

**De Anza College
Chemistry Department
Spring 2018**

COURSE TITLE

Chemistry 1A-01 & 02 General Chemistry

Class 04/09/18 to 06/28/18

Meeting times: Sec 01/02 Lecture 11:20 AM – 12:20 PM, MWF, Room SC1102
 Sec 01 Lab 7:30 – 10:20 PM, MW, Room SC2202
 Sec 02 (Salehi) Lab 2:30 – 5:20 PM, MW, Room SC2202

INSTRUCTOR

Dr. John Cihonski

Contact: School e-mail: cihonskijohn@fhda.edu

OFFICE HOURS

MW 10:30-11:30 AM in Chem Faculty office area

REQUIRED MATERIALS

- 1) Text: Silberberg, Chemistry: The Molecular Nature of Matter and Change, any edition
- 2) General Chemistry Laboratory (De Anza 2015 edition) – see lab PDFs at <http://deanza.edu/chemistry/Chem1B.html>
- 3) 8.5 x 11 permanent bound laboratory notebook with carbon copies.
- 4) Safety Goggles (must be approved by instructor)
- 6) Scientific calculator

Grading Scheme

Minimum Course Score	Grade	Course Score formula	
92	A	$(3M + F + L)/580 = \text{Grade}$	
80	B		Possible points
65	C	3 Midterm Exam (M) scores	300
55	D	F = Final exam score	200
		L = Laboratory score	110
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Total Possible Points			590

Dropping - It is the responsibility of the student to drop the class and to check out of the laboratory.

Attendance - Attendance is required for **all** laboratory sessions and highly encouraged for lectures. The course is impacted; there is neither lab make-up time nor space for you to work in other lab sections. If you miss a lab, you need to discuss the issue with the instructor (valid reason and written documentations will be required).

- The 1st unexcused missed lab will result in a zero.
- The 2nd unexcused missed lab will result in failing the course.

Lecture - Each of the three exams will be worth 100 points and the comprehensive final exam will be worth 200 points. If a student is absent during any exam, he/she will receive a grade of zero. **At the discretion of the instructor, a makeup exam may be allowed for an urgent medical or legal situation** which prevents a student from attending class. In such cases, all of the following requirements will apply: 1) Student must present documentation of the reason for absence (letter from doctor or court official, including address and phone number) to the instructor on the day student returns to school, 2) **Exam must be made up within two days of missed exam**, 3) **Only one make-up exam is allowed per quarter. Work must be shown on all problems (exam, homework, etc.) to receive credit.** Bathroom breaks during an exam are discouraged. Unethical behavior of any kind will result in penalties commensurate with the significance of the behavior.

Homework – Homework as noted on the Lecture and Exam schedule is optional. However it is important for your learning the material. “Homework” constitutes the problems related to each lesson (excluding the Comprehensive Exercises) that address the material covered and are answered in the back of the text.

Laboratory - All laboratories are expected to be completed (see Attendance). Lab reports are due the next lab period within the first five minutes of the scheduled lab period. If a lab report is late it will be penalized twenty percent per *class* day. For all laboratory experiments, the advance study assignment sheet must be completed and initialed by the instructor prior to the beginning of the lab period. Laboratory data sheets

must also be initialed by the instructor before leaving the lab. An incomplete report will receive a zero. Coming sufficiently late for a lab (as determined by the instructor) may result in your *not* being permitted to do the experiment.

Chemistry 1A: Sec 01/02 Lecture 11:30 AM – 12:20 PM, MWF Room SC1102

	Topic	Chapter	Problems
1	Introduction & Measurement	C1	*
2	Theory & Structure of the Atom	2.1 to 2.6, C7, 8.1 & 8.2	*
3	Periodic Table & Trends	8.3 & 8.4	*
Exam 1			
4	Chemical Bonding	2.7, C9	*
5	Electronic & Geometric Molecular Structure	C10	*
6	VBT & MOT	C11	*
7	Nomenclature	2.8 + worksheet	*
8	Molecular Stoichiometry	3.1 & 3.2	*
Exam 2			
9	Chemical Reactions	3.3, C4	*
10	Reaction Stoichiometry	3.4	*
11	Thermodynamics	C6	*
Exam 3			
Final Exam Monday, June 25 th 11:30 AM – 1:30 PM			

* Problems are from Silberberg text(s). Homework constitutes those problems related to each lesson that address the lecture material and where the answers are provided in the back of the text. These problems are indicated by a colored problem number (red, blue, etc. depending on the text edition).

Chemistry 1A: Sec 01 Lab 7:30 – 10:20 PM, MW, Room SC2202
 Sec 02 (Salehi) Lab 2:30 – 5:20 PM, MW, Room SC2202

Week of	Monday	Wednesday
Apr 8	Check-in	Measurement
Apr 15	Nomenclature	Hydrate (1)
Apr 22	Hydrate (2)	Precipitation (1)
Apr 29	Precipitation (2)	Types of Reactions (1)
May 6	Types of Reactions (2)	Conductivity (1)
May 13	Conductivity (2)	Acid/Base Titration (1)
May 20	Acid/Base Titration (2)	Calorimetry (1)
May 27	Holiday	Calorimetry (2)
June 3	Redox Titration (1)	Redox Titration (2)
June 10	Line Spectra	Molecular Model (1)
Jun 17	Molecular Model (2)	Check-out

Laboratory Safety

Laboratory safety is an everyday assignment. Being safe in the lab is a top priority. Any unsafe behavior, intentional or not, will be noted and may be cause for dismissal from the class. Under NO circumstance are shorts and sandals allowed in the laboratory. You will be dismissed from the laboratory if you are not wearing appropriate protective clothing. For your protection, safety goggles with indirect ventilation and an ANSI minimum rating of Z87 must be worn at all times in the laboratory. Latex gloves will be provided for those experiments using chemicals that are hazardous to skin.

Chemical Disposal and Clean-up

As a concern for the environment and the law, proper chemical disposal is essential. Students who do not comply with directed procedures may be expelled from the lab or failed in the course for repeated offenses. Check with the instructor if you have any questions. All students are requested to do a conscientious and thorough job of cleaning up after themselves in their own work area and in shared areas such as the chemical supply table and balance room.

From the American Chemical Society Safety In Academic Laboratories Guidelines, 7th Ed., the following mandatory minimum safety requirements must be followed by all students and be rigorously enforced by all Chemistry faculty:

- 1) Chemistry Department-approved safety goggles purchased from the De Anza College bookstore (NOT safety glasses) must be worn at all times 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 worn at all times; 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 worn at all times
- 4) Hair reaching the top of the shoulders must be tied back securely
- 5) Loose clothing must be constrained
- 6) 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 forbidden at ALL times, including during lab lecture
- 8) Use of electronic devices requiring headphones in the laboratory is prohibited at ALL times, including during lab lecture
- 9) 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.
- 10) Students are required to know the locations of the eyewash stations, emergency shower, and all exits
- 11) Students may not be in the lab without an instructor being present
- 12) Students not enrolled in the laboratory class may not be in the lab at any time after the first lab period of each quarter.
- 13) Except for soapy or clear rinse water from washing glassware, NO CHEMICALS MAY BE Poured INTO THE SINKS; all remaining chemicals from an experiment must be poured into the waste bottle provided.
- 14) Students are required to follow the De Anza College Code of Conduct at all times while in lab: "horseplay", yelling, offensive language, or any behavior that could startle or frighten another student is not allowed during lab;
- 15) 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.

By signing below, I,

_____,
First Name Family Name

acknowledge that I fully understand and agree to abide by the laboratory safety rules listed above. Further, I acknowledge that my failure to abide by these rules will result in my being dropped from this chemistry class immediately.

Signature Date

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Student Learning Outcome(s):

- *Identify and explain trends in the periodic table.
- *Construct balanced reaction equations and illustrate principles of stoichiometry.
- *Apply the first law of thermodynamics to chemical reactions.