

General Chemistry I (Chemistry 0110 and 0410)
CRN: 33032 – Section 1400 and CRN: 18502– Section 1480
1400: 9:00am – 9:50am MWF, 121 Lawrence Hall
1480: 3:00am – 3:50am MWF, 154 Chevron Hall
Fall 2025

Instructor: Justin K. Belardi, Ph.D.

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Office Hours:

- 1) Mondays 11am-noon, Eberly 206, Begins 9/8 (in-person only)
- 2) Tuesday Noon, Begins 9/2, (Zoom only, link to be sent through Canvas)

****This syllabus is subject to change. Any adjustments will be announced.**

Required Materials / Apps:

- 1) Textbook: OpenStax Chemistry-2e: <https://openstax.org/details/books/chemistry-2e>
- 2) Graphing or scientific calculator with ability to do arithmetic, exponents, and logarithms.
- 3) Canvas Website: All course materials will be available here including practice worksheets, keys, videos, simulations, and other resources.
- 4) University Email: You are required to regularly check email and Canvas for course updates
- 5) Top Hat – In class surveys and assessments
- 6) Zoom – Office hours and if necessary to replace a lecture

Attendance: Attendance will not be taken during the lecture, but the material covered during the lecture is directly applicable to the assessments, so attendance is highly encouraged. Attendance is mandatory for the recitation sections and exam days. Missing a graded assessment will result in a zero.

Grade Weighting: Exam dates are tentative and subject to change. Any score adjustments / curves to exams are at the discretion of the professor.

Exam #1: Friday, September 26th	100
Exam #2: Friday, October 24th	100
Exam #3: Wednesday, November 19 th	100
Recitation Quizzes (Weekly)	100
Final Exam: Monday December 8 th , 8-9:50am	150
Lab (CHEM 0110 only)	150

Recitation Quizzes: Weekly quizzes will be given by your TA during your recitation section. Quiz topics will come from the previous week's lectures, videos, and assignments. Quiz scores will be averaged to determine the overall score. The lowest quiz score will be dropped. There will be no makeup quizzes and a missed class results in a zero for that quiz. In the event of an emergency, we can arrange for you to attend a different recitation during the week (please contact instructor). If the University is closed on your recitation quiz day, you will be exempt from the quiz that week and it will not count as your dropped quiz.

Homework: Assignments including worksheets, videos, and simulations will be provided on Canvas to help you with the class. Homework is not a part of your grade in the course, but it is a valuable part of learning the material and test preparation. Answer keys will be provided as appropriate so that you can learn from your mistakes.

Exams: Attendance at Exams is mandatory. There will be no make-up exams. Late arrival will result in less time to complete the test. Exams will be a combination of multiple choice and free response questions. Exams will be graded in GradeScope. Graphing or Scientific calculators will be needed on the exam. Sharing calculators is not permitted. No phones or smart devices are permitted. A Periodic Table will be provided for all exams. Any score adjustments for the class will be at the discretion of the instructor.

Teaching Assistants (TAs): Due to the large number of students in the class, TAs will be used to help the course instructor with teaching recitation sections, grading quizzes, grading exams, and other course activities. The instructor will work closely with TAs to provide guidance on grading and recitation preparation. Your assigned TA should be your first line contact when you need course assistance outside of office hours. If the TA is unable to assist or there is a disagreement with the TA, the instructor will resolve these issues.

Academic Integrity: Violation of University academic integrity policies (https://www.policy.pitt.edu/sites/default/files/Policies/Academic/Policy_AC39.pdf) will not be tolerated and will (at a minimum) be met with a zero on the assignment and could result in class failure, University suspension, or University expulsion as detailed in the University Policy.

Disability Services: If you have a disability for which you are or may be requesting an accommodation, you must contact both your instructor and Disability Resources and Services (412-648-7890, drsrecep@pitt.edu, 412-228-5347 for P3 ASL users), as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course. To receive accommodations, you must get approved through DRS.

Classroom Recording: To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion, and/or activities without the advance written permission of the instructor.

Well-Being: Your well-being is important. Chemistry is a challenging subject and can often cause difficulty for students. Please use the University resources for well-being at <https://www.thrive.pitt.edu/> if you need any assistance.

Diversity and Discrimination: This course is intended to be an inclusive and equitable environment for chemistry education. If there are any barriers to your full participation in the class, please contact the instructor to discuss ways to improve the situation. Any instances of discrimination of any type in this course should be reported to the instructor who will pass along to the appropriate University resource.

Tentative Schedule (subject to change based on pacing, see Canvas for updated plan):

Timeline	Topics
Week 1: August 25 th – August 29 th	Introduction / Syllabus Introduction to Matter (States of matter, classifying matter, chemical and physical properties / changes) Introduction to Measurement (significant figures, metric prefixes, density, dimensional analysis) Quiz: None
Week 2: September 1 st – September 5 th	Labor Day (9/1): No Class Finish Measurement Atomic Theory Subatomic Particles The Periodic Table Recitation Quiz #1: Matter, Measurement, Dimensional Analysis
Week 3: September 8 th – September 12 th	Ionic and Molecular Compounds Mole Calculations Empirical and Molecular Formulas Molarity and Solutions Recitation Quiz #2: Atomic Theory, subatomic particles, ionic formulas, nomenclature, and the Periodic Table
Week 4: September 15 th – September 19 th	Continue Mole Calculations Balancing Chemical Reactions Stoichiometry Recitation Quiz #3: Acid Nomenclature, Mole Roadmap Calculations and Determining Empirical and Molecular Formulas

Week 5: September 22 nd – September 26 th	Reactions in Aqueous Solution (Not on Test #1) Full Ionic and Net Ionic Equations (Not on Test #1) Quantitative analysis of chemical reactions (Not on Test #1) Test #1 (100 points), No Quiz
Week 6: September 29 th – October 3 rd	Thermochemistry Calorimetry Ways to calculate ΔH Recitation Quiz #4: Reactions and in aqueous solution, net ionic equations, Quantitative analysis
Week 7: October 6 th – October 10 th	Fall Break (10/10) No Class Finish Thermochemistry Begin Light and the Electromagnetic Spectrum Recitation Quiz #5: Thermochemistry
Week 8: October 13 th – October 17 th	Bohr's Model Quantum Mechanical Model Electron Configuration Recitation Quiz #6: Light and the Electromagnetic Spectrum
Week 9: October 20 th – October 24 th	Periodic Trends Begin Discussion of Types of Bonding (Not on Test #2) Test #2 (100 points), No Quiz
Week 10: October 27 th – October 31 st	Ionic Bonding Covalent Bonding and Lewis Structures VSEPR Theory and hybridization Recitation Quiz #7: Quantum Mechanics, Electron Configuration, Periodic Trends
Week 11: November 3 rd – November 7 th	Bond and Molecule Polarity Resonance Molecular Orbital Theory Recitation Quiz #8: Ionic and Covalent Bonding, VSEPR
Week 12: November 10 th – November 14 th	Gas Laws Recitation Quiz #9: Bonding Models, Polarity, and Resonance
Week 13: November 17 th – November 21 st	Finish Gases

	Intermolecular Forces (Not on Test #3)
	Test #3 (100 points)
Week 14: November 24 th – November 28 th	Thanksgiving Week – No Class
Week 15: December 1 st – December 5 th	Finish IMFs Course Review and Preparation for Final Exam Recitation Quiz #10: Gases and IMFs
Week 16: December 8 th – December 12 th	Final Exam – December 8th (150 points)