

Course information: CHEM, Section CRN 42682 ,42690 (30 A ,30 Z AND 31 Z)

Course Type: Academic: ONLINE (Synchronous)

Class lecture: 30 A, (30 Z, 31Z):

Monday and Wednesday Synchronous via ZOOM meeting from 5:30 PM -7:20 PM

Lab (30Z):

Monday Synchronous (7:30 PM –8 :30 pm) via ZOOM meeting /Asynch(8:30pm –10 :20 pm)

Lab (31Z):

Wednesday (7:30 PM –8 :30 pm) via ZOOM meeting /Asynch (8:30pm –10: 20 pm)

Office hours: Thursday and Friday 11 :00 am to 12 :00pm via zoom meeting

Instructor Information: Dr. Divya Gairola gairoladivya@fhda.edu

Communication Policy and Response Time: use the Inbox within Canvas to contact me. (Top right corner where it says Inbox). If Canvas is down or you need an alternative email, you can use my email address. gairoladivya@fhda.edu

Be sure to label all messages as Course Prefix/Number, followed by a brief subject description. I will respond within 24 hours Monday through Friday. If I am working on the weekends and holidays, I will respond within 48 hours (about 2 days). For questions that may be of general interest to the class, please use the general course discussion board in Canvas. Please send me a message in Canvas with specific questions about the class, or regarding personal matters. Do not hesitate to contact me whenever you have concerns about your progress, or if you need help.

Expectations of Time commitment: This 5-unit course meets online synchronous mode. Students are expected to commit at least **10 -13 additional hours per week** outside of the class and laboratory for reading, writing, researching, and completing assignments.

Course Description: This is a two-part course to be taken in sequence by students entering the allied health fields. The focus of the first part of this course is an introduction to general chemistry with a discussion of various measurement tools, followed by a discussion of energy and matter, and the discovery of an atom. The next set of topics will cover an introduction to elements, compounds, and types of bonding in compounds, followed by several types of chemical reactions and stoichiometric calculations based on chemical equations. The course will discuss the properties of gases and solutions and concludes with a discussion of acid-base chemistry and nuclear chemistry.

Prerequisites: A grade of C or better in MATH 114 or the equivalent

Footnote: This is an online lecture and laboratory class with SOME scheduled meetings as noted in the class listing. The rest of the class can be completed independently each week on the student's own time. Students must have access to a computer, the internet, and an individual email address. Most De Anza classes will use the Canvas course management system. We recommend a laptop or desktop computer

to successfully complete the course; a tablet or phone may not be adequate for all assignments and tests. Information about Canvas and Online Education Orientation can be found on Canvas on the Student Resources page: <https://deanza.instructure.com/courses/3382>. The Student Online Resources hub with extensive information and tips can be found at deanza.edu/online-ed/students/remoteteaching

Course material (required):

- **Textbook** Janice G. Smith, General, Organic and Biological Chemistry, 4th ed., McGraw-Hill.
- **CHM 101** one quarter subscription for homework.
- **Scientific or Graphing Calculator:** You will need a calculator that can handle the standard arithmetic operations, as well as logarithms and exponentials. Any standard scientific calculator is likely to be sufficient.
- **HOL Chemistry kit.** This is provided to you for free by the college and is not available until 2 weeks after the quarter starts. Please be aware that if you are an international student, you will have to work out shipping and any International Customs paperwork to have the kit delivered.

Third-Party Tool (s) Statements: In this course, we will use **CHEM101, YouTube, Google Docs, Google Sheets, Google Slides** as web-based 3rd party tool(s) to complete or participate in assignments, activities, and/or access course materials. Students may be required to establish a username or password, submit work, and/or download information from these tools. There is, therefore, some risk that individuals electing to use the products and services made available by these tools may place any student information shared with the tool vendor at risk of disclosure.

Course policies:

Attendance and Withdrawal:

Attendance in lectures has a strong correlation to higher grades in class. Attendance will be monitored throughout the course duration. If you know that you will miss class, then please notify the instructor within 24 hours of the absence. More than two unexcused absences may result in failure or withdrawal from the course. If a student accumulates more than two absences, then the instructor can assign a W or an F at his/her discretion. Please do not "Ghost" withdraw stop showing up. All absences must be presented to the instructor and verified with documentation.

24-hour notice expands 24 hours before and after the start of class time.

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 My Portal by the appropriate deadline. To withdraw YOU MUST REQUEST a W from the instructor VIA EMAIL this provides the necessary documentation to protect you and the instructor. If you start the final exam, then you will earn a letter grade A, B, C, D, or F. This is fully student RESPONSIBILITY to follow the De Anza Catalog and the student handbook (withdrawal) guidelines.

Conduct: Classroom Behavior and Civility. While I understand that we all have things that are out of our control, I do expect students to show up on time and ready to participate in class. This means getting a good night's sleep, eating lunch, answering phone calls, etc. BEFORE class. I do ask questions often and expect responses from students. I do reserve the right to penalize classroom outbursts in the form of point deductions, removal from that class, or withdrawal/failure of the course.

You are expected to treat your instructor and your fellow classmates with respect. In all correspondence, whether communicating in person or online, you should show respect for the viewpoints of others who may disagree with you or see things from a unique perspective. Criticizing, ridiculing, insulting, or belittling others will not be accepted. Keep in mind that electronic communications do not have the advantage of nonverbal cues that are so much a part of interpersonal communication. Humor or satire can sometimes be misinterpreted in electronic communication forums.

Academic integrity: Besides academic performance, students should exhibit the qualities of honesty and integrity. Every student is expected to produce his/her original, independent work. Any student whose work indicates a violation of the De Anza Academic Misconduct Policy including cheating, plagiarism, and dishonesty will be subject to disciplinary action. Cheating or plagiarizing in any form including but not limited to those above will not be tolerated. The first offense of academic dishonesty will result in a zero for the relevant exam or assignment, which may lead to failing the course. The offending student will also be reported to the Dean of Student Development, which may result in other administrative consequences. For a fuller description of what constitutes a violation of academic integrity, see the De Anza College academic honor code the link below:

www.deanza.edu/policies/academic_integrity.html

Disability Support Programs & Services: <http://www.deanza.edu/dsps/> Offers support services including accommodations and educational classroom assistance designed to help students with disabilities. Resources can be reached at 408.864.8753.

Statement of Student Responsibility: As a registered student in this class, it is your responsibility to know and understand the contents of this syllabus. Ask if you have any questions! It is also your responsibility to be aware of your rights and responsibilities as a De Anza student. These may be found in the De Anza College Catalog and Student Handbook.

Tutoring: Check at <https://www.deanza.edu/studentssuccess/onlinetutoring/>

Other campus services can be found as part of the student success center as well:

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

Addressing Incidents of Title IX Sexual Harassment:

<http://www.deanza.edu/titleix/studentguide.pdf>

Veteran services: <https://www.deanza.edu/veteran>

Major Assignments and Activities:

The course consists of 10 modules over 11 weeks plus finals week. Each module corresponds from 1-2 weeks. Modules will contain some or all the following components:

Announcements: Be sure to check these announcements weekly for time-sensitive information, reminders, and changes.

The pattern of the module: Lecture Slides, worked example, Clicker point, homework, quiz, discussion Lab work and Ask your instructor.

The goal of the assignments is for the student to think about issues and ideas related to the subject area. The assignments will demonstrate understanding and application of your reading and/or research.

Lab: The lab meetings for the course will include a synchronous as well as asynchronous meeting beginning at the start of the scheduled period, during which we will discuss the topics or techniques relevant to the week's lab exercise. After that discussion is complete, you will have the option to complete the lab exercise Asynchronously, all work associated with a lab must be submitted to Canvas and/or Hands-On-Labs by the due date (Check tentative lab schedule on canvas).

Two Lab Quizzes plus five Science Interactive Lab Kit, free from bookstore on for experiments performed at home. They can be ordered on April 20. Use this link to create a Science Interactive account: <https://myhol.holscience.com/enroll/cmmd-tzcw-kbns-pfpx> You can create an account before you have the kit. Please do so ASAP and complete Getting Started and Laboratory Safety and submit the pdf for each one to CANVAS. All 7 labs count towards your grade.

Assignment Deadlines: All assignments have a specific due date. Assignments may not be turned in late unless there is a legitimate documented emergency. You must contact me before the due date and ask for an extension. I will consider each request on a case-by-case basis. Late assignments will automatically lose 10% of the grade. **Late assignments will only acceptable after the approval of the instructor**

Class Notes: Lecture /Labs related slides will be posted on canvas. It helps you if you take notes during class as problems and examples will be covered during lectures/labs. I will post additional resources on canvas to learn course content in diverse ways.

NOTE: You will be able to access everything you need for each week's work from within the module.

Course evaluation:

Homework:(200 points) there will be online homework assignments facilitated through a program called Chem101. Homework is due on the date posted. A separate handout is posted on the Canvas site which explains registration and enrollment instructions.

Quiz (100 points) Quizzes: There will be 8-10 graded quizzes. Quizzes will be multiple-choice, true/false, and short answers. quizzes will be given in most modules to check your understanding of the readings and to highlight important concepts. There will be 8-10 graded quizzes.

Exams = (250 points) There will be three exams and one final exam. These exams will replicate the difficulty of the final exam. All exams will be multiple-choice with the chance for no more than five short answers. Questions will range in difficulty from direct mimics of homework questions to more complex applications of the concepts discussed. Documented and excused absences on the day of an exam may result in the availability of the test 24 hours before and after the originally scheduled time.

Final Exam (200 pts) The final exam will be cumulative (cover all material from the course). The final is a campus standardized multiple-choice test that covers all the De Anza course competencies the final exam is scheduled already in the De Anza Class schedule and is listed in the Tentative Schedule.

Lab report and lab exam: 175 points and 75 points Lab reports will be filled out in the form provided by each HOL experiment, saved as a .pdf and submitted to Canvas Assignments in the proper place. Lab Reports and Quizzes are DUE ONE WEEK AFTER Lab is COMPLETE

Late labs assignments submission will automatically lose 10% of the grade.

Discussion /Attendance and participation: 50 points: You will benefit by leveraging the vast experience everyone has in this course by participating in the discussions fully. There are **6 discussion boards**. Here you will reply to the question posed on the Discussion Board. Discussion Board postings are designed to prompt you to reflect on that week's lessons. You will read the discussion posts of your classmates to get a sense of the variety of perspectives and viewpoints on a particular topic as well as to build community and interaction in this course. Please take the time to read and respond to each other's posts. A rubric will be used to grade discussion board posts. Some discussion boards are not graded but are there to allow you to support each other and work together.

Course Grading: There is a total of 1000 points possible for the course. Grades will be assigned based on the standard.

ASSIGNMENTS	POINTS	FINAL GRADE
HOMEWORK VIA CHEM 101	200	>= (90 %) A+/A/A-
QUIZZES	100	B>= (80%) B+/B/B-
EXAM -3	250 (exam 1 and 2 =80 points each) Exam 3 = 90 pts	C>= (70%) C+/C
FINAL EXAM	200 Mandatory to complete chem 30 A COURSE	D>= (60%) D+/D/D-

LAB REPORT	7 X 25 = 175	F=< (LESS THAN 60 %)
LAB EXAM	75	
DISCUSSION /ATTENDANCE AND PARTICIPATION	50	
TOTAL POINTS	1000	

Netiquette

- Netiquette refers to the rules of behavior while on the Internet. When interacting within the online course environment, please follow the below.
- Show professionalism and courtesy in all communications within the
- No one else should be given access to the course or conferences without the faculty member's permission.
- Do not use the words or text from others without acknowledging the source.
- Humor can easily be misinterpreted within the online environment, please be cautious with the use of humor and use symbols to help prevent misunderstandings.
- Adhere to the same behavioral standards as you would in a face-to-face classroom and as is specified in the De Anza student handbook.
- Avoid typing in all capital letters, for those of us using the Internet frequently, this can seem like you are 'yelling.'
- Respect other people's time and contribute thoughtful comments and ideas to the discussions rather than simply making statements such as 'I agree.'
- Use correct spelling and grammar. Avoid the use of abbreviations and use spell check within your word processor or within the course to check the spelling of your communications.

Tips for College Success

- Arrive at every class meeting on time and ready to learn.
- Develop effective time management skills, by trying different strategies and evaluate periodically.
- Complete and turn in your homework and class assignments.
- Give yourself enough 2-3 hours of studying (sometimes more).
- Ask questions of your professor(s) if you are unsure or need clarification on an assignment or exam.
- Get involved on campus. Build a support network and/or study groups with your fellow students. Establish your academic goals by seeking out career services and meeting with academic advisors regularly.
- Find the best balance between your academic workload and your life responsibilities (work, family, etc.).
- Know and use campus resources.

- Ask for help. You do not have to figure out everything on your own. From getting help to pay for school, working with a tutor to improve your grades, or attending college workshops, De Anza offers services both in-person and online to support your success. Use them early and often. Service hours and success workshops are announced through the De Anza.edu website and social media.

Test-Taking Tips and Tricks

- Be sure that you understand what will be on the test and what concepts will be covered.
- Study in reasonable time segments, take a break, then study again.
- Group study material together into logical pieces.
- Use one of these. [9 Types of Mnemonics to Improve Your Memory \(Links to an external site.\)](#) (link to the article from verywellhealth.com).
- When answering an essay or problem-solving questions, make sure you read the entire question and understand what it is asking of you.
- When answering multiple-choice questions, eliminate the most illogical questions first, then focus on the others.
- Get plenty of sleep the night before the test.
- Arrive early on the day of the test to allow sufficient time to prepare and be present.
- Make sure that you eat a nutritious meal before the test.

Additional Information is found in the De Anza Lab Safety Document:

Since you will be working at home rather than in the lab, the set of safety guidelines is slightly different from normal but is no less important, and it is up to you to ensure that you follow them to avoid injuring yourself or those around you:

1. Chemistry Department-approved safety goggles (NOT safety glasses) must be always worn once laboratory work begins, including when obtaining equipment from the stockroom or removing equipment from student drawers, and may not be removed until all laboratory work has ended, and all glassware has been returned to student drawers.
2. Shoes that completely enclose the foot are to be always worn; NO sandals, open-toed, or open-topped shoes, or slippers, even with socks on, are to be worn in the lab.
3. Shorts, cut-offs, skirts, or pants exposing skin above the ankle, and sleeveless tops may not be worn in the lab: ankle-length clothing must be always worn.
4. Hair reaching the top of the shoulders must be tied back securely.
5. Loose clothing must be constrained.
 4. Wearing "...jewelry such as rings, bracelets, and wristwatches in the laboratory..." should be discouraged to prevent "...chemical seepage in between the jewelry and skin...".

7. Eating, drinking, or applying cosmetics in the laboratory is always forbidden, including during lab lectures.

8. Use of electronic devices requiring headphones in the laboratory is always prohibited, including during lab lecture

5. Students are advised to inform their instructor about any pre-existing medical conditions, such as pregnancy, epilepsy, or diabetes, that they have that might affect their performance.
6. Students not enrolled in the laboratory class may not be in the lab at any time after the first lab period of each quarter.
7. Students are required to always follow the De Anza College Code of Conduct while in the lab: "horseplay," yelling, offensive language, or any behavior that could startle or frighten another student is not allowed during lab.
8. Strongly recommended: Wear Nitrile gloves while performing lab work; wear a chemically resistant lab coat or lab apron; wear shoes made of leather or polymeric leather substitute. Reckless behavior will not be tolerated. If your actions endanger the health and safety of yourself or someone else, you will be asked to leave and you will receive a zero for the day.

CHEM 30A Tentative lecture/lab schedule Spring –2021 by Dr. Divya Gairola

Month /date /day (Monday)	Lecture	Date (Wednesday)	LECTURE	LAB Monday/ Wednesday
April 5	Lecture: Intro to Course and Lab; & Math Skills Ch. 1: Matter and Measurement	April 7	Lecture: Ch. 1: Cont. Ch. 2: Atoms and the Periodic Table	30 Z/31 Z Intro, Science Interactive: Getting Started & Laboratory Safety
April 12	Lecture: Ch. 2: Cont.	April 14	Ch. 3: Ionic Compounds	Lab 1 measurements
April 19	Lecture: Ch. 3: Cont. Ch. 4: Covalent Compounds	April 21	Lecture: Ch. 4: Cont.	Lab: Lab 2-Nomenclature
April 26	Review exam 1 chapter 1 to 4	April 28	EXAM –1 FROM CHAPTER (1 TO 4)	Lab 30/31 Z: HOL SI Kit-Laboratory Techniques and Measurements
May 3	Lecture: Ch. 5: Chemical Reactions	May 5	Lecture: Ch. 5: Cont. Ch. 6: Energy Changes, Reaction Rates and Equilibrium	HOL: SI Kit-Observations of Chemical Changes

May 10	Lecture: Ch. 6: Cont. Ch. 7: Gases, Liquids, and Solids	May 12	Lecture: Ch. 7: Cont.	HOL: SI Kit-Limiting Reagents
May 17	Lecture: Ch. 8: Solutions	May 19	Lecture: Chap 8: Cont.	HOL: SI Kit-Introduction to Chemical Compounds
May 24	Review exam –2 chapter 5 to 7	May 26	EXAM –2 CH 5 –7	HOL SI Kit-Solutions and Dilutions
May 31	Holiday Memorial Day (no class)	June 2	Lecture: Ch. 9: Acids and Bases	
June 7	Ch. 10: Nuclear Chemistry	June 9	Lecture: Ch. 10: Cont. Review for Exam 3: Ch. 8-10	
June 14	Review for Exam 3: Ch. 8-10 Review for Final: Ch. 1-10	June 16	Exam 3: Ch. 8-10	Lab: Lab Final exam
June 21	Final exam preparation self- study No class	June 23	Final exam ch:1 to 10 Wednesday 6 :15 pm to 8 :15 pm	

Quizzes dates will be posted in canvas module.

Disclaimer: Dates and scheduled topics are tentative. Topics may be presented in an order that differs from that stated and may be adjusted to meet the needs of the group of students. Dr. Divya Gairola reserves the right to change exam and quiz dates as well as modify the grade scale at any point during the Spring 2021 quarter.

Statement regarding Syllabus Changes: This syllabus is intended to contain complete and accurate information; however, **Divya Gairola** reserves the right to adjust this syllabus during the course. Students will be notified by the faculty member of any changes in course requirements or policies via Canvas, announcements, or in lecture.

Student Learning Outcome(s):

*Solve stoichiometric problems by applying appropriate molar relationships.

*Identify the differences between elements and compounds and describe the chemical bonding in compounds- ionic vs. covalent.