

CHEM 1400, GENERAL CHEMISTRY
Section D (90368), MWF 2:20-3:10 Innovation E102
University of Vermont
Fall Semester 2023

GENERAL INFORMATION

INSTRUCTOR: Amy Hoeltge, Ph.D.

EMAIL: Amy.Hoeltge@uvm.edu

OFFICE: Innovation E337

OFFICE HOURS: drop in or by appointment

COURSE DESCRIPTION

This is the first semester of a two-semester course sequence. Topics include matter, stoichiometry, gas laws, thermochemistry, quantum theory, atomic structure, electronic configurations, bonding, and intermolecular forces.

REQUIRED COURSE MATERIALS

1. TEXTBOOK: Chemistry: Atoms First ; Burdge, J. ; 5th Ed
2. ONLINE ACCESS: ALEKS 360 (McGraw Hill) **Class ID code is QDAVQ-YQRWW**

Available at the UVM bookstore as a bundled package:

Looseleaf text with 52 week access card for ALEKS 360 - ISBN 9781265610265... \$200

3. LAB NOTEBOOK: A carbon-less copy notebook
4. SAFETY EYEWEAR: Everyone must wear OSHA approved safety glasses or goggles while in lab.
5. CALCULATOR
6. Lab Coat

Our ALEKS course has already been synced with our Brightspace page. Please access ALEKS from there.

LECTURE

We will meet, in person, on MWF from 2:20-3:10 pm, in Innovation E102. Attendance is not mandatory, though strongly encouraged.

- Lecture notes are created in class, not ahead of time. I will upload them to Brightspace at some point after class and you may access them on your own. Please realize that sharing these notes is not required of me and I will be doing it as a courtesy to you. The timing of each upload may vary but I usually have them ready within 24 hrs of each class.
- Lectures are not recorded or streamed. If you are unable to attend, for any reason, please arrange to acquire written notes from either a classmate or from my uploaded file on Brightspace.

EXAMS

Dates for each exam are listed on the lecture schedule. These four exams will be given online, via ALEKS. To extend the greatest flexibility, I will make these exams available beginning Saturday at midnight (12:00 am EDT) until 10:00 pm EDT the following Monday. You may take your exam at any time during the window in which it is available.

Please realize that once you have started the exam, you will have 3.0 hrs to complete it. Exams cannot be saved and returned to later, even within the window of availability. Each exam is written to take no more than 1.5 hrs. As such, every student is afforded double time for each exam and so extended time accommodations will not apply.

Students may use their textbook or their notes while taking exams. ALEKS has data/formulae information as well as a periodic table that will be available to you while taking the exam. You may use a calculator of your choosing.

It is in your best interest to keep up with the practice exercises and quizzes in ALEKS so that you are familiar with the way the program wants you to enter your answers. The more you use the program, the easier it gets to navigate the various icons and syntax.

Please realize that once the exam closes at 10:00 pm on Monday evening, any work submitted afterward will not be graded.

Attendance at all examinations and labs is required. A grade of zero will be assigned to any student who misses an exam. Please plan accordingly. In the event of an emergency, see the Grading section of this document for the policy regarding a missing exam.

HOMEWORK

A long list of suggested practice problems can be found at the end of this syllabus, in the lecture schedule. **These exercises will not be collected or graded (and you are certainly welcome to doing any of the exercises outside of my suggested list).** You can check your answers in the back of the textbook. This is a nice way to practice putting pencil to paper and will be helpful, in general, for problem solving and in-class note taking.

In addition to hard copy end-of-chapter textbook questions, you may exercise in ALEKS, using the chapter practice links. If you are interested in feedback, rather than simply checking your answers, ALEKS provides a detailed solution and explanation for each practice exercise. I have selected a large group of topics from each chapter and the pool of questions offered on ALEKS is quite generous. Practice exercises offered on ALEKS will likely better prepare you for exams because it will require your work to be entered the same way via the database. You will become more skilled with the program (and your exam taking will be more efficient) the more you practice in ALEKS.

ONLINE QUIZZES

There will be ten graded quizzes (best 10 out of 12) during the semester. These will occur once we finish a chapter and will be found online, in ALEKS. You will have an entire week to get your chapter quiz done. As such, no extensions will be granted, regardless of the reason.

GROUP PROJECT

To help students make peer-peer connections in class, group presentations will be due at the end of the semester. I will create groups with approximately 7-10 people each. Effort will be made to encourage groups of like-minded majors, but there will be mixtures.

Your group can be found on Brightspace, under the Content & Activities link. Click on the Favorite Scientist Presentation module and you will see a link for the group discussion forums as well as a link for uploading your final video presentation. Please find your group from the list and enter your discussion forum to meet your group members. For the work, you have a choice: either establish contact for meeting periodically offline, agree to discuss the project entirely in your forum on Brightspace, or agree to a hybrid of on/offline discussion. You are in control of how you work – just make an effort to meet your classmates and have fun accomplishing the goal together.

The goal: each group should pick a relatively current scientist – within the last 50 years (does not have to be a chemist) - whose work and world impact is something that inspires your group.

Presentations will be due on 12/8/23, should be captured on video, and uploaded into the Video Presentation folder within Content & Activities on Brightspace. You can find this folder in the “Favorite Scientist Presentations” module. Please use your Group Number (eg. #8 or #24, etc) when uploading the file (either in the title of submission or within the file name). Presentation should be no more than 3 or 4 Powerpoint slides:

- Slide 1: Introduction including Background, Degree, University(ies), etc
- Slide 2: Graduate or Undergraduate Research Contribution(s)
- Slide 3: Why did you pick this scientist and how did they contribute to our world?

- Slide 4: Summary

LAB

More information can be found on the Blackboard page for your lab section.

- Before the start of lab, purchase your lab manual, lab notebook, and safety glasses. On your lab's Blackboard page, review and complete the Safety Presentation and Safety Quiz. You will not be able to participate in lab until this is complete.
- Students must attend the lab section to which they are assigned. **If more than two labs are missed, you will receive an F for the course.** Only the academic dean of your college may grant an incomplete. An unexcused absence will result in a ZERO grade for the laboratory experiment. Official documentation of sickness or a family crisis is required for an excused absence from lab.

GRADING

Exams	4 exams @ 100 pts each	400 pts	40 %
Online Quizzes	12 quizzes (top 10 counted) @ 30 pts each	300 pts	30 %
Labs	10 experiments @ 30 pts each	250 pts	25 %
Group Project	1 PowerPoint presentation @ 50 pts	50 pts	5 %
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Total Course		1,000 pts	100 %

- Your lowest exam score will be replaced by your highest exam score.
- Letter grade cut offs are not determined until after the final exam. However, in the past, whole letter ranges have generally trended as follows:

A range: 880-1,000 pts

B range: 780-870 pts

C range: 680-770 pts

D range: 580-670 pts

F is anything <580 pts

OFFICE HOURS

If you would like additional help in the course, you may drop in or schedule a specific time to meet with me. I am exceedingly available outside of class time, during evening hours, and on weekends. Drop ins are welcome any time my office door is open. For evenings and weekends, I kindly ask you to email me to arrange an in-person or Teams appointment.

Please send me an email at least two hours prior to our private session if you will not be able to make it. That way I can offer the time slot to one of your classmates.

ACCOMMODATIONS

Student Learning Accommodations Statement

"In keeping with university policy, any student with a documented disability interested in utilizing accommodations should contact ACCESS, the office of Disability Services on campus. ACCESS works with students to create reasonable and appropriate accommodations via an accommodation letter to their professors as early as possible each semester." Contact ACCESS: A170 Living/Learning Center - 802-656-7753

ACADEMIC INTEGRITY

This policy addresses plagiarism, fabrication, cheating, and collusion.
<http://www.uvm.edu/policies/student/acaintegrity.pdf>

FERPA RIGHTS DISCLOSURE

The purpose of this policy is to communicate the rights of students regarding access to, and privacy of their student educational records as provided for in the Family Educational Rights and Privacy Act (FERPA) of 1974. <https://catalogue.uvm.edu/undergraduate/academicinfo/ferparightsdisclosure/>

RELIGIOUS HOLIDAYS

Students have the right to practice the religion of their choice. If you need to miss class to observe a religious holiday, please submit the dates of your absence to me in writing by the end of the second full week of classes. You will be permitted to make up work within a mutually agreed-upon time.
<https://www.uvm.edu/registrar/religious-holidays>

HEALTH AND SAFETY

The University of Vermont's number one priority is to support a healthy and safe community:
Center for Health and Wellbeing: <https://www.uvm.edu/health>
Counseling & Psychiatry Services (CAPS): (802) 656-3340

C.A.R.E.: If you are concerned about a UVM community member or are concerned about a specific event, we encourage you to contact the Dean of Students Office (802-656-3380). If you would like to remain anonymous, you can report your concerns online by visiting the Dean of Students website at <https://www.uvm.edu/studentaffairs>

DIVERSITY, EQUITY, AND INCLUSION

The Division of Diversity, Equity, and Inclusion believes excellence should be inclusive of the entire University of Vermont (UVM) community and is steadfastly committed to this belief. Every day, our division strives to make our work accessible, affirming, and action-oriented to help ensure excellence is inclusive of everyone.
<https://www.uvm.edu/diversity>

INTERFAITH CENTER

Each of us engages those questions differently, perhaps through a religious tradition, philosophy, or spiritual practice. No matter how you make meaning of your life, you are welcome at the Interfaith Center for reflection, spiritual practice, education, and community building. <https://www.uvm.edu/interfaithcenter>

MOSAIC CENTER FOR STUDENTS OF COLOR

MCSC's vision is to create a diverse and rich community of empowered, engaged, and enthusiastic students of color at UVM. We fully support the holistic development of self-identified students of color so that they can obtain their goals for academic achievement, personal growth, identity formation, and cultural development. <https://www.uvm.edu/mcsc>

PRISM CENTER

The Prism Center serves the diverse queer and trans communities at the University of Vermont. We support and empower lesbian, gay, bisexual, transgender and queer students, as well as students whose identities fall in between or expand beyond those categories, and work to create a campus community where people of all sexual and gender identities can thrive. <https://www.uvm.edu/prism>

UVM WOMEN & GENDER EQUITY CENTER

The equity center cultivates joyful community while advancing gender equity across identities. We envision a brave, diverse, and equitable learning environment for all members of the UVM community. We provide advocacy services for those in our community who have experienced sexual or intimate partner violence, and strive to provide programming, education, and events that ask our community to explore the intersections of their gender and other identities. <https://www.uvm.edu/wagecenter>

FALL 2023 TENTATIVE SCHEDULE

DATES	CHAPTER	PRACTICE HOMEWORK SUGGESTIONS/OTHER INFORMATION
Aug 28-30	1	Ch 1: 7,11,13,15,17,19,25,27,29,31,33,39,41,43,45,47,49,51,53,69,71,73,77,79,87,89,93,95,97
Sep 1-6	2	Ch 2: 9,15,17,19,21,35,37,39,45,47,53,55,57,59,61,63,65,67,69,81
Sep 4		NO CLASSES LABOR DAY
Sep 8-15	3	Ch 3: 5,7,9,15,17,25,27,29,31,33,35,36,37,45,47,49,59,61,63,71,77,79,85,97,99,101,103
Sep 11		LAST DAY TO ADD/DROP
Sep 16-18	EXAM 1	Exam becomes available on ALEKS at 12:00 am 9/16 and is due no later than 10:00pm 9/18 (Chapters 1-3)
Sep 18-22	4	Ch 4: 5,7,9,11,13,15,19,20,21,26,28,33,35,37,39,41,43,49,53,54,55,56,65,67,71,73,75,77,91,93,95,97,99,101,103,105,111,117
Sep 25-29	5	Ch 5: 7,9,17,19,25,27,29,33,35,37,49,57,59,63,65,69,71,77,79,81,83,85,87,89,91,93,95,97,101,103,109,111
Oct 2-6	6	Ch 6: 17,19,22-25,29,35,37,39,41,43,55,57,62,64
Oct 9-11	7	Ch 7: 7,9,11,13,19,31,33,35,37,39,41,49,57,59,63,65,67,77,79,81,83
Oct 13		NO CLASSES FALL RECESS
Oct 7-9	EXAM 2	Exam becomes available on ALEKS at 12:00 am 10/7 and is due no later than 10:00pm 10/9 (Chapters 4-6)
Oct 16-18	7	
Oct 20	Group Project	Last day to select your scientist and fill in the Excel spreadsheet on Brightspace
Oct 20-27	8	Ch 8: 5,9,11,19,21,23,27,29,31,33,35,37,39,47,49,51,53,55,57,65,81,85
Oct 30		LAST DAY TO WITHDRAW
Oct 30 – Nov 3	9	Ch 9: 11,19,21,23,25,27,33,35,37,39,45,47,49,51,65,67,69,71,73,75,77,101,103,105,107,115,125,139
Nov 6-13	10	Ch 10: 11,13,19,21,23,31,33,35,37,39,41,43,47,49,59,61,63,65,67,69,77,85,87
Nov 4-6	EXAM 3	Exam becomes available on ALEKS at 12:00 am 11/4 and is due no later than 10:00pm 11/6 (Chapters 7-9)
Nov 15-17	11	Ch 11: 9,23,31,33,35,45,47,49,51,53,55,57,59,61,76,79,87,89,91,97,111
Nov 20-24		THANKSGIVING BREAK
Nov 27-29	11	
Dec 1-8	12	Ch 12: 13,15,69,84,87,91,97
Dec 8	Group Project	Last day to upload your video to the Favorite Scientist Presentation folder on Brightspace
Dec 9-14	EXAM 4	Exam becomes available on ALEKS at 12:00 am 12/9 and is due no later than 10:00pm 12/14 (Chapters 10-12)

