

Welcome to Chemistry 10, General Chemistry Winter 2019

Instructor:

Dr. Elizabeth Migicovsky
e-mail: migicovskyelizabeth@fhda.edu

Section:

CHEM 10-Section 03
Lecture: MW 9:30 AM – 11:20 AM, G6
Lab: W 11:30 AM – 2:20 PM, SC 2210

This class is divided into two separate instructional periods: a **lecture period** devoted to the primary course material; and a **lab period** for conducting lab experiments. One registration code automatically enrolls you in all two periods. Everyone will have the same lecture period and lab period. **At De Anza College the lab and lecture cannot be taken as separate courses under any circumstances. Once you are enrolled you may not switch lab lecture or lab periods whether on a temporary or on-going basis.**

Office Hours:

MW 9:00 AM – 9:30 AM and
M 11:20 AM – 12:20 PM SC1 Second Floor

Required Materials:

1. The lecture text for this course is **Chemistry in Context, 9th edition by the American Chemical Society** (McGraw-Hill: 2018; ISBN 978-1-307-02780-8). *Note: Due to the high cost of textbooks, if you have already purchased a previous edition of this text or a text written by another author, it is your decision whether or not to purchase the official text; however, all problems, section numbers, diagrams, or tables referred to in class will come directly from the official text. There are other excellent texts available which may be useful if you are seeking addition problems or an alternate presentation of the course material. If you wish to use an alternate text, please consult with me so that I can determine whether the text you intend to use is appropriate for the level of this course.*
2. The official lab text for this course is **Conceptual Chemistry: Understanding Our World of Atoms and Molecules, 5th edition by Donna Gibson and John Suchocki** (Pearson: 2014; ISBN 978-0-321-80453-2). *Note: Please be aware that the page numbers have changed from older editions, and there may be differences in the procedures as well. If you have an older edition of the lab text and you cannot or do not wish to purchase the current edition, there is a copy of the lab text on reserve at the library. However, do not wait until the last moment to prepare for lab in case someone else has checked it out!*
3. A **scientific calculator** that has at least log and exponential functions is required (~ \$12). Graphing calculators will not be allowed!
5. OSHA approved **laboratory safety goggles**. Other types of goggles will not be permitted.
6. **Latex or Nitrile Gloves (optional)** available from the bookstore.

Registration, Attendance, and Conduct Policy:

Registration: Due to safety concerns, enrollment in each section is strictly limited to 28 students per section. Class spaces are filled in accordance with the official class roster from Admission and Records, followed by the official wait list. Any errors with registration or status must be addressed directly to Admission and Records. Please note that if you are placed in a section from the wait list, you will not be assigned a laboratory locker or be allowed to perform experiments until you are **officially** enrolled in the class.

Attendance: Attendance is expected during all lectures, all lab lectures, and all laboratory periods. Students are expected to be prompt and to leave only when lecture or lab is concluded. Arriving late to lecture is disruptive to the class and **strongly discouraged. If you miss lecture, laboratory lecture, or a laboratory period for any reason within the first two days of class, you will be dropped from the course.**

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 Admissions and Records by the appropriate deadline. You are required to officially check out of your lab locker whether you remain in the course or drop the course. Failure to check out of lab by the scheduled check-out date will result in an administrative fee and a block will be placed on your future registration.

OTHER IMPORTANT POINTS:

IF YOU MISS LABORATORY LECTURE OR A LABORATORY PERIOD FOR ANY REASON WITHIN THE FIRST TWO DAYS OF CLASS, YOU WILL BE DROPPED FROM THE COURSE. TWO OR MORE UNEXCUSED ABSENCES FROM LAB WILL RESULT IN AN AUTOMATIC “F” FOR THE ENTIRE COURSE.

IF YOU ARE DROPPED FROM THE COURSE DURING THE FIRST TWO DAYS OF CLASS YOUR LOCKER WILL BE INSPECTED AND MAY BE REASSIGNED TO ANOTHER STUDENT. YOU WILL BE HELD RESPONSIBLE FOR ANY BROKEN OR MISSING LAB EQUIPMENT PRIOR TO REASSIGNMENT.

IF YOU FAIL TO CHECK OUT OF LAB YOU WILL ALSO BE CHARGED AN ADMINISTRATIVE FEE AND A BLOCK WILL BE PLACED ON YOUR REGISTRATION.

Conduct: **The ringer on all cell phones must be turned off during lecture and lab periods.** You may not text or use any social media in the lecture room or the laboratory. If you must take a phone call or reply to a text in the case of an emergency, please step outside of the room to do so. Please notify the instructor if you need to leave the lab for any reason. No smartwatches may be worn during exams. Students are also expected to abide by the Academic Integrity policy as outlined in the De Anza College catalog at all times. Students caught cheating or plagiarizing on any assignment will be expelled from the course and receive a grade of “F.” If collusion between students to cheat can be demonstrated, each student will receive this same penalty.

Class Format:

Grading and Exam Schedule (Exam dates are tentative):

Exam I:	100 pt
Exam II:	100 pt
Exam III:	100 pt
Final Exam:	200 pt
3 Quizzes (33 or 34 points each)	100 pt
Essay	20 pt
Laboratory Reports (10 pt each) (Lowest score will be dropped)	80 pt
Laboratory Exam	<u>100 pt</u>
	800 pt

Grade Scale:

% of Total Points Possible

Grade

98-100	A+
92-97	A
89 - 91	A-
85 - 88	B+
82 - 84	B
79 - 81	B-
75 - 78	C+
68 - 74	C
64 - 67	D+
61 - 63	D
58 - 60	D-
less than 58%	F

Dr. Migicovsky reserves the right to change exam dates as well as modify the grade scale at any point during the quarter. You must receive a passing lab grade in order to pass this course.

Tentative Exam Dates:

There is an exam scheduled approximately every six lecture periods. The dates are listed on the schedule provided on page 5. Be aware that exam dates may change depending on the timing of the material presented in lecture.

Homework:

Here are a few tips about studying for this course.

1) **Read** each chapter carefully before coming to class. Not every detail will be covered in lecture, but you are still expected to understand the whole chapter. Students should plan to read 1-1.5 chapters per week.

2) As you read the chapter, attempt to do the in-chapter sample and follow up problems and the corresponding end-of-chapter practice problems. Exam questions will often be very similar to the problems mentioned above; therefore, make sure you can do all of these problems **comfortably** before an exam. If you do not do all of the problems, at least try the ones whose letters are **bold**. Their solutions are found in the back of the book. Try to first do these problems without looking at the solutions. This is very important since you will not have a solutions manual/answers on an exam!! **Educational research tells us that it is just as important for your brain to see mistakes as it is for your brain to figure out the correct pathway. It also tells us that you must see the same information at least three times within 48 hours in order to retain that information.**

3) **DO NOT FALL BEHIND WITH THE READING OR HOMEWORK!!** This is the number one mistake you can make. Concepts in chemistry are like building blocks. Initially, you learn one topic to build up to larger concepts. If you are shaky on a topic early on, your whole foundation will be unstable. To avoid this, try to read ahead of the scheduled lecture topics and keep up with the homework.

4) In addition to completing the homework, it is also recommended that you discuss ideas and concepts with your peers in study groups and come to office hours to discuss ideas with the instructor as well. There are usually several questions on the exam that will test your conceptual understanding and there will always **be at least one type of problem on the exam that you have never seen before to determine how well you can integrate ideas and concepts.**

5) **You will get +1 point EXTRA CREDIT for turning in the homework problems that are assigned for each chapter.** You must show that you have actually done the work instead of writing down the answers from the back of the book or from another student's work. This means showing all calculations and logic behind the answers. These problems can be turned in at any time throughout the quarter, but I suggest turning them in immediately before the exam covering the given material so you do not fall behind on your reading or homework.

Lecture Quizzes and Exams:

There are three quizzes, three lecture exams, and one final exam. Material covered in lecture, in the assigned reading, homework, and activities will be on the exam. Make sure you can do **all** the assigned homework **without** struggling. Quiz and Exam questions will always include questions that are similar to homework problems in addition to conceptual questions and **one or two questions that will challenge your understanding of the material (meaning you may have never seen this type of problem in the homework).**

All quizzes will be **take-home quizzes**. You may work with other students on the quizzes, but you may not consult other instructors or the internet. The three lecture exams are worth a cumulative 100 points. Due dates for the take-home quizzes will be given in class.

Each **in-class** lecture exam is worth 100 points. **No early, late, or make-up exams will be given.**

The final exam is **cumulative** and is worth 200 points. **No early, late, or make-up final exams will be given.** If you feel that any of your exams are graded incorrectly, you are always welcome to turn the exam in for a **complete re-grade at the end of the lecture or laboratory period within a week since the exam is passed back.**

Laboratory Lecture

Students are expected to attend **all** laboratory lectures and **all** laboratory sessions. You must complete **all** of the laboratory experiments, and you must also participate in the **entire** laboratory session in order to receive credit for both the laboratory notebook and the laboratory report. Most labs are broken up into at least two lab periods. You must participate in both lab periods to receive full credit for the report.

There are no make-up labs. If you are unexcused from a lab period or fail to perform any part of a laboratory experiment, you will receive zero credit for the corresponding lab report. It is also your responsibility to understand the theory and use of the chemicals and equipment for any laboratory period that you miss in order to be prepared for the laboratory exams and lab final. **If you have a medical emergency or some other emergency that prevents you from attending lab, you will be asked to supply written documentation in order for the absence to be excused. Be sure to contact the instructor as soon as possible if you miss a lab session.**

If you miss laboratory lecture or a laboratory period for any reason within the first two days of class, you will be dropped from the course. Two or more unexcused absences from lab sessions will result in an automatic grade of "F" for the entire course.

Laboratory Reports:

Only your top 8 lab report scores will count as part of your overall course grade. No make-up labs or late lab reports will be allowed or accepted.

Lab reports should be your own work. Copying data, calculations, phrases or paragraphs from another student or the web is considered plagiarism.

Lab reports are due **the next** lab period after the wet chemistry is completed. For example, if you complete the first lab on a Monday, the report is then due the following Monday. There are some exceptions to this deadline and those will be noted accordingly at appropriate times in the course. **Late lab reports will have 10% deducted from the score for every day they are late.**

Laboratory Exam

There is one cumulative laboratory exam for this course.

The lab exam is worth 100 points. The laboratory exam will be given during your regularly assigned laboratory sessions. The date for the lab exam will be on the last day of lab. **No early, late or make-up lab exams will be given and all lab exam scores will count toward your overall course grade.**

Essay

Every student be assigned a scientist to be the topic of their essay. Details about this essay will be given in class. This assignment is worth 20 points. **You must use and reference outside sources as you gather information for your assignment.**

Tentative Lecture, Laboratory, and Exam Schedule

CHEM 10 SCHEDULE – FALL 18

Schedule is subject to change. Changes will be announced in class.

Date	Lecture Topic	Reading	Assessment	Lab	Homework
1/7	Atoms and molecules	1.1-1.6			Ch.1: 1,5,7,11,13
1/9	The periodic table	1.7-1.11		Check In	
1/14	Nomenclature	2.1-2.10			Ch.2: 4,5,10,12, 13,16,18
1/16	Chemical reactions	2.11-2.16		2. Taking Measurement	
1/21	<i>No Class</i>	-			
1/23	Light	3.1-3.6	Quiz 1 due	4. % Water in Popcorn	Ch.3: 1,10,12,14,16, 19,23,27,36,51,54
1/28			Exam 1		
1/30	Bonding	3.7-3.11		9. Electron Dot Structures	
2/4	Ionic Compounds	4.1-4.7			Ch.4: 7,9,11,13,19, 21,23,25,29,39
2/6	Molecular shapes	4.7-4.12		10. Molecular Shapes	
2/11	Thermodynamics	5.1-5.11			Ch.5: 11,13,14,17,20,21,24,28, 30,32,35,41,67
2/13	Intermolecular Forces	5.12-5.17		11. Solutions	
2/18	<i>No Class</i>	-			Ch.8: 1,5,7,9,11,13,15, 17,19,21,23,25,27,29, 3,33,41,43,45,47,59,61
2/20	Water / Acids and bases	8.1-8.13	Quiz 2 due	17. Upset Stomach	
2/25			Exam 2		
2/27	Nuclear Chemistry	6.1-6.9		13. How Much Fat	Ch.6: 1,3,5,9,20,25,33
3/4	Electrochemistry	7.1-7.4			Ch.7: 2,3,5,7,8,10,12,13,36,43a
3/6	Polymers	9.1-9.11	Quiz 3 due	20. Organic Molecules	Ch.9: 1,5,7,9,11,12,17,28,31, 34,44,48
3/11			Exam 3		
3/13	DNA	13.1-13.8		21. DNA Capture	Ch.13: 5,8,12
3/18	Fats, proteins, carbs	11.1-11.13	Essay due		Ch.11: 9,15,17,19,21,31,37
3/20	Equilibrium	12.1-12.10		Check-Out Lab Exam	Ch.12: 2,4,7,9,12,15,25
3/25	Comprehensive Final Exam 9:15 AM – 11:15 AM				

Partial List of Laboratory Safety Procedures

*If any of these rules are broken, the instructor has the right to deduct points from individuals or from the entire class.

- Students must comply with all safety procedures and precautions when attending a laboratory session.
- There are no provisions for making up a lab; therefore, you are expected to attend all scheduled lab sessions.
- You must have your laboratory procedures written prior to starting an experiment. Lab notebooks will be checked during lab and will be awarded between 1-5 points depending on completeness.
- Laboratory notebooks **must be written in ink** and all data must be written in the laboratory notebook. Scraps of paper containing data will be confiscated. Do not use “white-out.” Use one line to cross out incorrect data.
- Lab lecture will consist of a discussion concerning safety for the experiment being conducted that day as well as information regarding experimental techniques.
- Eating and drinking is not permitted in the lab. **Do not** bring food or drinks to the lab even if they are in closed/sealed containers.
- If you are pregnant or think you are pregnant, it is your responsibility to consult with your physician before taking this course and performing the laboratory experiments.
- You must wear OSHA approved safety goggles and gloves at **all times** while in the laboratory. Failure to comply with this rule will result with your being expelled from the course and receiving a grade of “F.”
- Appropriate attire must be worn in the laboratory. Shorts, open toed-shoes, and sleeveless shirts (“spaghetti straps”) are **not** considered safe clothing for the laboratory. Clothing made of natural fibers are less of a hazard than those made of synthetic fibers.
- Do not begin the laboratory experiment (e.g. place any chemicals or glassware on the lab benches, turn on Bunsen burners, etc.) until the safety introduction is complete and everyone is wearing their goggles and gloves. The instructor will let you know when it is time to begin the experiment.
- In some cases it will be necessary for the instructor to examine your “set up” before you begin the experiment. In these instances, the instructor will inform you of proper procedures at the beginning of class.
- If you come into contact with a chemical flush the affected area with water immediately for 15 minutes. Depending on the degree of contact with the chemical and the location on the body you may need to do this in the sink or safety shower. When using the safety shower you must remove the clothing over the area that has come into contact with the chemical. The instructor will ask the other students in the class to leave the room for privacy.
- You will be wearing safety goggles at all times, but should you get a chemical in your eye, flush your eyes in the eye wash for at least 15 minutes.
- If your clothing or hair catches on fire use the safety shower immediately. If this is not possible “stop-drop- and –roll.”
- If you are hurt or think you have come into contact with a chemical, notify the instructor immediately (or send a lab partner to fetch the instructor) while following proper safety procedures.
- Know where the eyewash, safety shower, and fire extinguishers are located. (You should be able to do this with your eyes closed!)
- Chemicals should never be taken back to your lab bench. They must be kept in the fume hood in their proper storage containers. All chemicals and waste bottles must be capped after use. **Never** leave a chemical bottle or waste container uncapped.

- If a chemical spill occurs, notify your instructor so that she may help you follow the proper measures for cleaning up chemical spills.
- All waste must go into appropriate waste containers. Never throw anything down the sink or in the regular trash receptacles.
- Never pick up broken glass with your hands. Always use a brush and dust pan to sweep up broken glassware.
- If at any time the instructor feels that you are being unsafe and have not followed proper safety precautions and procedures, you will be asked to leave the lab, and you will receive zero credit for the laboratory report and notebook. You may also be expelled from the course and receive a grade of "F."
- After completing an experiment clean up your lab space as well as glassware. Return all cleaned glassware and other equipment (e.g. Bunsen burners, clamps, steel rods, etc.) to the appropriate cupboards or stockroom.
- After you have completed an experiment and cleaned up your bench space and glassware, check out with the instructor.
- Remember to wash your hands immediately after completing the experiment and checking out. Also, change your clothes as soon as possible. This is especially important if you have children.
- Lab reports (except for the last one) are due **the Lab period after the wet chemistry is complete. No make up labs are allowed and no late** lab reports will be accepted.

Student Learning Outcome(s):

- *Develop problem solving techniques by applying the "Scientific Method" to chemical data."
- *Analyze and solve chemical questions utilizing information presented in the periodic table of the elements.
- *Evaluate current scientific theories and observations utilizing a scientific mindset and an understanding of matter and the changes it undergoes.