

**Preparation Course for General Chemistry
Spring 2021 (CHEM-25-03Z & 04Z) Syllabus**

Lecture: Sections 03Z & 04Z : Monday & Wednesday -10:30 AM - 12:20 PM Online

Lab: Section-03Z(CRN:44010): Monday- 2:30 PM - 3:20 PM - Online

Lab:Section-04Z(CRN:44011): Wednesday- 2:30 PM - 3:20 PM - Online

Instructor: Dr. Hema Ramakrishna

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Office Hours: Monday & Wednesday- 1:20 PM - 2:20 PM Online

Description: An Introduction to core theory and problem solving techniques of chemistry as preparation for Chemistry 1A at DeAnza College. The course will include an overview of many of the most important topics in general chemistry, including stoichiometry, atomic and molecular structure, solutions, scientific measurement, the periodic table, and chemical reactions. The course material will be approached from both a conceptual and mathematical standpoint.

Required materials:

1. Lecture TextBook: Introduction to Chemistry, 5e, by Bauer, Birk, Marks.
(ISBN - 9781307601633)
2. Lab Manual: Will be listed in Canvas and posted online for each lab.
3. A scientific calculator that has at least log and exponential functions is required.

DeAnza Tutoring: Students can get help online:

Tutoring: Go to <http://deanza.edu/studentsuccess> and click to join a Zoom tutoring room during open hours.

Workshops: Attend a [Skills Workshop](#), a [content-specific math/science workshop](#), an [Accounting chapter review workshop](#), or a [Listening and Speaking workshop](#).

Resources: Join the [SSC Resources Canvas site](#) to see content and learning skills links.

After-hours or weekend tutoring: See the [Online Tutoring](#) page for information about NetTutor (via Canvas) or Smarthinking (via MyPortal).

Evaluation: Your grade will be based on your performance in the following:

Lecture Exams: There will be three midterm exams and one final exam. **All the three midterm exam scores and Final exam score will be used in determining your final grade.** Each midterm exam counts for 125 points. **No early, late or make-up midterm exams will be given.**

Lab assignments: **All 9 lab assignments and Prelabs will count towards your final grade.** **No make-up labs.** Instructions to complete the experiments, calculations, analyze the results and submit the Prelabs and lab assignments will be given during the regular Lab meetings.

Lab final Exam: There is one lab exam worth 90 points. The lab final exam will be given during your regularly assigned laboratory meetings as mentioned in the syllabus. **No early, late or make-up lab exams will be given and lab final exam score will count toward your overall course grade.**

Lecture Final Exam: A comprehensive lecture final exam will be given. Students who miss or fail the final exam will not receive a grade C or better. No early, late or make-up Lecture Final exam will be given.

The time of the final exam is determined by the college and cannot be changed for any reason. The Lecture Final Exam will be on Wednesday, June 23rd at 9:15 AM– 11:15 AM. If you cannot make this time, you should not enroll in this class.

9 Lab assignments (10 points each)	90 points
9 Prelabs (5 points each)	45 points
1 Lab Final Exam	90 points
3 Midterm Exams (125 pts each)	375 points
1 Lecture Final exam	200 points
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Total	800 points

Letter grades will be assigned according to the following grade scale:

90-100% = A
87-89.9% = A-
84-86.9% = B+
79-83.9% = B
76 -78.9% = B-
72-75.9%= C+
60-71.9% = C
50-59.9% = D
Below 50% = F

Dr. Ramakrishna reserves the right to change exam dates as well as modify the grade scale at any point during the quarter.

Attendance: Your attendance is urged for all lectures and required for all the exams and labs. It is the responsibility of the student to contact the instructor regarding missed work. **If an absence is anticipated, the student should make arrangements to complete the missed assignments prior to the absence.** 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.

Attendance is required at all scheduled laboratory sessions. You will receive a zero on the second lab you miss and will fail the course on the third.

All the assignments and exams must be submitted on time only on the Canvas site. Any late submissions will not be graded or counted towards the final grade. Exams, Prelabs and lab assignments which are not submitted in the assigned time will score zero.

Academic integrity : Academic dishonesty is a serious offense. Students are also expected to abide by the Academic Integrity policy of De Anza college catalog at all times.

Academic dishonesty is a serious offense, which includes but is not limited to the following: Cheating, complicity, fabrication and falsification, forgery, and plagiarism. Cheating involves copying another student's paper, exam, quiz or use of technology devices to exchange information during class time and/or testing. In addition, it also includes unauthorized collaboration on academic work of any sort. Complicity, on the other hand, involves the attempt to assist another student to commit an act of academic dishonesty. Fabrication and falsification, respectively, involve the invention or alteration of any information (data, results, sources, identity, and so forth) in academic work.

Any sort of cheating is never tolerated and results in dismissal from the course with a Grade F and the incident will be reported to the Division Dean and the College disciplinary board.

Homework : As this is a college-level course, homework will not be collected or graded, it is entirely up to you to discipline yourself to do as many problems as may be necessary for you. Recommended problems are posted below. The suggested problems are **not** necessarily an indicator of the types of problems that will be found on quizzes or exams.

Chapters	Problems
Ch:1- Matter and Energy	1.4, 1.8, 1.12, 1.14,1.18, 1.22, 1.28, 1.34, 1.40, 1.46, 1.52, 1.58, 1.60, 1.68, 1.74, 1.76, 1.80, 1.86, 1.90, 1.96, 1.108
Ch:2- Atoms, Ions and the Periodic Table	2.2, 2.10, 2.14, 2.22, 2.24, 2.28, 2.30, 2.34, 2.38, 2.40, 2.48, 2.50, 2.54, 2.74, 2.78, 2.86, 2.92, 2.94, 2.98, 2.104, 2.106, 2.108
Ch:3-Chemical Compounds	3.2, 3.4, 3.8, 3.10, 3.12, 3.14, 3.18, 3.20, 3.22, 3.30, 3.32, 3.34, 3.36, 3.38, 3.40, 3.42, 3.44, 3.46, 3.48, 3.50, 3.54, 3.60, 3.62, 3.66, 3.68, 3.70, 3.82, 3.84, 3.86, 3.88, 3.90
Ch:4- Chemical Composition	4.4, 4.8, 4.10, 4.12, 4.16, 4.18, 4.20, 4.22, 4.24, 4.28, 4.30, 4.34, 4.36, 4.38, 4.40, 4.42, 4.44, 4.46, 4.48, 4.54, 4.56, 4.58, 4.60, 4.68, 4.70, 4.72, 4.74, 4.76, 4.78, 4.80, 4.84, 4.86,4.88, 4.100, 4.102, 4.104, 4.106, 4.108, 4.112, 4.114
Ch:5-Chemical Reactions and Equations	5.6, 5.8, 5.12, 5.18, 5.24, 5.28, 5.30, 5.38, 5.40, 5.42, 5.46, 5.48, 5.52, 5.56, 5.58, 5.60, 5.64, 5.70, 5.74, 5.78, 5.82, 5.88,5.92, 5.96, 5.104, 5.106, 5.110, 5.112
Ch-6- Quantities in Chemical Reactions	6.4, 6.8, 6.10, 6.12, 6.14, 6.16, 6.18, 6.20, 6.22, 6.24, 6.26, 6.28, 6.32, 6.34, 6.36, 6.38, 6.40, 6.44, 6.46, 6.48, 6.50, 6.56, 6.58, 6.60, 6.62, 6.64, 6.68, 6.72, 6.74, 6.76, 6.78, 6.84, 6.86, 6.90, 6.92, 6.94.
Ch:7- Electron Structure of the Atom	7.2, 7.8, 7.12, 7.14, 7.16, 7.18, 7.24, 7.28, 7.30, 7.32,7.36, 7.40, 7.44, 7.46, 7.48, 7.50, 7.52, 7.54, 7.62, 7.64, 7.66, 7.68, 7.72, 7.76, 7.78, 7.80, 7.82, 7.84.
Ch:8-Chemical Bonding	8.2, 8.4, 8.6, 8.8, 8.10, 8.14, 8.16, 8.20, 8.22, 8.24, 8.26, 8.30, 8.32, 8.34, 8.46, 8.48, 8.50, 8.52, 8.54, 8.56, 8.58, 8.60, 8.62, 8.64, 8.66, 8.68, 8.70, 8.86, 8.88, 8.90, 8.92, 8.94,8.100, 8.114, 8.120, 8.122, 8.134.
Ch:9-The Gaseous State	9.14, 9.16, 9.20, 9.22, 9.24, 9.26, 9.30, 9.38, 9.40, 9.42, 9.44, 9.50, 9.52, 9.58, 9.60, 9.62, 9.64, 9.66, 9.68, 9.70, 9.72, 9.86, 9.88, 9.90, 9.92, 9.94,9.100, 9.102, 9.116
Ch:10-The Liquid and Solid States	10.2, 10.6, 10.10, 10.14, 10.22, 10.34, 10.36, 10.42, 10.46, 10.48, 10.54, 10.58, 10.62, 10.68, 10.70, 10.74, 10.78, 10.82,10.84, 10.88.
Ch:11-Solutions	11.4,11.6,11.10,11.14,11.42,11.46,11.48,11.50,11.52,11.58,11.62,11.64,11.68,11.72,11.74, 11.76,11.80.
Ch:13- Acids and Bases	13.12,13.16,13.18,13.20,13.22,13.24,13.28,13.30,13.34,13.36,13.38,13.44,13.46,13.52,13.54,13.56,13.58,13.62,13.66,13.68,13.70,13.72,13.74,13.78,13.80,13.82,13.86,13.92,13.96, 13.98,13.106,13.108,13.110,13.112.
Ch:14-Oxidation-Reduction Reactions	14.4,14.8,14.10,14.12,14.14,14.16,14.18,14.20,14.24,14.26,14.28,14.30,14.32,14.36,14.46, 14.48.

Changes to Syllabus: This syllabus may change according to the needs of the class. Please check with the syllabus posted.

Tentative Laboratory, Lecture, and Exam Schedule

Date Monday	Lecture Lab-Section-03Z(CRN:44010)(Online)	Date Wednesday	Lecture Lab-Section-04Z(CRN:44011)(Online)
05 Apr	Lecture :Introduction ;Ch.1: Matter and Energy Section-03Z-Lab-01: Check-In & Math Module	07 Apr	Lecture: Ch.1-Cont., Ch.2: Atoms, Ions and the Periodic Table Section-04Z-Lab-01: Check-In & Math Module
12 Apr	Lecture :Ch.2:Cont,Ch.3: Chemical Compounds Section 03Z-Lab-2 : Measurements	14 Apr	Lecture: Ch.3:cont, Ch.4: Chemical Composition Section-04Z-Lab-2: Measurements
19 Apr	Lecture : Ch.4. Cont.. Section 03Z-Lab-3 : Density	21 Apr	Lecture : Ch.5: Chemical Reactions & Equations Section 04Z-Lab-3 : Density
26 Apr	Lecture:Ch:5 cont, Section 03Z-Lab-4 : Atomic structure & Periodic Table	28 Apr	Lecture: Exam-1(Ch.1-4) Section 04Z-Lab-4: Atomic structure & Periodic Table.
03 May	Lecture : Ch.6: Quantities in Chemical reactions Section 03Z-Lab-5 : Ionic Compounds	05 May	Lecture:Ch.6: Cont., Section 04Z-Lab-5 : Ionic Compounds
10 May	Lecture: Ch.7: Electron Structure of the Atom Section 03Z-Lab-6 : Hydrates	12 May	Lecture: Ch:7.Cont, Section 04Z-Lab-6 : Hydrates
17 May	Ch:8:Chemical Bonding (8.1-8.3, 8.5) Section 03Z-Lab-7 : Chemical Reactions	19 May	Lecture:Ch.8: Cont, Ch:9:The Gaseous State Section 04Z-Lab-7 : Chemical Reactions
24 May	Lecture: Exam-2(Ch.5-8) Section 03Z-Lab-8: Covalent Compounds	26 May	Lecture:Ch.9 Cont,Ch:10:The liquid & Solid States,(10.1-10.3) Section 04Z-Lab-8: Covalent Compounds
31 May	Lecture:Ch.10:Cont; Ch:11:Solutions (11.1,11.4,11.5) Section 03Z-Lab-9: Gas Laws	02 Jun	Lecture: Ch:11:Cont Section 04Z-Lab-9: Gas Laws
07 Jun	LectureCh:13:Acids and Bases(13.1-13.6) Section 03Z-Lab-10:Vinegar Analysis	09 Jun	Lecture: :Ch.13:Cont: Ch:14:Oxidation-Reduction Reactions(14.1, 14.2, 14.4) Section 04Z-Lab-10:Vinegar Analysis
14 Jun	Lecture: Ch:14:Cont, Section 03Z-Lab- Lab Final exam	16 Jun	Lecture: : Exam-3(Ch.9-11, 13 &14) Section 04Z- Lab - Lab Final exam
21 Jun	Finals week -No class	23 Jun	Lecture Final Exam; 9:15 am -11:15 am Cumulative (Ch.1-11 & Ch.13-14)

Student Learning Outcome(s):

*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.