

**CHEMISTRY 1210 Tentative Schedule – Fall 2021**  
**(Subject to moderate change)**  
**Classes held on Tuesdays and Thursdays, 5:15 – 7:45 p.m.**

Date	Watch This Before Class (video links on Canvas):	In Class We'll Work On:	Other Stuff (Exams done in Testing Centers):
8/31	Welcome Video	Syllabus Review, Intro Survey, and Group Assignments	Intro Survey (on Canvas): 8/31 – 9/18  Entrance Exam: 9/2 – 9/25
9/2	All the Chapter 1 Videos	Quiz 1 (on Canvas) Pr. Set 1 (Ch. 1) – due by 9/3	
9/7	Chapter 2: 1 <sup>st</sup> half of videos	Pr. Set 2 (Ch. 2) – due by 9/10	
9/9	Chapter 2: 2 <sup>nd</sup> half of videos	Quiz 2 (on Canvas) Pr. Set 2 (Ch. 2)	
9/14	Chapter 3: 1 <sup>st</sup> half of videos	Pr. Set 3 (Ch. 3) – due by 9/22	
9/16	Chapter 3: 2 <sup>nd</sup> half of videos	Quiz 3 (on Canvas) Pr. Set 3 (Ch. 3)	
9/21	Chapter 3: 2 <sup>nd</sup> half of videos	Pr. Set 3 (Ch. 3), Exam 1 Review*	Exam 1 (Ch. 1-3): 9/22 – 9/29
9/23	Chapter 4: 1 <sup>st</sup> half of videos	Pr. Set 4 (Ch. 4) – due by 10/6	
9/28	Chapter 4: 2 <sup>nd</sup> half of videos	Quiz 4 (on Canvas) Pr. Set 4 (Ch. 4)	
9/30	Chapter 4: 2 <sup>nd</sup> half of videos	Pr. Set 4 (Ch. 4)	Anonymous Survey (on Canvas): 10/5 – 10/17
10/5	Chapter 4: 2 <sup>nd</sup> half of videos	Pr. Set 4 (Ch. 4)	
10/7	Chapter 5: 1 <sup>st</sup> half of videos	Pr. Set 5 (Ch. 5) – due by 10/13	
10/12	Chapter 5: 2 <sup>nd</sup> half of videos	Quiz 5 (on Canvas) Pr. Set 5 (Ch. 5), Exam 2 Review*	
10/14	Chapter 6: 1 <sup>st</sup> half of videos	Pr. Set 6 (Ch. 6) – due by 10/20	Exam 2 (Ch. 4-5): 10/13 – 10/20
10/19	Chapter 6: 2 <sup>nd</sup> half of videos	Quiz 6 (on Canvas) Pr. Set 6 (Ch. 6)	
10/21	Chapter 7: 1 <sup>st</sup> half of videos	Pr. Set 7 (Ch. 7) – due by 10/27	
10/26	Chapter 7: 2 <sup>nd</sup> half of videos	Quiz 7 (on Canvas) Pr. Set 7 (Ch. 7), Exam 3 Review*	
10/28	Chapter 8: 1 <sup>st</sup> half of videos	Pr. Set 8 (Ch. 8) – due by 11/3	
11/2	Chapter 8: 2 <sup>nd</sup> half of videos	Quiz 8 (on Canvas) Pr. Set 8 (Ch. 8)	Exam 3 (chapters 6-7): 10/27 – 11/3
11/4	Chapter 9: 1 <sup>st</sup> half of videos	Pr. Set 9 (Ch. 9) – due by 11/10	
11/9	Chapter 9: 2 <sup>nd</sup> half of videos	Quiz 9 (on Canvas) Pr. Set 9 (Ch. 9)	
11/11	Chapter 10: 1 <sup>st</sup> half of videos	Pr. Set 10 (Ch. 10) – due by 11/17	
11/16	Chapter 10: 2 <sup>nd</sup> half of videos	Quiz 10 (on Canvas) Pr. Set 10 (Ch. 10), Exam 4 Review*	
11/18	Chapter 11: 1 <sup>st</sup> half of videos	Pr. Set 11 (Ch. 11) – due by 11/29	Exam 4 (chapters 8-10): 11/17 – 11/24
11/23	Chapter 11: 2 <sup>nd</sup> half of videos	Quiz 11 (on Canvas) Pr. Set 11 (Ch. 11)	
11/25	NO CLASS – Thanksgiving Holiday		
11/30	Chapter 12: 1 <sup>st</sup> half of videos	Pr. Set 12 (Ch. 12) – due by 12/3	Anonymous Survey (on Canvas): 11/25 – 12/6
12/2	Chapter 12: 2 <sup>nd</sup> half of videos	Quiz 12 (on Canvas) Pr. Set 12 (Ch. 12)	
12/7	Final Exam Review	Final Exam Review*	No-Test Week
12/9	Final Exam Review	Final Exam Review*	
12/13 – 12/17			Comprehensive Final

†During Exam reviews, we will go over the Exam Study Guides (available through Canvas) together.

**CHEMISTRY 1210 – Fall 2021**  
**Principles of Chemistry I**  
**Tuesdays and Thursdays, 5:15 – 7:45 p.m.**

Section	Location	Room
BB1	Brigham City Campus	Brigham City Classroom and Student Services
EB1	Moab	Moab Center
MB1	Logan Campus	Geology 105
UB1	Vernal	BEERC B135
	Roosevelt	Roosevelt SC176

**General Information**

**Instructor:** Dr. Mike Christiansen (please just call me Mike)  
**Email:** [m.christiansen@usu.edu](mailto:m.christiansen@usu.edu) (please do NOT message me through Canvas; I don't check it)  
**Office:** 221G Bingham Building  
**Phone:** **Office:** 435-722-1761      **Cell:** 435-828-0140  
**Office hours:** Tuesdays and Thursdays, 4–5 p.m.

**Optional:** Buy a chemistry textbook, any author, any edition. My course is based on **Chemistry: the Central Science, 12<sup>th</sup> edition, by Brown, Lemay, Bursten, Murphy, and Woodward**, ISBN-10: 0321696727 | ISBN-13: 978-0321696724 (other editions are acceptable)

**Solutions to Exercises for Chemistry: The Central Science, 12<sup>th</sup> Edition, by Brown, Wilson, & Bursten**, ISBN-10: 0321705009 | ISBN-13: 9780321705006

**Prerequisites:** One of the following: Math ACT score of at least 25 or equivalent SAT Math score, AP Calculus AB score of 3 or higher, ALEKS Math score of 76 or higher, MATH 1050 or higher, or co-requisite of MATH 1050; high school chemistry recommended

**Course Description:** First of a two-semester sequence, covering fundamentals of chemistry. Designed for science and engineering students.

**Course Objectives:**

By the end of the semester you should:

1. Understand the basic principles of general chemistry, as described above under **Course Description**.\*
2. Be able to explain basic, everyday chemical phenomena and apply this knowledge to solving real-world problems.\*†
3. Be able to explain why chemistry is important and how it applies to everyday life.‡

\*IDEA objectives 1-2

†IDEA objective 3

‡IDEA objective 7

**Course Structure:** This course is not an online class. However, in response to the global pandemic (see <https://www.usu.edu/covid-19/index> and <https://www.usu.edu/policies/20-t4/>), various structural changes have been made.

To begin, this class does NOT follow a traditional-lecture format. Instead, lecture videos are pre-recorded and posted on Canvas. **Your assignment is to watch each chapter's lecture video before class**, according to the schedule on Page 1 of this document. We will spend in-class time doing problem sets, either individually or in groups (see **Problem Sets** below). This type of course structure, where you watch lecture videos online outside of class and then do "homework" in class, is called **flipped learning**. I flip my classes for the following reasons:

- Once students get used to it, most strongly prefer it to traditional lecture.
- It generally produces higher grades than traditional lecture.
- I get to know my students better, which means (when applicable) I can write better letters of recommendation for you later on.
- You can re-watch my videos as many times as you want, which can better help you prepare for our exams and (if applicable) entrance exams to professional schools later on.
- Because you do your problem sets in class, with me present, I am here to help answer your questions, right when you need me most.

To take the greatest advantage of the **flipped learning** videos outside of class, you must:

- Watch the videos BEFORE class.
- Take notes and write down questions while you watch the videos.
- Do NOT do other activities (browse social media, listen to music, do your dishes) while watching the videos.
- Come to class. (Don't skip, except in unavoidable emergencies.)

**Peer Grades:** For those who choose to work in groups (see **Problem Sets** below), in order to encourage participation and to discourage freeloading, at the end of the semester, I will have you anonymously assign a peer grade to each member of your group (including yourself), based on how much each person contributed to your group problem sets. Your individual problem set score will then be readjusted to reflect the combined-average grade you receive from you and your fellow group members, according to the following equation:

$$\text{Individual Problem Set Grade} = (\text{Group's Total Problem Set Grade}) \times (Y)$$

(Y) = the numerical average of Peer Grades, by the following conversion:

F	D-	D	D+	C-	C	C+	B-	B	B+	A-	A
0.5	0.575	0.65	0.6833	0.7167	0.75	0.7833	0.8166	0.85	0.8833	0.9167	1

**Attendance:** **I ask facilitators to please track attendance and email me the final attendance record at the end of the semester.** Attendance is not mandatory, but in-class problem sets are integral to the course, and we will work on problem sets during class. Thus, your grade will correlate strongly with your attendance. Additionally, if you ask me for letters of recommendation later on, I will take your attendance into serious consideration.

**Canvas:** Beyond videos, I will also post problem sets, lecture slides, overhead notes, answer keys, study guides, announcements, grades, and schedule changes on Canvas. Please check Canvas regularly.

**Zoom:** In-class proceedings will be recorded using Zoom. You can access our Zoom recordings through our Canvas homepage by clicking MEDIA GALLERY on the left panel, which will let you to re-watch anything you miss in class. Please do NOT use this as an excuse to regularly skip class.

**Time Expectations:** Your primary homework is to watch the video lectures before class, to study for exams, and to prepare for in-class problem sets. If you want more practice, I've also posted (on Canvas) a list of **Suggested Chapter Problems** from our text, which are recommended but not required. Please note that chemistry is a subject that requires a large time commitment to master.

**Video Quizzes:** There will be a five-point quiz each week, based on material covered in each chapter's videos (see the schedule on Page 1 above). These quizzes are given to encourage you to watch the lecture videos according to schedule. Your lowest quiz score will be dropped. Quizzes are done online through Canvas. To access them through Canvas, click QUIZZES on the left panel.

**Problem Sets:** During Week 1 of class, I will assign you to a group. If any of you wish you NOT work in a group, *for whatever reason*, please let me know by emailing me at [m.christiansen@usu.edu](mailto:m.christiansen@usu.edu). In the past, most students have strongly preferred working in groups, once they get used to it.

Each chapter's problem set is posted on that chapter's Canvas page in advance. Most problem sets take more than one class period to finish. Due dates are posted at the top of each problem set and on our course schedule. Exams are based significantly on problem sets, so please work hard and ask me questions in class. Your lowest problem set score will be dropped.

You may use any resource you want on problems sets, including your notes, textbook, the internet, me, group members, and other classmates (please follow USU COVID-19 precautions, outlined at <https://www.usu.edu/covid-19/index> and <https://www.usu.edu/policies/20-t4/>). However, I warn against mindlessly copying answers. Doing so will only disadvantage you and lower your exam performance. You can email me your problem sets as you work on them ([m.christiansen@usu.edu](mailto:m.christiansen@usu.edu)). I will then email you feedback with no grade punishment, as many times as you like, up until the problem set's due date. If you hand in a problem set after its due date, it will be worth 50%. I will post problem set answer keys that include some (not all, but some) worked-out answer videos the morning after each problem set is due.

**Entrance Exam:** You are required to take an entrance exam worth 35 points, for which you receive full credit, regardless of how you do on it. Its purpose is to give me a baseline measure of your chemistry knowledge at the start of the year, for later comparison.

**Exams:** Most of your grade comes from exams (four midterms and one comprehensive final), which are based largely on problem sets. Exams will be taken in your testing centers and are NOT done in groups. Exams will cover information from our video lectures and/or class and will include modified problems from the text or problem sets. The comprehensive final will have questions from old exams and quizzes, as well as new questions. Exams will be given on the days indicated on the class schedule. If you know ahead of time that you will miss an exam, and if the reason is valid (determined at my discretion), arrangements will be made. No after-the-fact excuses/absences will be considered.

## Grade Breakdown:

Your course grade will be calculated, based on the following point amounts:

<b>Intro Survey</b>		5 points	(0.8%)
<b>Entrance Exam</b>	(Full credit for taking it, irrespective of grade)	35 points	(5.8%)
<b>12 quizzes</b>	(5 points each – lowest score dropped)	55 points	(9.1%)
<b>12 problem sets</b>	(10 points each – lowest score dropped)	110 points	(18.2%)
<b>4 Midterm Exams</b>	(100 points each – lowest score dropped)	300 points	(49.6%)
<b>Comprehensive Final</b>	(100 points, MANDATORY)	100 points	(16.5%)
<b>Total</b>		605 points	

Of the four midterm exams, **only three will be counted** toward your final grade. If you take all four midterms, your lowest score will be dropped. The comprehensive final is mandatory and will not be dropped. Your final course grade will be based on the following scale:

A: 100-93%   A–: 92-90%   B+: 89-87%   B: 86-83%   B–: 82-80%  
C+: 79-77%   C: 76-73%   C–: 72-70%   D: 69-60%   F: 59% and below

## University Policies

**COVID-19 Classroom Safety.** While not mandated, USU encourages and welcomes the wearing of masks in all university buildings, especially within 6 feet of others. Furthermore, it is strongly encouraged to take measures to mitigate risk as recommended by federal and state public health officials. These measures include getting fully vaccinated, staying home if you are sick (even with mild symptoms), and maintaining good hygiene, including frequent hand washing. Testing will be provided, without charge, throughout the semester, and the USU COVID Webpage will provide up-to-date information. Please remember; COVID can have significant impact on the health and safety of those around you so remain vigilant and respectful.

**Academic Freedom and Professional Responsibilities.** Academic freedom is the right to teach, study, discuss, investigate, discover, create, and publish freely. Academic freedom protects the rights of faculty members in teaching and of students in learning. Freedom in research is fundamental to the advancement of truth. Faculty members are entitled to full freedom in teaching, research, and creative activities, subject to the limitations imposed by professional responsibility. USU Policy 403 (accessible at <http://www.usu.edu/hr/files/uploads/Policies/403.pdf>) further defines academic freedom and professional responsibilities.

**Academic Integrity – the “Honor System.”** The University expects that students and faculty alike maintain the highest standards of academic honesty. The Code of Policies and Procedures for Students at Utah State University (accessible at <https://studentconduct.usu.edu/studentcode>) addresses academic integrity and honesty and notes the following:

- **Academic Integrity:** Students have a responsibility to promote academic integrity at the University by not participating in or facilitating others' participation in any act of academic dishonesty and by reporting all violations or suspected violations of the Academic Integrity Standard to their instructors.
- **The Honor Pledge:** To enhance the learning environment at Utah State University and to develop student academic integrity, each student agrees to the following Honor Pledge: “I pledge, on my honor, to conduct myself with the foremost level of academic integrity”. Violations of the Academic Integrity Standard (academic violations) include, but are not limited to cheating, falsification, and plagiarism.

**Plagiarism.** Plagiarism includes knowingly “representing by paraphrase or direct quotation, the published or unpublished work of another person as one’s own in any academic exercise or activity without full and clear acknowledgment. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials.” The penalties for plagiarism are severe. They include warning or reprimand, grade adjustment, probation, suspension, expulsion, withholding of transcripts, denial or revocation of degrees, and referral to psychological counseling.

**Grievance Process.** Students who feel they have been unfairly treated [in matters other than discipline, admission, residency, employment, traffic, and parking - which are addressed by procedures separate and independent from the Student Code] may file a grievance through the channels and procedures described in the Student Code: <https://studentconduct.usu.edu/studentcode/article7>.

**Sexual Harassment.** Utah State University is committed to creating and maintaining an environment free from acts of sexual misconduct and discrimination and to fostering respect and dignity for all members of the USU community. Title IX and USU Policy 339 (<https://www.usu.edu/policies/339>) address sexual harassment in the workplace and academic setting.

The university responds promptly upon learning of any form of possible discrimination or sexual misconduct. Any individual may contact USU’s Affirmative Action/Equal Opportunity (AA/EO) Office (<http://aaeo.usu.edu/>) for available options and resources or clarification. The university has established a complaint procedure to handle all types of discrimination complaints, including sexual harassment (USU Policy 305, <https://www.usu.edu/policies/305/>), and has designated the AA/EO Director/Title IX Coordinator as the official responsible for receiving and investigating complaints of sexual harassment.

**Students with Disabilities.** USU welcomes students with disabilities. If you have, or suspect you may have, a physical, mental health, or learning disability that may require accommodations in this course, please contact the Disability Resource Center (DRC) as early in the semester as possible (University Inn # 101, 435-797-2444, [drc@usu.edu](mailto:drc@usu.edu)). All disability related accommodations must be approved by the DRC. Once approved, the DRC will coordinate with faculty to provide accommodations.

**Withdrawal Policy and “I” Grade Policy.** If a student does not attend a class during the first week of the term or by the second class meeting, whichever comes first, the instructor may submit a request to have the student dropped from the course. (This does not remove responsibility from the student to drop courses which they do not plan to attend.) Students who are dropped from courses will be notified by the Registrar’s Office through their preferred e-mail account.

Students may drop courses without notation on the permanent record through the first 20 percent of the class. If a student drops a course following the first 20 percent of the class, a W will be permanently affixed to the student’s record (check General Catalog for exact dates). Students with extenuating circumstances should refer to the policy regarding Complete Withdrawal from the University and the Incomplete (I) Grade policy in the General Catalog.

**No-Test Days Policy.** For classes that meet for a full semester, a five-day period designated as "no-test" days precedes final examinations. During this time, no major examinations, including final examinations will be given in order that students may concentrate on classwork, the completion of special assignments, writing projects, and other preparation for duly scheduled final examinations. Approved exceptions include final papers, weekly chapter quizzes, quizzes, projects, and examinations associated with a lab that does not meet during final examinations. This policy does not apply to classes that meet only during the second 7-week session of the semester or to classes offered during the summer term. Complete information related to Final Examination Policies (<https://catalog.usu.edu/content.php?catoid=12&navoid=3311>) can be reviewed in the General Catalog.

**Assumption of Risk.** All classes, programs, and extracurricular activities within the University involve some risk, and some involve travel. The University provides opportunities to participate in these programs on a voluntary basis. Therefore, students should not participate in them if they do not care to assume the risks. Students can ask the respective program leaders/sponsors about the possible risks a program may generate, and if students are not willing to assume the risks, they should not select that program. By voluntarily participating in classes, programs, and extracurricular activities, students do so at their own risk. General information about University Risk Management policies, insurance coverage, vehicle use policies, and risk management forms can be found at <http://www.usu.edu/riskmgt/>.

**Mental Health.** Mental health is critically important for the success of USU students. As a student, you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce your ability to participate in daily activities. Utah State University provides free services for students to assist them with addressing these and other concerns. You can learn more about the broad range of confidential mental health services available on campus at Counseling and Psychological Services (CAPS).

Students are also encouraged to download the “SafeUT App” to their smartphones. The SafeUT application is a 24/7 statewide crisis text and tip service that provides real-time crisis intervention to students through texting and a confidential tip program that can help anyone with emotional crises, bullying, relationship problems, mental health, or suicide related issues.

**I have read and understood the course syllabus:**

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**Printed Name**

**Signature**

**Date**