



General Chemistry I

Chemistry 1110 - 001

Dr. Doug Harris

Spring 2022 Course Syllabus

M,W,F: 9:30 – 10:20 am: LSB 133

Tues: 4 – 4:50 pm: ESLC 130

4 credits

Dates		MON	TUES	WED	FRI
January	10 th – 14 th	Introduction	1	1	2
January	17 th – 21 st	Holiday	2	2	2
January	24 th – 28 th	3	3	3	3
January/February	31 st – 4 th	3	Exam 1 4 p.m. ESLC 130	4	4
February	7 th – 11 th	4	4	5	5
February	14 th – 18 th	5	6	6	6
February	21 st – 25 th	Holiday	6	6	6
February/March	28 th – 4 th	6 and Extra Credit Information	Exam 2 4 p.m. ESLC 130	7	7
March	7 th – 11 th	Spring Break	Spring Break	Spring Break	Spring Break
March	14 th – 18 th	7	7	7	8
March	21 st – 25 th	8	8	8	9
March/April	28 th – 4 th	9	9	9	9
April	4 th – 8 th	Exam 3 9:30 a.m. LSB 133 Extra Credit Due	10	10	10
April	11 th – 15 th	11	11	11	11
April	18 th – 22 nd	12	Make Up Exam by Appointment Only 4 p.m. ESLC 130	12	12
April	25 th and 26 th	12	12		
May	4 th			Final Exam 9:30 a.m. LSB 133	

Exam Number	Date	Chapters Included
1	Tuesday, 1 st of February	1 – 3
2	Tuesday, 1 st of March	4 – 6
3	Monday, 4 th of April	7 – 9
Make Up Exam	Tuesday, 19 th of April by appointment only for excused absences only	1 – 9
Final	Wednesday, 4 th of May	10 through 12 – 25 questions 1 through 9 – 25 questions

Dr. Doug Harris
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Office Hours: 10:30 – 11:30 am MW or by appointment

Materials

Scientific Calculator (no networking-capable calculators)

Auto Access eBook: General, Organic, and Biological Chemistry eBook, 6e by Timberlake

This course requires all-inclusive digital materials that are provided to you at a lower price than traditional printed materials. These materials are paid for through an "Auto Access Digital Materials" charge placed on your student account when you registered for the course. **To access the materials, visit the Canvas course site.** For more details, including dates, deadlines, and opt-out info, visit your student Auto Access Portal: <https://portal.verba.io/usu/login>

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 2021 – 2022 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. Students will be permitted to use a calculator (no networking capable calculators) for each exam. Exams will not be rescheduled to another date and time.
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. The comprehensive make-up exam is by appointment only and will be held at the exam date and time outlined on the first page of the syllabus. The comprehensive make-up exam will not be rescheduled to another date and time. Students may not request to take the comprehensive make up exam after starting a regular exam.
5. Keep in mind that the practice exams serve as an assessment of your understanding of concepts presented in lecture. 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. Scantrons will be provided by the instructor.
7. When taking the exams, be sure to answer the problem and immediately fill out the corresponding scantron bubble. Avoid waiting to fill out your scantron sheet when finished with your exam. Keep in mind that the exams are multiple-choice and each marked answer is either correct or incorrect. Credit will not be granted for problems that are accidentally marked incorrectly (no answer indicated, two answers provided for one problem, indicated scantron answers are one question number off, indicated scantron answer does not match personal exam copy answer, etc.).
8. Double check your scantron sheet before turning it in. Make sure that all of your answers have been entered the way you want them to appear on your scantron. Once a scantron is submitted, it may not be retrieved in order to make additions and/or changes.
9. Please arrive early to take each exam. Exams and scantron sheets will not be handed out after the first completed exam scantron sheet has been submitted. All requests for an exam and scantron sheet after the first completed exam scantron sheet has been submitted will be directly referred to this policy without further discussion.
10. Please make a printout of each exam results so that you may track your progress in the course.

11. 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. Further information will be given in class on Monday, February 28th regarding the specific details in producing the extra-credit assignment. The extra-credit submission deadline will be at 9:30 a.m. Monday, April 4th when we meet to take the third exam. 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 9:30 am Monday the 4th of April will not be accepted and will be directly referred to this syllabus course policy.

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:

- Understand and apply the basic structure and methodology of the scientific enterprise.
- 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.