Chemistry 1A: General Chemistry Summer 2020

Dr. Brophy

CHEM 1A CRN

Synchronous Class Meetings: **MTuWTh** 9:00 am – 10:20 am
MTuWTh 10:30 am – 11:45 am

*****attendance and participation in synchronous class meetings are required for the summer 2020 quarter*****

Instructor: Dr. Megan Brunjes Brophy
*Please contact me through the **Canvas Inbox** for all course-related communications.*

Course Webpage: Canvas.
Turn on Canvas notifications to receive class announcements.

Office Hours:
By appointment

Zoom: ***Canvas for Zoom meeting information***

Important Dates

Add Day	July 2, 2020	Last day to *add*.
Refund Day	July 1, 2020	Last day to *drop* the course and receive a refund.
Drop Day	July 6, 2020	Last day to *drop* the course without receiving a "W"
Withdraw Day	August 2, 2020	Last day to withdraw from the course.

Exam Dates
See class schedule on Canvas*

Final exams will be delivered in an oral "interview" format over zoom during the week of August 3rd. You will be randomly assigned an exam time during the normal class meeting time. ***Make sure that you available for the entire week as alternate exam times will not be permitted.***

Academic Integrity
Students are expected to adhere to the policy on academic integrity that is outlined in the De Anza College manual (https://www.deanza.edu/studenthandbook/academic-integrity.html). ***I expect all submitted work to represent your own understanding of the material and to be written in your own words.*** Cheating, copying, plagiarizing, etc. will not be tolerated, and the minimum consequence will be receiving a zero on that assignment and the incident will be reported to the Dean of Student Services. More than one instance of academic dishonesty will result in automatically failing the course. ***Cheating on any exam will result in automatically failing the class***. All laboratory data used in calculations and reported in lab reports must be collected by each student.

Required Materials: Lecture

- **Chem101** Follow the instructions on Canvas to sign up for an account for the Summer 2020 session. There is a two-week grace period
- **Textbook** *Chemistry: The Molecular Nature of Matter and Change*, 8th edition by Silberberg and Amateis, available at the De Anza College Bookstore or from multiple online retailers. Chemistry 1A, 1B, and 1C all use the same textbook.
  *We will **not** use online homework in this class, and you will not require access to McGraw-Hill Connect. You may use any edition of the textbook in any format. We will go over options during the first class period.*
- **Calculator** A scientific calculator with natural log functionality is necessary and sufficient for this class. If you have already purchased a graphing calculator for another class, you may use it on exams and quizzes; however, *we will not use the graphing functionality.* Recommended models:
  https://www.amazon.com/Texas-Instruments-MultiView-Scientific-Calculator/dp/B000PDFQ6K
  https://www.amazon.com/dp/B005QXO8J0/ref=dp_cerb_3
- **Computer and Reliable Internet** You will require internet access and a computer or advanced tablet in order to participate in this course. You may also find it helpful to have a printer.
- **A camera with a internet access (such as a smart phone / iphone)**
- **GeniusScan** This app will allow you to quickly create PDFs of your work and upload the PDFs to Canvas.
- **A back-up plan.** It is your responsibility to have a back-up plan in the event of a power or internet outage. Where is the closest wi-fi hotspot? How will you get there?

Required Materials: Lab

- **For the summer quarter, no additional supplies are required for lab.**

Campus Resources

- **Math, Sciences, and Technology Resource Center (MSTRC) Tutoring.** The MSTRC offers tutoring for the Chemistry 1 sequence and is located in room S43 in the S-quad. Furthermore, I will hold office hours in S43 this quarter.
  https://www.deanza.edu/studentsuccess/mstrc/
- **Disability Support Programs Services** The mission of DSPS is to ensure access to the college's curriculum, facilities, and programs. In particular, DSPS can help you get extended time on examinations.
  https://www.deanza.edu/dsps/
- **Resources for Students** Additional resources may be found at https://www.deanza.edu/services/

I expect you to use the resources available to you, share resources with your classmates, and ask for help when needed.

Syllabus Statement
This course syllabus is a contract. Please read it carefully and completely in its entirety before asking me any questions regarding the course schedule, content, requirements, grading, etc. You are expected to adhere to the De Anza College Student Code of Conduct Administrative Policy 5510 at all times. This syllabus is a living document. ***All corrections and changes to this syllabus will be announced through Canvas.***

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. Everyone will have the same lecture period, but a different lab period depending on which section you are enrolled in. At De Anza College, the lab and lecture may not be taken as separate courses under any circumstances.

Course Description
An introduction to the structure and reactivity of matter at the molecular level. Application of critical reasoning to modern chemical theory and structured numerical problem solving. Development of molecular structure from rudimentary quantum mechanics, including an introduction to ionic and covalent bonding. Chemical problem solving involving both formula and reaction stoichiometry employing the unit analysis method. An introduction to thermochemistry and a discussion of the first law of thermodynamics.

Prerequisites
CHEM 25 or CHEM 30A or satisfactory score on Chemistry Placement Test; MATH 114 or equivalent.

Hours
This class will meet synchronously from 9:00 – to 11:45 am Monday – Thursday. In addition to these synchronous hours, you should ***expect to spend an additional 8-12 hours a week studying and working on class assignments in order to master the material***.

Attendance Policy
Your *punctual* attendance is expected at all lecture and laboratory sections of the course. In order to be counted "present" and receive credit for that day's activities, you must arrive during the first 5 minutes of class. If you try to enter the zoom class after 9:05 am, I cannot guarantee that I will see you in the waiting room. We have a scheduled break from 10:20 am – 10:30 am, and I will admit students from the waiting room at that time. If you will have to miss lecture or lab for any reason, let me know by e-mail or phone as soon as possible. Notifying your instructor of absences or tardiness shows that you take your responsibility towards yourself and your fellow students seriously.

Late work will not be accepted under any circumstances. In the case of a documented emergency (e.g. hospitalization, court appearance, car crash), I may excuse you from that day's work. These instances will be handled and decided on a case-by-case basis.

Grading Breakdown and Expected Grade Scale
To succeed in this course, you will need to exhibit consistent and sustained effort throughout the quarter. This will be demonstrated through in-class practice problems, laboratory analysis, and examinations. Assignment types are assigned a weight; not all points are created equally!

Assignment Category	Percentage of Final Grade[1,2]
CHEM101 Assignments and In-Class Activities	30%
Lab, Worksheets, and Miscellaneous Class Assignments	25%
Exams	30%
Lab Final	5%
Oral Exam	10%

[1] If you end the quarter with less than 60% in any assignment category, including the lab final and/or oral exam, you will receive an F in the class.
[2] The weights of these assignment categories may change. For example, if there are repeat violations of the academic integrity policy, this scale will be adjusted such that the oral exam will be worth a larger portion of your grade.

Percentage in Class	Grade[1]

> 93%	A
90 – 92.9%	A–
87 – 89.9 %	B+
83 – 86.7%	B
80 – 82.9%	B–
77 – 79.8%	C+
70 – 76.9%	C
65 – 69.9%	D+
60 – 64.9%	D
<60%	F

NOTE: Dr. Brophy reserves the right to alter the grade scale at any point in the quarter.

Study Tips

1. Complete the assigned reading before coming to class. Write down any vocabulary words that you do not understand as well as their definitions.
2. Take *handwritten* notes during class and review your notes regularly. Write down any questions you have and bring them to office hours or e-mail your instructor.
3. *Do a little bit every day*. After every lecture, review the reading assignment and complete in-chapter and end-of-chapter exercises.
4. Join a study group. Work on problem sets together. The best way to learn the material is to teach it to somebody else.
5. If you feel that you are a poor test-taken, *complete and turn in all assignments on time* in order to pass the class.
6. Take care of yourself! Stay well-rested and drink water.

Assignment Descriptions

Your attendance and active participation is expected at every lecture period. ***Due to the high number of students wishing to enroll in the course, any unjustified absences during the first two weeks of class will result in you being dropped from the course.*** Absences may be excused in case of a verified emergency (e.g. doctor's note or police report). If you know that you will not be able to attend lecture for any reason, let me know by email right away (even if only 5 minutes before class). Late arrivals and early departures are distracting for the whole class (and me!), so arrive on time and stay for the whole class period. I strongly encourage taking your own notes in lecture. Computers are not necessary during lecture. Do not use your computers for non-course related activities during lecture. Put your phone on silent or Do Not Disturb while you are in class. If you must take a phone call in case of emergency, quietly leave the room before answering the phone.

CHEM101 Homework and In-Class Activities (30%)

We will use Chem101 as our online homework and "clicker" system during the summer quarter. You must sign up for a Chem101 account on the first day of class. The cost of Chem101 is ~$20. Once you sign up for an account, there is a two-week grace period before you must purchase access for the remainder of the quarter.

In general, homework assignments will be posted on Mondays and due the following Sunday at 11:59 pm. Each homework question is worth 1 point.

Each in-class question will be worth 5 points, and the number of questions will vary each day. ***Make sure you attend every class session to receive credit***. If at any point during the Zoom sessions, you leave or do not participate, I reserve the right to eject you from class for the day and you will receive zero points for all of the day's activities. If you need to leave or step away for any reason, send me a message in the Zoom chat with your expected return time.

Lab Assignments, Worksheets, and Miscellaneous Class Assignments (25%)

All work that you submit must be handwritten unless otherwise specified, and all work for your calculations must be shown.

Exams (30%)

There will be three midterm exams worth a combined 30% of your grade. Early and late exams will not be administered, and **missing an exam will result in a <u>zero</u> without documented proof of a medical or legal emergency** (e.g. hospitalization or car crash). If you require any accommodations for exams, you must be approved by DSPS.

Exams will be conducted over Zoom. Additional details will be available in the class Canvas site.

Lab Final (5%)

The lab portion of the class will evaluate experimental design, critical thinking, and data analysis. The lab exam will be conducted over Zoom. Additional details will be available in the class Canvas site.

Oral Final (10%)

The final exam will consist of a ~15 minute "interview" with Dr. Brophy scheduled during the week of August 3rd. You will be randomly assigned a time for your interview, so make sure that you available during class times every day between August 3rd and 6th. The oral final will consist of at least (but possibly only) 1 question from the course material. You must be on Zoom with your camera on for the duration of the exam. This exam is worth 5% of your overall grade; however, you must complete it and receive at least 60% of the available points in order to pass the class.

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.