

CHEM 960 ENGINEERING CHEMISTRY 1

Fall 2025

Dr. Hannah R. Morris
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CHEM 960-1125	CRN 11107	MW 8:00-8:50 am	Benedum 157
CHEM 960-1050	CRN 10894	MW 9:00-9:50 am	Benedum 229
CHEM 960-1075	CRN 10923	MW 10:00-10:50 am	Benedum 229

AND all sections Thursday 8:00-8:50 am Lawrence 120. Lectures and recitation will be presented in-person for the entirety of the semester unless otherwise regulated by the university. Sessions will be recorded and posted for asynchronous review using Panopto (also found on Canvas). Any change in mode of instruction will be posted in Canvas. The lecture will emphasize the material from the course that is most important for you to know and understand. During the lecture there will be time to ask questions/discuss theory.

Our course is on Canvas. I will use this system to communicate with the class, set up appointments to meet with students, post lecture slides and assignments, and recorded videos etc. Check here often to get current information on the class. **Attendance is greatly encouraged for best results in the class.**

Office Hours

Monday 12:30-2:00 pm in-office, Tuesday 1-3 pm, Thursday 10-12 am in-office. Appointments available if these times don't fit your schedule.

Recitations

In addition to the above lectures, you **must** attend one of these sections weekly. These sessions, led by a teaching assistant (TA), give you an opportunity to ask questions (focused primarily Achieve homework, weekly review topic assignment and Packback Poll questions) in a small group setting. A quiz will also be given most weeks on the previous weeks lecture material – see the schedule at the end of this syllabus for the exact schedule.

You should always attend the recitation you are registered for. But, if for some reason you miss your recitation, go to another one during that week if possible. If your TA is not the TA for the makeup section, write your normal TA's name and section info on the top of the quiz. Email me if you have concerns about makeups.

NOTE: Making up a recitation should be an occasional occurrence for a small portion of the class. It should not be a regular occurrence for anyone.

Recitation Sections:

<u>Day/Time</u>	<u>Room</u>	<u>CRN</u>	<u>TA</u>
Tues 8:00-8:50	Chevron 132	10895	Sadia Akram
Tues 8:00-8:50	Eberly 228	10896	Declan Johnson
Tues 9:00-9:50	Eberly 206	14865	Declan Johnson
Tues 9:00-9:50	Chervron 135	10897	Ari Freedman
Fri 8:00-8:50	Eberly 206	20535	Declan Johnson
Fri 8:00-8:50	OEH 316	11108	Ryen Sutton
Fri 8:00-8:50	Eberly 228	25254	Ari Freedman
Fri 8:00-8:50	Chevron 132	25255	Abigail McClain
Fri 8:00-8:50	Benedum 229	32927	Sadia Akram
Fri 9:00-9:50	Chevron 132	10893	Abigail McClain
Fri 9:00-9:50	Eberly 228	10892	Ari Freedman
Fri 9:00-9:50	Benedum 229	32928	Sadia Akram
Fri 10:00-10:50	Eberly 206	10891	Declan Johnson
Fri 10:00-10:50	Eberly 228	10924	Ari Freedman

Go to the section that you are registered for. BUT, if something happens that you cannot make your scheduled time, go to another section if possible.

Communication: It is essential that you let me know if you have problems in this course as it progresses. I cannot help you after the course is over. It is best for me to slow down if/when I know that there is a problem with a topic. PLEASE contact me (email or in class/after class or schedule an appointment) if/when there is a problem or lack of understanding/communication on a topic.

Books and Materials:

Chemistry: Atoms First 2e (Open Stax)

This textbook is free electronically and can be accessed at the following link: <https://openstax.org/details/books/chemistry-atoms-first-2e>. If you prefer, a hardcopy version can be purchased from the bookstore, or from any other source of your choosing. **(Make sure you order an Atoms First version)**

In addition, you will need to purchase an online homework account from Achieve for the term in order to complete the online homework/quizzes and sign-up for Packback for the term.

Grades

Exams:

- 3 exams, **100 points** each
- a cumulative final exam, **180 points**

Quizzes:

10 quizzes, 11 points each, given during the recitation sections on the previous week's material

- the lowest score will be dropped, resulting in a total of **100 points**.
- equivalent to an exam score (make sure you attend recitation weekly)

Achieve HW:

Homework will be completed online at www.achieve.com--accessible through Canvas. Due dates will be listed at the site and on your Canvas to do list. Your total homework for the term will be worth **50 points**.

Review Topic Assignment:

Assignments given at start of week (comprehensive)

- Assigned on Sunday; submit through gradescope Friday; partner graded due Monday in class
- Assignment graded on participation, partner grading and comments of weekly learning from assignment (**30 points total**)

Packback Curiosity Question:

Every week there will be an assignment to write a question or respond to a poll question related to the material from the previous week. The program guides you in creating questions related to the course and requires a minimum curiosity score of 35. The prompt each week will determine what is required for the assignment Each week you can receive a maximum of 10 points (first assignment due 9/7/25) for a total of 130 points which will be scaled to a maximum score of **40 points**.

Final Question—ask a question relating theory from the course to a Nobel Prize Winner. Question requirements include curiosity score of 80 and include a video, image and 2 references. Assignment will require 1 question and 2 responses to other students final question. Question worth **20 points** of your final exam score.

Packback Poll Questions:

- Discussion Questions for Recitation
- you must attend recitation to obtain this score which will be recorded by TA
- 30 points** (80% participation and 20% accuracy)

Overall Grade:

Exams	300 pts	40.0%
Final Exam	180 pts	24.0%
Quizzes	100 pts	13.3%
Achieve	50 pts	6.7%
Review Topic	30 pts	4.0%
Packback Poll	30 pts	9.3%
Packback Curiosity	40 pts	
Packback FinalQ	20 pts	
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Total	750 points	

36% of your grade ←

→ 9.3%

Grading

Student performance will be evaluated based on homework, Topic review assignments, quizzes, Aktiv, Packback, and exams:

Your total points will be added up at the end of the term. The resulting scores will then be applied to a strict 97/93/90/87/83/80.....etc scale (A+, A, A-, B+, B, B- etc). Do not rely on a curve in this class. Often the curve is small. Any curve that does exist is at my discretion and will not be determined until the end of term.

Exam Regrade Policy

If you feel that your exam was not graded fairly, you may request a re-grade. The exam will be submitted and graded through gradescope. A regrade request may be made through gradescope if you feel that your exam was not graded fairly. Your dispute must explain which question you feel was incorrectly graded and an explanation of why you deserve more credit. There will be a limited time in which you can submit a regrade. Do not expect to request an exam regrade once the term has ended.

Makeup Policy

THERE ARE NO MAKEUP EXAMS. If you have extreme circumstances, see me ASAP. If you suddenly have reason to miss an exam (extreme sickness, death, etc), you are responsible for contacting me as soon as humanly possible. If you know ahead of time that you cannot make an exam, talk to me as soon as possible to make other arrangements.

Note: Sleeping in **IS NOT** an acceptable reason for a makeup.

Covid Policy

This class will follow all University policies related to Covid-19. Contact me if you test positive and we can discuss options.

Academic Integrity and Plagiarism

Cheating/plagiarism will not be tolerated. Students suspected of violating the University of Pittsburgh Policy on Academic Integrity will be required to participate in the outlined procedural process as initiated by the instructor. A minimum sanction of a zero score for the quiz, exam or paper may be imposed. For the full Academic Integrity policy, go to: <http://www.cfo.pitt.edu/policies/policy/02/02-03-02.html>

Violation of the Academic Integrity Code requires the instructor to submit an Academic Integrity Violation Report to the Dean's Office.

Disabilities

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Resources and Services, 140 William Pitt Union, 412-648-7890 as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.

Additional Help

Your first source of help should be my office hours and your recitation instructor's office hours. In addition to this, the Study Lab will be offering tutoring in The Gardner Steel Conference Center and other places on campus. There is also free tutoring in Room 130 of Chevron (the schedule is posted in the undergraduate office). The EXCEL program also has tutoring for students in its program. A program is available through Study Lab which aims to help students with best learning and study habits for a successful academic career. <https://www.asundergrad.pitt.edu/study-lab>.

Nondiscrimination Policy

As an educational institution and as an employer, Pitt values equality of opportunity, human dignity, and racial/ethnic and cultural diversity. Accordingly, the University prohibits and will not engage in discrimination or harassment on the basis of race, color, religion, national origin, ancestry, sex, age, marital status, familial status, sexual orientation, gender identity and expression, genetic information, disability, or status as a veteran. For more information, visit <http://cfo.pitt.edu/policies/documents/policy07-01-03web.pdf> In this class we will celebrate our differences and encourage participation by all members of the class. Your diverse backgrounds will aid in our discussions and questions about chemistry. We will strive to create a community where all are welcome.

CHEM 960 SCHEDULE FALL 2025

Week	Dates	Mon	Wed	Thu	Quiz?	Pages
1	Aug 25, 27, 28	Welcome	Atoms	Atoms	No	Ch 2:67-87, 94-114
2	Sept 1, 3, 4	No Class	Quantum	Quant/Electrons*	Yes	Ch 3A:115-157
3	Sept 8, 10, 11	Quant/Electrons	Quant/Electrons	Quant/Electrons	Yes	Ch 3B: 158-169
4	Sept 15, 17, 18	Periodic Trends	Periodic Trends	Compounds	Yes	Ch 3C: 169-193
5	Sept 22, 24, 25	Compounds	Compounds	Compounds	Yes	Ch 4A 195-213 & 87-94
6	Sept 29, Oct 1, 2	Lewis Dot	Lewis Dot	Exam 1	No	Ch 6A: 310-320
7	Oct 6, 8, 9	Lewis Dot	Bonding	Bonding	Yes	Ch 4B: 213-227
8	Oct 13, 15, 16	Hybridization	Hybridization	MO Theory	Yes	Ch 4C/5: 227-308
9	Oct 20, 21, 22	MO Theory	Reactions	Reactions	Yes	Ch7A: 341-348, 363-395
10	Oct 27, 29, 30	Reactions	Aqueous Rxn	Exam 2	No	Ch 11A: 600-607, Ch 6B: 320-327
11	Nov 3, 5, 6	Aqueous Rxn	Aqueous Rxn	Thermodynamics	Yes	7B = 348-363
12	Nov 10, 12, 13	Thermodynamics	Thermodynamics	Gases	Yes	Ch 9
13	Nov 17, 19, 20	Gases	Gases	Exam 3	No	Ch 8
14	Nov 24, 26, 27	Thanksgiving				
15	Dec 1, 3, 4	Liq/Solids	Liq/Solids	Liq/Solids	Yes--IMF	Ch 10
16	FINAL MON DEC 8 8-9:50 AM ROOM TBA					

The above schedule is tentative and is subject to changes by the instructor which will be announced in class. Exam dates will be fixed. Exam 1 (Oct 2nd), Exam 2 (Oct 30th), and Exam 3 (Nov 20th) will be given during Thurs morning lecture.

* Friday September 5th Add/Drop period ends