

CHEM 1450, GENERAL CHEMISTRY II

Section A (92945), MWF 1:10 pm - 2:00 pm

E105 Innovation Hall

Fall Semester 2023

*Note that content in this syllabus may be subject to change, with prior notice given.

GENERAL INFORMATION

INSTRUCTOR: Yangguang Ou, Ph.D.

EMAIL: you@uvm.edu

OFFICE: E341 Innovation Hall

OFFICE HOURS: Fridays 2-4 pm or by appointment

COURSE DESCRIPTION

This is the second semester of a two-semester course sequence. Topics include solutions, kinetics, equilibrium, acid-base chemistry, aqueous ionic equilibria, thermodynamics, electrochemistry, and nuclear chemistry.

This course is designated as an N2 (Natural Science with Lab) course and as such, students completing a course fulfilling the N2: Natural Science (with lab) requirement will:

1. Demonstrate familiarity with scientific thought, observation, analysis, experimentation, and formal hypothesis testing in relation to the general field or topic of the course.
 2. As appropriate to the level and field of the course, make informed judgments about scientific information and arguments related to the natural world.
 3. As appropriate to the level and field of the course, use appropriate theories and models to predict change in natural systems over time.
 4. Demonstrate understanding of the scientific method through practical and written work.
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REQUIRED COURSE MATERIALS

1. ONLINE ACCESS: Burdge et al.: *Chemistry: Atoms First*, 5th Ed. (McGraw Hill) - ALEKS 360
(Instructions on how to obtain book access detailed in the next section.)
 - a Cost: \$95 for a 18-week access code. This purchase comes with an e-textbook and access to ALEKS, which is the learning portal we will utilize for homework and other assessments. This is required.
 - b You are welcome to also obtain a hard copy if you'd like but it is NOT mandatory that you obtain a hard copy. You can order a discounted hard copy directly through Brightspace/ALEKS integrated account once you purchase the online access. It's \$44.00 through this method. It costs more if you use other methods to purchase a hard copy. This purchase cannot replace the 18-week access code as you will need ALEKS 360 to complete assignments and assessments for the class.
 - c I have provided a 2-week access code here that you can use if you cannot purchase an access code right away for various reasons: **537EA-00DF8-992B2-B3E78** . This is to help you all get started on familiarizing yourself with ALEKS and doing the Initial Knowledge Test. Please note that this code

does not give you an additional 2 weeks. If you utilize this code, once you purchase your own access code, you will only have 16 weeks remaining on your access code. Please be sure to obtain your own access code before this 2 week period expires.

2. CALCULATOR

* Required lab materials are listed separately on a lab syllabus, provided by Lab Coordinator Christine Cardillo

Ways to obtain the textbook and online access:

1. **Brightspace:** Go to <https://brightspace.uvm.edu> and sign into your Brightspace account through UVM. You should see CHEM1450 course listed under “My Courses” and “Fall 2023.” Click on that. On the top banner, select “Contents and Activities.” You should see “ALEKS” listed in the tabs on the left column and a blue link on the right panel that says “ALEKS External Learning Tool.” Select that. A prompt should appear that asks if you already have an access code so:
 - a ...either select yes and enter the access code (if you obtained it from a previous semester for the same book -AND- the access code will last the duration of the fall semester -OR- if you already purchased an access code from the bookstore). -OR-
 - b ...if you don’t have an access code then select no. This will take you to a new screen that will ask you to purchase an access code. Please select the 18 week period.
2. **Bookstore:** You can also purchase the 18-week access code through the bookstore. Please note that this option may include a price markup.

We will meet, in person, on MWF from 1:10-2:00 pm, in Innovation E105. Attendance to lectures are not mandatory, though strongly encouraged. Attendance in all labs is required. **If more than two labs are missed, you will receive an F for the course.**

- Slides for each lecture will be made available on Brightspace by the night before each lecture at the latest. Some of the notes will not be included in the slide deck as they will be filled in during lecture (i.e. if we are working on problems in class together). I will upload an annotated copy to Brightspace at some point after class so you can fill in anything you missed during lecture. 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.
- I will record my lectures just in case someone is out due to illness and other reasons. I will only provide the links to those who ask for them. If you are unable to attend, for any reason, please check the annotated slides on Brightspace after each lecture and send me a request via email for the recorded lecture(s).

EXAMS

Dates for each exam are listed on the Fall 2023 Tentative Schedule (see below). These four exams will be given online, via ALEKS 360 so make sure you have an uninterrupted connection to wifi during the time allotted. To extend the greatest flexibility, I will make the first three exams available beginning Saturday at midnight (12:00 am EST) until 10:00 pm the following Monday. You may take your exam at any time during the window in which it is available. The only exception will be Exam 4, for which you will have a 24 hr period (final exam day) to access it. This is because final grades will be due shortly afterwards so the allotted time period for exams 1-3 will not be possible for exam 4.

Please realize that once you have started the exam, you will have 3.0 hrs to complete it in a single sitting (this applies to all **four** exams). 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 plenty of time for each exam and extended time requests will NOT be given unless specifically detailed in the ACCESS letters.

Students may use their textbook and/or their notes while taking exams. ALEKS 360 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. Please realize that once the exam closes at 10:00 pm on Monday evening, any work submitted afterward will not be graded. A grade of zero will be assigned to any student who misses an exam. Please plan accordingly. In the case of an emergency, please see the Grading section below for policy regarding missed exams. It is in your best interest to keep up with the practice exercises and quizzes in ALEKS 360 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.

HOMEWORK

You will have access to practice problems throughout the semester for each chapter that we cover. These will NOT be graded but I highly encourage you all to work on them to practice for those assessments (quizzes and exams) that WILL count toward your final grade. Moreover, working through the homework problems on ALEKS 360 will help you get familiar with the platform, again making it easier for you to navigate when a real assessment comes along.

ONLINE QUIZZES

There will be eight graded quizzes (best 7 out of 8) during the semester. These will occur once we finish a chapter and will be found online, in ALEKS 360. You will have an entire week to get your chapter quiz done. As such, no extensions will be granted, regardless of the reason.

LAB

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

- Before the start of lab, purchase your lab manual, personal protective equipment, and other required materials as dictated by the lab syllabus (please contact Christine Cardillo if you have any questions).
- Students must attend the lab section to which they are assigned. Labs have a limited capacity for safety reasons. **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.

[If you send me an email (by 11:59 pm Sep 1, 2023) with the subject "CHEM1450" and in the body of the email write down one fact about yourself you'd like to share with me, I'll give you 5 bonus points on your first exam.]

GRADING

Exams	4 exams @100 pts each	400 pts	40%
Online Quizzes	8 quizzes (top 7 counted) @50 pts each	350 pts	35%
Final Exam	Simply 4 th exam (not cumulative)		
Labs	10 experiments	250 pts	25%
TOTAL		1000 pts	100%

- Your lowest exam score will be replaced by your highest exam score. Since your lowest exam grade will be replaced, there will be no makeup exams.
- Your lowest quiz grade will be dropped.

OFFICE HOURS

I will announce my office hours during the first week of classes. You are welcome to make a one-on-one appointment with me as well if you cannot make the allotted office hours – please send me an email to make an appointment. For all emails to me please put “CHEM1450” or “Gen chem II” in the subject line. This will allow the emails to be filtered into a dedicated folder so I can answer them in a timely manner. Otherwise it may take me a week or two to answer you as I will get them in the order in which it was received in my regular inbox.

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 cheating, fabrication, collusion, and plagiarism.](#)

Here is a reminder of your [Code of Student Rights & Responsibilities](#).

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
Aug 28-Sept 1	Welcome & 13
Sep 1	Last Day to Add Classes without Instructor Permission
Sep 4	Labor Day Holiday
Sep 5-8	13 & 14
Sep 11	Add/Drop, Pass/No Pass, Audit Deadline
Sep 11-15	14
Sep 16-18	EXAM 1 (13, 14)
Sep 18-22	15
Sep 25-29	15 & 16
Oct 2-6	16
Oct 9-12	16
Oct 13	Fall Recess
Oct 14-16	EXAM 2 (15, 16)
Oct 16-20	17
Oct 23-27	17
Oct 30	Last Day to Withdraw
Oct 30-Nov 3	18
Nov 6-10	18 & 19
Nov 11-13	EXAM 3 (17, 18)
Nov 13-17	19
Nov 20-24	Thanksgiving Holiday
Nov 27-Dec 1	19
Dec 4-8	19 & 20
Dec 8	Last Day of Classes
Dec 9-15	Reading Days and Exam Period
Dec 11	EXAM 4 (19, 20)