

**Introductory Chemistry, Chem 10, Spring 2017**  
**Instructor: John O'Neill**

**Instructor Contact Information**

Mr. John O'Neill  
Office: SC1, Second Floor  
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Email: [oneilljohn@fhda.edu](mailto:oneilljohn@fhda.edu)  
Office Hours: TTh- 4:30 to 5:20 p.m.

**Class Meeting**

Lecture: SC 2202  
Lecture time: TTh- 5:30 to 7:20 p.m.

Lab: SC 2202  
Lab time: Th 7:30 p.m. to 10:20 p.m.

**Textbook**

Lecture- Chemistry for Changing Times, 14th edition, Hill and McCreary  
ISBN-10 0-321-97202-3      ISBN-13 978-0-321-97202-6

Lab- Conceptual Chemistry, Laboratory Manual, Donna Gibson, Fifth Edition ISBN-10  
0-321-68171-1      ISBN-13 978-0-321-68171-3

**Course Content**

This course is an introduction to the discipline of chemistry, including chemical laboratory techniques and methods and a survey of important chemical principles. The course emphasizes chemistry as a subject of scientific inquiry and is designed to give the student a general appreciation for chemistry as a science.

**Student Learning Outcomes**

1. Demonstrate an understanding of chemical principles such as atomic structure, chemical bonding, mole concept, and acids and bases.
2. Demonstrate an understanding of the scientific method by performing laboratory experiments.

## **Academic Integrity**

All graded assignments must be completed without any consultation (people, books, internet) unless otherwise permitted by the instructor. Any student that violates this policy will receive a failing grade (F) in the class and reported to appropriate administrative authorities such as the Dean. Please refer to De Anza College's policy on academic integrity: <http://www.deanza.edu/studenthandbook/academicintegrity.html>.

## **Attendance Policy**

Failure to attend any of the lectures or laboratory classes during the first two weeks will result in you being dropped from the class. You are expected to attend all lecture and laboratory classes. Strong evidence exists 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 TWO or more lecture and/or laboratory periods.

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 in order to grant a make-up.

## **Exams**

There will be three exams and one final exam. You must bring your own calculator (if you need one), pencil and eraser for exams. Cell phones may not be used at any time during the exams. Once the exam begins you may not leave the room unless you turn in the exam, so plan to take a bathroom break before class. No cell phones during exam! If a cell phone is used during an exam, it may result in failure in the class.

## **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. Repeated violation of this policy may result in failure in the class.

## Evaluation

The lecture portion of the class is weighted at 75% and the laboratory portion is 25%. **Please note that regardless of your overall score, if you do not complete 2 of the lab assignments you will receive an F grade in the class.** The evaluation for the laboratory part will consist of lab reports, lab exams, attendance, and notebook.

## Lecture Schedule

The following is a tentative schedule for the lecture portion of the class. It is highly recommended that you read the relevant sections in the book prior to the lecture. Periodically, the instructor may assign certain sections of the book to be read on your own and these will not be covered in the lecture. You will receive appropriate instruction for such readings during the lecture.

<b>Date</b>	<b>Chapter</b>	<b>Topic</b>	<b>Important Quarter Dates</b>
4/11	1	Introduction, Chemistry	
4/13	1	Chemistry	
4/18	1	Exam 1	
4/20	2	Atoms	4/22 Last day to add classes
4/25	2	Atoms	4/23 Last day to drop w/refund and no record
4/27	3	Atomic Structure	
5/2	3	Atomic Structure	
5/4	2,3	Exam 2	5/5 Last day to request pass/no pass
5/9	4	Chemical Bonds	
5/11	4	Chemical Bonds	
5/16	5	Chemical Accounting	
5/18	5	Chemical Accounting	
5/23	5	Chemical Accounting	
5/25	4,5	Exam 3	
5/30	7	Acids & Bases	
6/1	7	Acids & Bases	6/2 Last day to drop with "W"
6/6	7	Acids & Bases	
6/8	7	Acids & Bases	
6/13		Presentations	
6/15		Papers	
6/20		Final Review	
6/22		Final Review	
6/27		Final Exam: 6:15-8:15 p.m.	

## Grading

<b>Lecture:</b>	<b>750 points</b>
<i>Exams</i>	$3 \cdot 100 = 300$ points
<i>Homework</i>	$5 \cdot 20 = 100$ points
<i>Final Exam</i>	$1 \cdot 150 = 150$ points
<i>Paper</i>	$1 \times 100 = 100$ points
<i>Presentation</i>	$1 \times 100 = 100$ points

<b>Lab:</b>	<b>250 points</b>
<i>Pre-lab</i>	$9 \times 5 = 45$ points
<i>Lab report</i>	$9 \cdot 10 = 90$ points
<i>Lab notebook</i>	$1 \cdot 25 = 25$ points
<i>Lab quiz</i>	$9 \cdot 10 = 90$ points

## 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 2 of the lab assignments you will receive an F grade in the class.**

*Percentage points*    *Grade*

Letter grades will be assigned according to the approximate scale:

A 90%

B 80%

C 70%

D 60%

F 50% and under

## Other Options

Pass/No Pass: A grade of "D" or higher is considered "Pass" in the course. "F" is considered "No Pass" in the course.

Audit: If you do not need any credit for this course, you may elect to audit the course.

Note: You are not permitted to attend this class if you are not officially registered.

## 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
- Sealed safety goggles must be worn at all times
- Eating and drinking are strictly prohibited inside the lab
- Open-toed shoes and shorts are not permitted in the lab; protective ankle length clothing is required
- Dispose of waste material and broken glassware as per instructions from your Instructor

The following is a schedule of experiments that will be performed this quarter. Prior to start of a particular lab, you must complete the pre-lab exercise and must have read the lab manual completely.

Date	Topic	Page Number
4/13	Introduction and Check-in	
4/20	Taking measurements	11
4/27	% Water in Popcorn	27
5/4	Electron Dot Structures (No Prep)	61
5/11	Molecular Shapes (No Prep)	67
5/18	Solutions	75
5/25	Upset Stomach	113
6/1	How Much Fat	91
6/8	Organic Molecules (No prep)	135
6/15	DNA Capture	145
6/22	Presentations and Check-out	

Lab Notebook: You are required to maintain a detailed laboratory notebook. Pre-lab assignments and all data obtained in the lab must be carefully documented in your notebook. All entries in the lab notebook must be in **PEN**.

Quiz: There will be a quiz at the beginning of each lab period.

Pre-lab Assignment: Prior to coming to lab, you must complete a numbered outline of the procedure for the experiment that will be performed on the particular day. You must also enter a blank data table for the data to be obtained in the laboratory. Failure to complete the pre-lab assignment will result in a loss of a minimum of 5-points. Additionally, the instructor may disallow you from continuing in lab on that day.

Lab report: Complete the data analysis and answer the post lab questions in your

lab notebook.

## **Papers & Presentations**

The class will be divided into 10 groups of three students each. Each group of students will be assigned one of the following topics:

1. Department of health and human services: <https://www.hhs.gov>
2. Environmental protection agency: <https://www.epa.gov>
3. Department of education: <https://www.ed.gov>
4. Department of energy: <https://energy.gov>
5. Office of science and technology policy:  
<https://www.whitehouse.gov/administration/eop/ostp>
6. Council on environmental quality:  
<https://www.whitehouse.gov/administration/eop/ceq>
7. National aeronautics and space administration: <https://www.nasa.gov>
8. National science foundation: <https://www.nsf.gov>
9. National institute of health: <https://www.nih.gov>
10. US geologic survey: <https://www.usgs.gov>

Each group will learn about the assigned topic with the following context:

1. What is the major purpose of this organization?
2. When was this organization founded? What were the initial goals and what are its goals now?
3. Who ran this organization under the previous government? What is the profile of this person- education, training, policies, relevant experience, focus areas, policies etc.
4. What were the main contributions of this organization during the last eight years (2008 to 2016)? How has this organization advanced science?
5. Who will run this organization under the new government? What is the profile of this person- education, training, policies, relevant experience, focus areas, policies etc.
6. What policy positions and directions have been outlined for this organization by the current administration?
7. What are the similarities and differences in the direction of this organization under the previous and current administrations?
8. Do you anticipate the changes to be beneficial or detrimental and if so how?

## **Presentation**

Group members will give a 15-minute oral presentation on the topic they have been assigned. Each member of the group must speak for five minutes. The presentation will address the research undertaken by the group and must address at a minimum the questions listed above. In addition, the groups are welcome to add their own emphasis to the topics they have been assigned. Following their presentation, the groups must be prepared to answer questions related to their presentation from classmates.

## **Paper**

Each student will write a letter to the current head of the respective department, with complete address information, which highlights their concerns and hopes for the organization that they have conducted research on. The letter should be based on the research conducted by the group. Based on the research, the letter should address: 1) the primary mission of the organization 2) the background and policy biases of the person heading the organization 3) where you think the organization is headed 4) what you think ought to be the primary direction of the organization 5) what are you most concerned about with regards to the direction of this organization 6) what you hope the organization will achieve in the next four years 7) what are you most hopeful about and 8) what are you most concerned about. The letter should be no more than three typed pages in 12 point font, one inch margins, double spaced. The letter is due on the day of the final exam, as an academic exercise. I will not be mailing the letters. If you wish to mail a copy of the letter as a private citizen, that is your prerogative.

## **Additional Resources**

### **Academic Support**

Academic support can be found at the Learning Resources Division <https://www.deanza.edu/learningresources/>. Information about tutoring can be found at the Math Science and Technology Resource Center <https://www.deanza.edu/studentuccess/mstrc/>. Additionally, you are encouraged to email me with class questions.

### **Disability Service Support**

De Anza is committed to providing support for students with disabilities. Please contact me as soon as possible if you require special accommodations and I will be happy to do what I can to help. For more information, visit Disability Service Support at <https://www.deanza.edu/dss/>.