday	Tuesday	Wednesday	Thursday
Week of June 29	Chapter 6	Chapter 6	Chapter 6	Chapter 12
Week of July 6	Chapter 12	Chapter 12	Chapter 13	Chapter 13
Week of July 13	**EXAM 1**	Chapter 15	Chapter 15	Chapter 15
Week of July 20	Chapter 16	Chapter 16	Chapter 16	Chapter 17
Week of July 27	**EXAM 2**	Chapter 17	Chapter 17/19	Chapter 19
Week of Aug 3	Chapter 19	Chapter 19	Review	**FINAL**

VIII. Tentative Lab Schedule

WEEK OF	WEEK	MONDAY	TUESDAY	WEDNESDAY	THURSDAY
6/29/2026	1	CHECK-IN	MOLAR VOLUME	STRUCTURE REVIEW	HEAT OF VAPORIZATION (1)
7/6/2026	2	HEAT OF VAPORIZATION (2)	GREEN SALT (1)	GREEN SALT (2)	GREEN SALT (3)
7/13/2026	3	GREEN SALT (4)	GREEN SALT (5)	IODINE CLOCK REACTION (1)	IODINE CLOCK REACTION (2)
7/20/2026	4	IODINE CLOCK REACTION (3)	IODINE CLOCK REACTION (4)	Kc BY SPECTRO (1)	Kc BY SPECTRO(2)
7/27/2026	5	Ka OF A WEAK ACID (1)	Ka OF A WEAK ACID (2)*	CALCIUM HYDROXIDE (1)	CALCIUM HYDROXIDE (2)
8/3/2026	6	CALCIUM HYDROXIDE (3)*	CHECK-OUT	NO LAB	**FINAL EXAM (SC2204)**

* extra day if necessary

IX. Homework and Learning Strategies

This is an accelerated 6-week course that usually runs over a 12-week period. Thus, the material will come quickly and it will be very easy to fall behind. It is critical that you dedicate sufficient time to study the lecture material and prepare for each lab period. **Chemistry 1B is considered to be a quite difficult course.**

Suggestions:

1) Prior to the lecture, **review** the textbook sections that are going to be discussed.
2) Prior to each lab, carefully **review** the lab procedure, do the pre-lab, and **submit** the prelab in Canvas prior to your laboratory section.
3) **Dedicate** the mornings to review the previous lecture material and do the **Chapter Problems** that are in the textbook. The odd-answers are posted for those questions. It is imperative that you do not fall behind on lecture material.
4) Try to do the laboratory report(s) on the weekend after the lab(s). Then **post** them on Canvas once completed. That way, you can use the weekdays to keep up with the lecture material, do the chapter problems, and prepare for the exams.
5) **Ask** questions of your classmates and the professor.
6) **Use** other material on the internet to help with studying and learning the material.

X. Laboratory Policies

Safety Contract and Laboratory Rules

De Anza College's laboratory safety contract is available on Canvas. The safety contract *summarizes* safety rules, precautions, and practices for the course. **A signature is required before the first lab experiment session, and failure to sign the safety contract will result in your withdrawal from the course.**

Safety is our first concern in the chemistry lab. You must follow the safety rules and instructor's directions in the lab. In addition, it is particularly important to have your cell phones in your backpack, dress appropriately, and never eat or drink in the lab.

Food, drinks, cell phones, and other electronic devices are NOT allowed in the lab for two reasons: 1) they may be a distraction while you (or others) are working with hazardous reagents and 2) these easily can be contaminated with chemicals from the laboratory. Food and drinks should be left inside your backpack. If needed, you can leave the room for a short time, but please avoid excessive exit/entry from the lab and never leave a lab experiment unattended.

Personal Safety Equipment Requirements

Students are required to use safety glasses or goggles during the lab experiments. The Department will provide goggles to be checked out for the lab period, so you are not required to purchase goggles. These goggles are shared amongst our chemistry students, so you are encouraged to bring your own.

It is absolutely mandatory that you dress appropriately for lab. Loose, baggy clothing is discouraged. Long hair must be pulled back; full-length shirts (covering the midsection) and long pants are required during lab days. *You must wear flat, closed-toe, closed-heel shoes*. Students violating these clothing and safety requirements will not be allowed in the laboratory.

Lab Manual and Pre-Lab Assignments

For each lab session, you are required to (1) thoroughly read the laboratory protocol for the scheduled experiment posted in Canvas (**also**, **see the schedule above**), (2) complete the pre-lab tasks in your lab notebook and (3) post the prelab into Canvas prior to the start of the lab period. **All pre-labs are due at the start of the lab session to ensure preparation**. If you do not have your prelab ready or are not dressed properly for safety requirements, you will need to leave the lab session and will receive a 0 for the lab. Preparation is required for your safety as well as the safety of your fellow students.

Prelabs must be complete and submitted in Canvas prior to the lab class (Camscanner is a good app for scanning your lab notebook for posting into Canvas). Prelabs submitted after lab session receive 0 pts.

General guidelines for Lab Notebook/*Grading of each lab report or prelab will depend on following these guidelines*

- Lab notebooks in CHEM 1B can be either lab notebooks or composition notebooks
- **Number the pages in your notebook**
- Make all entries in ink (**No pencil**)
- All entries must be **legible**
- All tables must be drawn with a **ruler** or straight edge
- **Corrections** are made by drawing a single line through the mistake.
- If the results are in a graph or spectrum, scale the image down to print out and paste into your notebook
- Always begin a new experiment on a new page
- At the top of each new experiment **write down that day's date**
- At the very end of the Conclusion section, **sign and date**, and place a diagonal line across any remaining blank space

Lab notebook sections and when they should be completed

Section	Description	When to Complete
Experimental Title	Use the title from the lab manual and title the top of the first page	Prelab - **Date First Page**
Objective	1-2 succinct sentences in your own words that describe the main purpose or goals of the experiment	Prelab

Equation(s)	Write out any major chemical reactions occurring in the experiment (may not apply to all labs).	Prelab
Safety and Hazards	Create a table of any safety or hazard considerations. Refer to SDSs for all of the chemicals that are to be used in that experiment, and list at least one major chemical hazard in this section for each chemical.	Prelab
Procedure	**Briefly** outline the procedure using numbered steps and include drawings or diagrams when applicable. Copying the procedure word for word is unacceptable. Prepare data tables as you see fit using a ruler to draw tables.	Prelab
Data and Observations	Keep entries as you proceed through the experiment. You can also make any procedural updates or changes as you progress through the experiment. Set up data tables to keep information organized. If a data table was not used, put a diagonal line through it or through a section of it. **Your Lab Notebook needs to be initialed by Instructor prior to leaving for the day to ensure that data were collected properly.**	During
Results and Discussion	Interpret your data and show any formal equations used. Address any unusual results or observations by providing reasonable explanations. **Answer any lab questions here and do calculations here.** Paste a copy of any graphs or spectra here.	After
Conclusion	Write a 3-4 sentence Conclusion explaining what was achieved in the experiment. Discuss ways that your results may have been improved if you were to do the experiment again.	After - **Sign and Date after end of Conclusion**

Lab Attendance

The laboratory activities – lab experiments and work sessions – are essential for this course. Understanding chemistry requires that you learn laboratory techniques, so if you are absent three (3) or more lab meetings during the semester, you will be given an F for the course.

At the start of each lab, there will be a short pre-lab lecture. During the pre-lab lecture, important safety information and chemical handling procedures (if any) will be reviewed. Thus, it is essential that everyone arrive to lab on-time. If you arrive more than 5 minutes late and miss any portion of the pre-lab lecture, you may not be allowed to participate in lab. **There are no make-up labs**. If you are unable to make it to a lab, please let your lab instructor know as soon as possible by e-mail/Canvas.

Lab Reports and Lab Grades

After you finish a laboratory experiment, you must complete the entire lab report and turn it **one week later on Canvas (use Camscanner app). All submissions must be a single pdf document, not individual pages.** Requirements and due dates will be posted on Canvas.

Lab Reports are due one week after the completion of the lab and submitted in Canvas.

Unless otherwise instructed, you may NEVER submit a report for a lab that you were absent from. Also, you may be working in pairs or groups, but it is essential that your lab reports and work sessions represents **your own work** and may not be copied from others – including AI-generated materials. Falsifying records, changing data entries, copying a lab report (or portions of a prelab, lab report, or worksheet) are forms of academic dishonesty and violate De Anza College's policies.

Lab Accidents/Injuries

Accidents and spills can happen in the lab. While accidents do not affect your grade - unless they result from disruptive behavior or unauthorized experiments - how you deal with the accident and/or injury is important. **No matter how trivial the accident may be, please notify your instructor without delay.**

Chemistry Laboratory Safety Rules

Any student who disregards safety rules may have his/her overall grade lowered at the discretion of the instructor. Consistent failure to follow these rules or serious infractions may result in outright expulsion from the course.

Locker Policy

If you are provided a lab locker for the quarter, you are required to officially check out of that locker, whether you complete the course or not. Failure to check out of your lab locker by the official checkout date may result in a your grades being held and/or a block being placed on your future registration.

XI. Information and Campus Policies

Nondiscrimination Statement

The college, the district and their representatives shall provide access to services, classes and programs without regard to national origin, immigration status, religion, age, gender, gender identity, gender expression, race or ethnicity, color, medical condition, genetic information, ancestry, sexual orientation, marital status, physical or mental disability, pregnancy, or military and veteran status, or because someone is perceived to have one or more of the foregoing characteristics, or based on association with a person or group with one or more of these actual or perceived characteristics.

Student Help and Support

De Anza College is here to support you with many Student Services.

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.