

CHEMISTRY 1310 SYLLABUS

Principles of General Chemistry for Engineers | Section S | 4.0 credit hours | Summer 2026

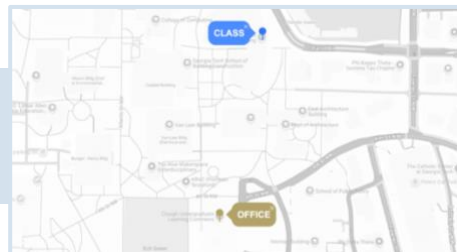


CLASS INFORMATION

Days Monday, Tuesday, Wednesday, and Thursday

Time 9:30 – 11:40 AM

Location Klaus Advanced Computing
Room 2456



INSTRUCTOR INFORMATION

Lecture Instructor Dr. Mioy Huynh (like *moy win*)

E-mail mioy.huynh@chemistry.gatech.edu

Office CULC 584A

Lab Instructor Dr. Anh Thu Le

E-mail anh.le@chemistry.gatech.edu

Office Boggs 2-90BC



REQUIRED MATERIALS

Textbook [Chemistry 2e](#) by OpenStax—[Access or download for free online.](#)

Calculator A calculator capable of scientific notation.

Note: Web-based and/or app-based calculators on mobile devices are not allowed on exams.

Canvas All course materials and announcements will be posted via [Canvas](#). Please check the Canvas site regularly and enable notifications.

Lockdown Browser Exams will be available *only* via LockDown Browser. You must download (free-of-charge) the [Georgia Tech version of LockDown Browser](#).

Ed Discussion We will use Ed Discussion to ask, post, and answer questions related to chemistry content. Please engage with posts to support and build our learning community.

Lab Materials Consult the lab syllabus, lab Canvas site, and lab instructor (Dr. Le) for required lab materials.



COURSE REQUIREMENTS AND GRADING

There will be 1000 total points in this course distributed according to Table 1. Your overall course grade will be assigned a letter grade according to the scale in Table 2.

Table 1. Required Graded Components of Course

Component	Points Possible
Exam 1	140 points
Exam 2	140 points
Exam 3	140 points
Exam 4	80 points
Daily Work ^a	250 points
Attendance	50 points
Laboratory	200 points
Total^b	1000 points

Table 2. Letter Grade Scale

Letter	Total Points	Percentage
A	900 – 1000 points	90.0 – 100.0 %
B	800 – 899 points	80.0 – 89.9 %
C	700 – 799 points	70.0 – 79.9 %
D	600 – 699 points	60.0 – 69.9 %
F^b	0 – 599 points	0 – 59.9 %

^a Daily work may consist of in-class questions (or online homework), Padlet discussion posts, and learning reflection surveys. See *Description of Graded Components* section on Canvas for additional details.

^b Students earning a failing (F) grade for the semester will be required to repeat *both* the lecture and the laboratory components. **An overall failing (F) grade for the semester will be issued if a student:**

- earns less than 60 % in the laboratory component (less than 120/200 laboratory points) in the course **OR**
- earns less than 60 % in the lecture component (less than 480/800 points on Exams 1–4, Daily Work, and Attendance) in the course **OR**
- earns less than 60 % of the total points (lecture and laboratory combined) in the course.



GENERAL COURSE INFORMATION AND LEARNING GOALS

This is a Core IMPACTS course that is part of the STEM area.

Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas. This course will help master course content, and support students' broad academic and career goals.

This course should direct students toward a broad Orienting Question:

How do I ask scientific questions or use data, mathematics, or technology to understand the universe?

Completion of this course should enable students to meet the following Learning Outcome:

Students will use the scientific method and laboratory procedures or mathematical and computational methods to analyze data, solve problems, and explain natural phenomena.

Course content, activities and exercises should help students develop the following Career-Ready Competencies:

Inquiry and analysis, problem-solving, and teamwork

Course Description: This course is a survey of general chemistry that covers a wide array of topics with focus on applications in everyday life. Specific topics include atomic structure, stoichiometry, bonding theory, properties of solids, liquids, and gases, kinetics, chemical equilibrium, electrochemistry, and chemical thermodynamics. The laboratory component focuses on fundamental lab skills as well as analytical and synthetic chemistry. The course is designed to develop your experimental skills as you collect and evaluate evidence for the concepts, principles, and theoretical models discussed in lecture.

Credit is not allowed for both CHEM 1310 and CHEM 1211K. There are no pre- or co-requisites for this course.

Lecture Learning Goals and Outcomes

- Identify steps in the scientific method.
- Apply concepts of measurement and significant figures to laboratory practices and chemical problems.
- Calculate amounts of chemical species using information from chemical formulas and chemical equations.
- Correlate information from balanced chemical equations to the microscopic scale.
- Summarize the behaviors of gases and explain them using the kinetic-molecular theory.
- Compare/Contrast the relationships between rate and concentration, concentration and time, and rate and time. Apply these principles to kinetic data.
- Use reaction mechanisms to infer the kinetics of chemical reactions.
- Interpret equilibrium data regarding gaseous and aqueous reactions.
- Extend concepts of chemical equilibrium to solutions of acids and bases.
- Interpret thermochemical equations and data and evaluate energies of systems.
- Integrate concepts of equilibrium, Gibbs free energy, and cell potential.
- Explain atomic structure using the quantum mechanical model of the atom.
- Correlate position on the periodic table to properties of elements and bonds.
- Explain periodic trends using theories of electronic structure.
- Correlate the molecular level process that occur during heating, cooling, and phase changes to the amount of energy removed or added to a system during each process.
- Predict molecular properties and behavior based on molecular structure and bonding theories.



ATTENDANCE POLICY

Given the accelerated format, **in-class attendance will be expected and factored into your course grade.** Unexcused absences and late submissions for graded assignments are not accepted. Students who are absent because of participation in a particular religious observance will be permitted to make up the work missed during their absence with no late penalty, provided the student informs the course instructors of the upcoming absence, in writing, within the first two weeks of class, and provided that the student makes up the missed material within the time frame established by the course instructor.

Comprehensive guidelines regarding class attendance (Rule 4) and excused absences can be found in the Georgia Tech catalog. Please read through these policies in their entirety.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Georgia Institute of Technology is committed to creating a learning environment that meets the needs of its diverse student body. Student's experiencing academic barriers due to disability or chronic medical conditions should contact the [Office of Disability Services \(ODS\)](#). The office can be reached via phone (404) 894-2563 or in-person at Smithgall Student Services Building, 353 Ferst Drive, Suite 221.

If you have already registered with the Office of Disability Services and have obtained an accommodation letter, please inform the course coordinator (Mioy) during the first week of class, or as early in the semester as possible, to discuss implementing your accommodations.

ACADEMIC INTEGRITY

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards as outlined by the [Academic Honor Code](#) and [Student Code of Conduct](#) policies.

If you have questions involving the Academic Honor Code at any time during the semester, please contact your instructor(s) or a First-Year Chemistry program faculty member. We are happy to clarify policies and help you navigate your academic experience with integrity.

Any student suspected of cheating or plagiarizing on an exam or assignment will be reported to the [Office of Student Integrity \(OSI\)](#), who will investigate the incident and identify the appropriate penalty for violations. Each exam will list academic integrity guidelines and will include an honor code statement you must confirm.

STUDENT-FACULTY EXPECTATIONS AGREEMENT

At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. Please consult the [Student-Faculty Expectations guidelines](#) for an articulation of some basic expectation that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, we encourage you to remain committed to the ideals of Georgia Tech while in this class.

We expect students to arrive prepared for class, to participate in class activities and discussions, and to utilize office hours for additional help when needed. In return, students should expect instructors to arrive prepared for class, to engage them in activities and discussions that further their understanding of course material, and to be available during office hours.

Students should expect to spend 6-9 hours per week outside of the classroom and laboratory to excel in this course. This includes time spent reading the textbook, watching videos as assigned, working problems, and writing laboratory reports. Students are encouraged to develop a pattern of preparing for class, attending class, and then reviewing after each class period.



ABBREVIATED CALENDAR & IMPORTANT DATES

Dates	Exams (attendance required)
Wed, May 27	Exam 1 (in-class)
Mon, June 8	Exam 2 (in-class)
Wed, June 17	Exam 3 (in-class)
Wed, June 24	Exam 4 (in-class)

Dates	Institute Holidays and Breaks
Mon, May 25	Memorial Day Holiday (no classes)
Fri, June 19	Juneteenth Day Holiday (no classes)

Dates	Events
Mon, May 18	First day of classes
Fri, May 22	Last day to register or drop without W
Mon, June 8	Last day to withdraw with W
Mon, June 22	Last day of instruction/classes

2026	SUN	MON	TUE	WED	THU	FRI	SAT
	26	27	28	29	30	1	2
MAY	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
Week 01	17	18	19	20	21	22	23
Week 02	24	25	26	27	28	29	30
JUN	31	1	2	3	4	5	6
	7	8	9	10	11	12	13
Week 03	14	15	16	17	18	19	20
Week 04	21	22	23	24	25	26	27
	28	29	30	1	2	3	4
JUL	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	31	1
AUG	2	3	4	5	6	7	8