

Chemistry 25: Preparation Course for General Chemistry De Anza College Fall 2016 (CRN: 22997 & 22998)

Lecture Instructor:

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Office Hours: After lecture or by appointment

Lab Instructor:

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Office Hours: TBD

Description: This course is a preparatory course for entry into the General Chemistry sequence. We will cover atomic structure, molecular theory, chemical equations, stoichiometry, gas laws, thermochemistry, and types of reactions. In lab, concepts will be reinforced through volumetric and gravimetric analyses and basic lab techniques.

Prerequisites and Recommendations: Prerequisite: MATH 114 or equivalent. Advisory: EWRT 1A or EWRT 1AH or ESL 5.

Required Materials:

- **Textbook or E-book** Introductory Chemistry, Concepts and Connections, Charles H. Corwin, 6th or 7th edition ISBN 13: 978-0-13-232148-8 ISBN 10: 0-13-232148-3
- **Calculator** this doesn't have to be fancy, but you will need log, ln, e^x functions (scientific calculator). You need to know how to use your calculator. You cannot use your phone's calculator on the exam, so do ALL chemistry problems with the calculator you WILL use on the exams.
- **Lab Manual** Laboratory Manual for Introductory Chemistry, 4th edition, Charles H. Corwin
- **Safety Goggles** (Bookstore or buy online) Goggles with Z87 written on them. They must be chemically resistant and not just physical impact resistant.

Grading: The course grade is based on a 1000-point scale. The points are earned by performance on homework (5%), in class assignments/group work (3%), lab (29.5%), quizzes (5%), exams (37.5%) and a comprehensive final exam (20%). There is no curve and no extra credit.

Graded Work	Points
Homework (9 x 5 points)	45
Prelabs (9 x 5 points)	45
Lab Reports (9 x 15 points)	135
Notebook	10
Lab Exam	100
Quizzes (regularly after lecture)	15
Lecture Exams (3 x 150 points)	450
<u>Final Comprehensive Exam</u>	<u>200</u>
TOTAL	1000

Grading Scale: Letter (%)

A+ (100-97)	B+ (89-86)	C+ (79-76)	D+ (69-66)	F (59-0)
A (96-90)	B (85-80)	C (75-70)	D (65-60)	

Pass/No pass: A grade of "C" or higher is considered a "pass" in this course, and lower than "D+" is considered "No Pass" for this course.

General Course Information:

Lecture: Lecture attendance is essential to passing the class. Lectures meet Monday and Wednesday from 8:30 AM -10:20 AM in G6. Lectures will parallel content in the book. Students are required to read the sections indicated in the course schedule.

Lab: There are no make-up labs. Labs will meet from 11:30 AM – 2:20 PM in SC2208. Through your lab write-ups you have a chance to demonstrate your understanding of chemistry by providing thorough, detailed explanations and answers to lab questions. Failure to abide by lab safety and instructor's guidelines will result in loss of points for that lab period or ejection from class. Every student must bring their own lab manual to class. **Two or more unexcused absences will result in an automatic "F" in the course regardless of the total number of points earned.**

Prelab: Students are required to read through the experimental procedure for the day and complete any prelab assignments in their lab notebook. There will often be a **prelab quiz** at the beginning of class to show understanding. Students who are not prepared will not be allowed to complete the lab.

Homework: Homework will be assigned by end of the chapter problems and due at the beginning of lecture, the day after we finish the material. **Full work must be shown to receive full credit.**

Quizzes: Quizzes serve as a quick assessment to test student understanding. The questions will be similar to that of an exam. There are no make-up quizzes. Missed quizzes will receive a zero.

Exams will occur during lecture period and include True/False, multiple choice, short answer, and calculation problems. Students are required to bring a writing utensil and calculator. No scantron forms or blue books are required. **There are no make-up exams.** Missed exams will receive a zero. For exams, your lowest exam score with your final exam score if your final exam score is higher. Every exam is cumulative.

Late Work/Missed Work Policy:

Late work will be penalized by

$$\text{Points Possible} - (\text{Points Possible} * 0.9^{\text{class periods late}}) = \text{Late Penalty}$$

For example, a 5-point homework assignment that is 1 class period late will have a late penalty of

$$5 - (5 * 0.9^1) = 0.5 \text{ points.}$$

A lab report worth 30 points that is 2 class periods late will have a late penalty of $30 - (30 * 0.9^2) = 5.7$ points. **It is the responsibility of the student to calculate the number of days late and as well as the late penalty.**

Disability Services:

Disability Support Services (DSS) provides special services and instruction for students with physical disabilities, psychological disabilities or chronic health impairments. These include registration assistance, parking permit distribution, shuttle service, assistive technology support and training, and academic and test accommodations.

Visually impaired students have the services of an alternate media specialist to assist them with curricular modifications such as ordering materials in special media. Deaf and hard-of-hearing students have the assistance of an interpreter/scheduler with registration, the provision of interpreting and captioning services in the classroom, and with a campus liaison. Location: Registration and Student Services Building 408.864.8753 (Voice) 408.864.8748 (TTY) dss@deanza.edu www.deanza.edu/dss

Academic Integrity:

All graded assignment must be done individually (no help from other people, the internet, etc.) Academic dishonesty includes cheating, plagiarism or knowingly furnishing false information. Whenever you submit answers as an individual (prelabs, lab reports, quizzes, exams), it must be your own. If you don't abide by the standards of academic integrity, you will be disciplined as spelled out by the college. This discipline can include a zero on the assignment, a failing grade (F) in the course, and expulsion from the college.

Learning Outcomes:

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

Laboratory Conduct and Safety:

The Lab period will consist of laboratory experiments and discussion. The emphasis is not on memorization of the “what’s” but on understanding of the “how’s” and the “why’s” of chemistry. You will be expected to maintain a lab notebook, so bring your lab manual, lab notebook, goggles, and calculator to class each time. Due to size and time constraints, there will be **NO make-up labs**.

1. The prelab must be completed prior to coming to lab.
2. Only bound notebooks may be used as laboratory notebooks. Instructor’s approval is required.
3. All data must be recorded in the lab notebook in pen.
4. You must obtain the instructor’s signature at the end of each lab period.
5. All lab reports must be typed.
6. You must be present in the lab during the entire duration of the lab experiment.

LABORATORY SAFETY PROCEDURES

Lab safety is incredibly important!

1. Safety Goggles must be worn at all times.
2. Clothing must cover your legs and feet. No sandals, ballet flats, skirts, capris or shorts are allowed. Students dressed improperly cannot stay in lab.
3. Know the location of the fire extinguishers, showers, and eye washes in the lab.
4. There is no eating, drinking (including bottled water), or chewing gum in the lab, period. There is a place OUTSIDE of the lab room, where drinks and lunches may be kept.
5. Broken glass must be discarded only in the designated “sharps” containers. Use broom and dustpan.
6. Report all injuries to the lab instructor immediately no matter how minor you think the injury is.
7. Ear buds and headphones are not allowed during lab.
8. Properly dispose of all waste material. The instructor will advise you for the procedure for each experiment. Nothing goes down the drain.

Lab and Lecture Schedule

Week	Date	Day	Lecture Chapter	Lecture Topic	Read Through	Laboratory Topic	HW due
Week 1	9-26	M	1-2	Intro, measurements	2.10	Check-In	
	9-28	W	3	Metric	3.9	Check-In	HW1
Week 2	10-3	M	4	Matter / Energy	4.9	Metric System / Density	
	10-5	W	5	Subatomic Particles	5.5	Metric System / Density	HW2
Week 3	10-10	M	5	Light / Orbitals Exam 1 (1-4)	5.9	Physical and Chemical Properties	
	10-12	W	5	Electron Configuration	6.10	Physical and Chemical Properties	HW3
Week 4	10-17	M	6	Periodic Trends	6.10	Alum Analysis	
	10-19	W	7	Naming	7.9	Alum Analysis	HW4
Week 5	10-31	M	8	Balancing Reactions	8.5	Penny Analysis	
	11-2	W	8	Solubility Trends	8.10	Penny Analysis	HW5
Week 6	11-7	M	9	Mole	9.4	Decomposing Baking Soda	
	11-9	W	9	Empirical Formula	9.9	Decomposing Baking Soda	HW6
Week 7	11-14	M	10	Exam 2 (5-9)	10.6	Electrical Conductivity	
	11-16	W	10	Stoichiometry	10.9	Electrical Conductivity	HW7
Week 8	11-21	M	11	Gases	11.11	Vinegar Analysis (I)	
	11-23	W	12	Bonding	12.8	Vinegar Analysis (I)	HW8
Week 9	11-28	M	12	Molecular Shapes	12.10	Vinegar Analysis (II)	
	11-30	W	13-14	Intermolecular Forces Solutions	14.11	Vinegar Analysis (II)	HW9
Week 10	12-5	M	15	Acids	15.8	Check-Out	
	12-7	W		Exam 3 (10-15)		Check-Out	
Week 11	12-12	M				Lab Final	
	12-14	W		Final Exam		Lab Final	

Exams will take place during the lecture period.

The Final Exam is cumulative and will be from 7 AM – 9 AM on Decemeber 14th.

October 9th is the last day to drop with a refund.