

Chemistry 201L Course Syllabus

Fall 2024

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Office Hours: TBD; in person or virtual (for virtual, please email beforehand)

WWW Address: <http://courses.chem.iastate.edu/>

*Chem 201 and 201L are co-requisite courses, i.e., students in Chem 201 are required to take Chem 201L at the same time or to have already received credit in 201L. Co-requisite course requirements are strictly enforced: Students who do not meet the co-requisite should drop the course or they will receive an F in the course. **Students who drop or audit Chem 201 will be required to drop 201L and vice versa.** Students may not register to audit Chem 201 after 5:00 PM on September 6th. The audit does not count towards full-time student status. **To add or drop recitation or lab sections during the first week of class, use AccessPlus. After the first week, please email amwade@iastate.edu or call 515-294-6361. The last day to drop CHEM 163 is November 1st.***

Required Items:

Laboratory Text: Provided on the course Canvas site.

Safety Eyewear: UVEX — Model S040C Safety Glasses or Jones & Co. Visorgogs or Magid Glove and Safety Manufacturing “Sapphire” safety glasses. Available for purchase from the ISU Bookstore at the Memorial Union, ChemStores (Gilman 1400), or anywhere on the web. Safety eyewear may be purchased at the bookstore. If you already have goggles from other courses, you may use them as long as they are Z87 impact-rated. Other styles or types of protective eyewear will NOT be permitted.

Lab Coat: Available for purchase from the ISU Bookstore at the Memorial Union, ChemStores (Gilman 1400), or anywhere on the web. If you already have a lab coat from other courses, you may use it as long as the fabric contains more than 50% cotton to ensure it is flame resistant.

Important Course Policies:

1. This course assumes that all work submitted by a student will be generated independently by the student. Any substantive portion of an assignment done by someone else, including AI-generated content, is not allowed and will be treated as academic misconduct.
2. It is the student's responsibility to make sure that homework is properly uploaded/submitted by the deadline. In case of technical problems, please email IMMEDIATELY your TA. Do not wait until the deadline has passed otherwise your work will not be graded.
3. It is the student's responsibility to check grades on Canvas on a weekly basis.
4. Any complaint on a grade **MUST** be brought up within 1 week of receiving the returned graded work to have the grade corrected. No exceptions.
5. Electronic devices of any type (e.g., laptops and cell phones) cannot be used in the lab. Students will be asked to leave their devices in their backpack. Students may be asked to take pictures with their cell phones of experiments set-ups or reaction products by their TA.
6. Each week, students will work with different lab partners. Lab partners will rotate on a weekly basis. The TA will assign partners at each lab period.
7. Presence at Lab Check-out is mandatory. Absence will result in 5 points being deducted from the last graded ELN.
8. If no teaching assistant shows up for your recitation/laboratory section, send one student to 1608 Gilman to find a substitute teaching assistant. The department will find a substitute as soon as possible.

Personal Protective Equipment (PPE): Safety eyewear, gloves (provided in lab), lab coat, face covering, and fully covered shoes are important components for lab safety. **Sandals are *not allowed*.** You will not be allowed to do the experiment if you are not in proper attire. **Goggles/lab coat/gloves/are to be worn at all times in the lab until all the chemicals have been put away. Please wear gloves when typing at the computer provided in lab.** Repeated offenses can result in dismissal from the course. In addition, *you are NOT allowed to wear PPE out in the hallway* so as to avoid contamination. **Failing to follow these safety rules will result in the loss of 5 points for each offense starting from the second warning.**

Pre-lab quizzes: You are expected to come to the laboratory prepared to do the work. **Prior** to each class you must have read the appropriate chapter in the electronic lab manual (found on Canvas). You are expected to complete the **pre-lab** quiz for the experiment before your class starts. Pre-lab quizzes may include questions about safety readings (the reading material is found on Canvas). **Late pre-lab quizzes will have 0 points and may not be completed after the due date.** Pre-labs are timed quizzes. You will be given up to two attempts (each 30 minutes) and the highest score will be taken.

Laboratory Notebook: Your laboratory teaching assistant (TA) will discuss the laboratory notebook at the check-in session during the first week of class. Laboratory experiments will be recorded using an electronic lab notebook (ELN) by LabArchives. In the laboratory, each student will have access to a computer. You must generate a pdf file of the ELN and upload it on Canvas **by 11:59 p.m. of three days after the experiment** (e.g., for Monday labs, upload by 11:59 p.m. of Thursday). **Late lab reports will have 0 points (no partial credit).**

Safety assignments: You have six Safety readings for the first labs. Each has a corresponding quiz. For deadlines of each safety quiz, please refer to Canvas calendar. No excuses are accepted for missing a due date.

Missed Experiments: There are no scheduled make-up labs. Students are expected to attend all laboratory sessions and complete the experiments as scheduled. If you know in advance that you will be unable to attend a scheduled lab experiment for your section, it is your best interests to notify your laboratory instructor as soon as possible. Under no circumstances are you to do an experiment or submit a report in a laboratory section other than the one for which you are registered without the prior consent of the laboratory instructor.

Grading: The laboratory grade will be based on ALL prelab quizzes (4 x 20 pts = 80 pts), all ELNs (11 x 25 pts = 275 pts), all safety assignments (6 x 4 pts = 24 pts), research proposal (25 pts), research report (50 pts), and final poster presentation (50 pts). **Total pts = 504 pts.**

Grading scale for final grades: A > 93.00%, A- > 90.00%, B+ > 87.00%, B > 83.00%, B- > 80.00%, C+ > 77.00%, C > 73.00%, C- > 70.00%, D+ > 67.00%, D > 63.00%, and D- > 60.00%, and F < 60.00%.

Please note that, NO GRADE ROUNDING OR CURVE WILL BE APPLIED. NO EXCEPTIONS.

Statements

Academic misconduct: Academic Misconduct in any form is in violation of ISU *Student Disciplinary Regulations* and will not be tolerated. This includes, but is not limited to: copying or sharing answers on tests or assignments, plagiarism (including from lab manual), submitting a lab report for an experiment not performed, and having someone else do your academic work. Anyone suspected of academic dishonesty will be reported to the Dean of Students Office.

(<https://www.studentconduct.dso.iastate.edu/academic-misconduct>).

Public Health: If you are not feeling well, you should stay home and focus on your health. Should you miss class due to illness, it is your responsibility to work with your instructor to arrange for accommodations and to make up coursework, as consistent with the instructor's attendance policy. You may choose to wear a face mask and/or receive the COVID-19 vaccine and boosters, as well as other vaccines such as influenza, but those options are not required. Thielen Student Health Center will continue to provide COVID-19 vaccinations free-of-charge to students. The university will continue to offer free masks and COVID-19 test kits during the fall 2022 semester. Other wellbeing resources for students are available at: <https://www.cyclonehealth.iastate.edu/wellbeing-resources/>

Public health information for the campus community continues to be available on Iowa State's public health website. All public health questions should be directed to publichealthteam@iastate.edu.

Accessibility Statement: Iowa State University is committed to assuring that all educational activities are free from discrimination and harassment based on disability status. Students requesting accommodations for a documented disability are required to work directly with staff in Student Accessibility Services (SAS) to establish eligibility and learn about related processes before accommodations will be identified. After eligibility is established, SAS staff will create and issue a Notification Letter for each course listing approved reasonable accommodations. This document will be made available to the student and instructor either electronically or in hard-copy every semester. Students and instructors are encouraged to review contents of the Notification Letters as early in the semester as possible to identify a specific, timely plan to deliver/receive the indicated accommodations. Reasonable accommodations are not retroactive in nature and are not intended to be an unfair advantage. Additional information or assistance is available online at www.sas.dso.iastate.edu, by contacting SAS staff by email at accessibility@iastate.edu, or by calling 515-294-7220. Student Accessibility Services is a unit in the Dean of Students Office located at 1076 Student Services Building.

First amendment Statement: Iowa State University supports and upholds the First Amendment protection of freedom of speech and the principle of academic freedom in order to foster a learning environment where open inquiry and the vigorous debate of a diversity of ideas are encouraged. Students will not be penalized for the content or viewpoints of their speech as long as student expression in a class context is germane to the subject matter of the class and conveyed in an appropriate manner.

Laboratory Experiment Schedule

Fall 2024

Week	Week of	Experiment
1	26-Aug	Lab Check-In, Introduction to ELN, Chapter 3 : Measurement and Error Analysis
2	2-Sep	Chapter 4 : Recrystallization, Melting Points, and Thin Layer Chromatography *Monday lab sections will not meet due to University Holiday: lab work must be completed as much as possible during week 3. <i>Safety Assignment 1</i>
3	9-Sep	Chapter 4 (Continued) <i>Safety Assignment 2</i>
4	16-Sep	Chapter 5 : Equilibrium, <i>Safety Assignment 3</i>
5	23-Sep	Chapter 6 : Phase Diagrams, <i>Safety Assignment 4</i>
6	30-Sep	Chapter 7 : Organometallics (synthesis and practice chromatography) <i>Safety Assignment 5</i>
7	7- Oct	Chapter 7 : Organometallics (Continued): separation of ferrocene products <i>Safety Assignment 6</i>
8	14-Oct	Water Quality Project 1 pH, conductivity, turbidity, salinity
9	21-Oct	Water Quality Project 2 Hardness, alkalinity Research Proposal is due before lab session starts
10	28-Oct	Water Quality Project 3 Lead determination, UV measurements (nitrates, sulphates, iron)
11	4-Nov	Water Quality Project 4 Copper determination, UV measurements (nitrates, sulphates, iron) OR Anodic Stripping
12	11-Nov	Water Quality Project 5 Copper determination, UV measurements (nitrates, sulphates, iron) OR Anodic Stripping
13	18-Nov	Water Quality Project 6 Open to finishing, expanding, and/or repeating
14	25-Nov	<i>Thanksgiving Break – No Classes</i>
15	2-Dec	Lab check-out - Attendance is mandatory (5-point penalty) Preparation of Posters for Lab Final Research Article is due by noon, 2 days after lab session
16	9-Dec	Lab Final. It will involve a poster session with oral presentations on students' Water Quality projects. Mount posters on hallway bulletin boards outside of 1225 Hach. Done during your regular lab time.