



General Chemistry I

Chemistry 1110 - CO1 XL

Dr. Harris

Summer 2021 Syllabus

4 credits

Week of:	Presented Chapters
10 th of May	Introduction/Chapter 1/Chapter 2
17 th of May	Chapter 2/Chapter 3
24 th of May	Chapter 3/Chapter 4
25 th of May	Chapter 4/Chapter 5
31 st of May	Chapter 5/Chapter 6
7 th of June	Chapter 6/Extra Credit Information
14 th of June	Chapter 7
21 st of June	Chapter 7/Chapter 8
28 th of June	Chapter 8/Chapter 9
5 th of July	Chapter 9
12 th of July	Chapter 10/Chapter 11
19 th of July	Chapter 11/Chapter 12
26 th of July	Chapter 12
2 nd of August	Chapter 12
9 th of August	Comprehensive Make Up Exam and Final Exam

Exam Number	Date	Chapters Included
1	Wednesday the 26 th through Friday the 28 th of May, 2021	1 – 3
2	Monday the 21 st through Wednesday the 23 rd of June, 2021	4 – 6
3	Monday the 19 th through Wednesday the 21 st of July, 2021	7 – 9
Comprehensive Make Up Exam – by appointment only for excused absences	Monday the 9 th through Tuesday the 10 th of August, 2021	1 – 9
Final	Wednesday the 11 th through Friday the 13 th of August, 2021	1 through 9 – 25 questions 10 through 12 – 25 questions

Dr. Doug Harris

E-mail: doug.harris@usu.edu (Reply within 2 business working days)

Materials

Karen Timberlake, *General, Organic, and Biological Chemistry: Structures of Life*, Custom Text, Pearson.
Scientific Calculator (no networking-capable calculators)

Coursework	Examinations, 3 @ 100.....	300
	Final Exam, mandatory @ 200.....	200
	TOTAL.....	500

Grades

100% - 92%	A
91% - 88%	A-
87% - 85%	B+
84% - 81%	B
80% - 77%	B-
76% - 73%	C+
72% - 64%	C
63% - 60%	C-
59% - 57%	D+
56% - 50%	D

Note: Scores rounded to nearest one's place (91.4% = 91% and 91.5% = 92%).
The instructor reserves the right to lower these cutoff scores.

Policies and Procedures

1. The administration of Chemistry 1110 will adhere strictly to the policies (including the issuing of incompletes) outlined in the USU 2020 – 2021 General Catalog.
2. Qualified students with disabilities may be eligible for reasonable accommodations. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, 797-2444 voice, 797-0740 TTY, or toll free at 1-800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advance notice.
3. There will be three 50-minute exams and one 110-minute mandatory final exam. Each exam will be administered directly in the nearest Utah State campus testing center. Students are encouraged to schedule the three regular exams and the final exam with their nearest testing center as soon as possible. Students will be permitted to use a scientific calculator (no networking-capable calculators), blank scratch paper, and the reference exam information posted to Canvas for each exam. Exams will not be rescheduled to dates outside of the outlined exam windows.
4. Missed Exam Policy: Missed exams which have excused absences will be made up with a comprehensive make-up exam. Excused absences include: (1) school excused absences outlined in the general catalog, (2) illness, and (3) a family emergency. Planned family trips, vacations, outings, and weddings are not excused absences. Students should notify the instructor in advance, if possible, prior to missing any exam. Students missing an exam (excluding the mandatory final exam) will have one week to notify the instructor that they have an excused absence. Missed exams that are not made up will be scored as zero. Only one missed exam can be made up. The comprehensive make-up exam is by appointment only and will be held at the exam time window outlined on the first page of the syllabus. The comprehensive make-up exam will not be rescheduled to another date outside of the outlined exam window. Students may not request to take the comprehensive make up exam after starting a regular exam.
5. Keep in mind that the practice exam serves as an assessment of your understanding of concepts presented in the lecture videos. Hopefully you will be diligent about following the suggested study plan outlined at the beginning of the course. Exam questions may be the same or similar to the practice exam problems but may also be completely different.
6. Although class attendance will not be officially taken, it will be absolutely essential that every effort is made in following the suggested study plan. All students will be held responsible for video lecture material and worked problems as well as announcements posted to the course Canvas page.
7. If you choose to complete an optional extra-credit molecular modeling exercise, one percentage point (1%) will be added to your final grade percentage. This is helpful to those students who end up with a final borderline grade percentage. The extra-credit submission deadline will be at 9 am MDT Monday, July 19th. Since the extra credit activity is presented at the conclusion of chapter 6, before the 2nd exam, and will only require 15 minutes to complete, all extra credit submissions after 9 am MDT Monday the 19th of July will not be accepted and will be directly referred to this syllabus course policy. Further information is presented in the corresponding video, posted to the course Canvas page, regarding the specific details in producing the extra-credit assignment.

Main Course Objectives and Assessment

1. Prepare students for careers in health-related professions, environmental, and agricultural science.
2. "To make the study of chemistry an engaging and positive experience by relating the structure and behavior of matter to its role in health and the environment" (see text preface).
3. Lecture learning checks will be used as a means of assessing student comprehension. These student-centered learning strategies have previously proven successful in this chemistry course.

Some Learning Objectives:

- Review math and learn to do calculations while working everyday examples of problems in health and medicine using metric units.
- Understand the relationship of isotopes to the atomic mass of an element on the periodic table.
- Understand the relationship between electron arrangement, group number, and periodic law.
- Understand different types of radiation, radiation protection, balancing of nuclear equations, and the fusion and fission processes.
- Learn the relationship between group numbers, valence electrons, and the formation of ionic and covalent compounds.
- Write ionic formulas and names of compounds with polyatomic ions.
- Use VSEPR theory to determine the shape, bond angles, and polarity of a molecule.
- Classify an equation as a combination, decomposition, replacement, combustion, and/or oxidation-reduction.
- For a given mass of a substance in a reaction, use the appropriate mole factors and molar masses to calculate the mass of a reactant, product/percent yield.
- Determine the energy lost or gained during a change of state/temperature.
- Use the ideal gas law to calculate an unknown pressure, volume, moles, and/or temperature of a gas.
- Understand solubility and determine whether a salt will dissolve in water.
- Calculate the percent concentrations and molarity of a solution.
- Describe the behavior of a red blood cell in hypotonic, isotonic, and hypertonic solutions.
- Understand and write the equilibrium constant for an equation.
- Describe the characteristics of acids and bases.
- Classify bases/acids as strong or weak.
- Predict whether a salt will form an acidic, basic, or neutral solution.
- Describe the function of a buffer.
- Describe the properties and functional groups found in organic compounds.
- Describe the physical properties and write the IUPAC names of alkanes and cycloalkanes.
- Describe the properties, reactions, and IUPAC names of alkenes and alkynes.