Department of Chemistry and Biochemistry

Chemistry 1144 • Spring 2025 • Lecture Schedule (Evening)

Text: *"Chemistry" by J. Overby, 15th ed, McGraw-Hill, 2025*

Dates	Chapter No.	Topics
Jan 30	11	Liquids; Solids; Intermolecular Forces
Feb 6, 13	12	Solutions
Feb 13, 20	13	Kinetics
Feb 27, Mar 13	14	Equilibrium
Mar 13		**EXAMINATION # 1**, covering Chapters 11-13
Mar 20	15	Acids and Bases
Mar 27	15/16	Acid-Base Equilibria
Apr 3	16	Solubility and Complex Ion Equilibria
Apr 10		**EXAMINATION # 2**, covering Chapters 14-16 (no solubility)
Apr 10, Apr 24	17	Thermodynamics
Apr 24, May 1	18	Electrochemistry
May 8, 15	23	Transition Metals and Metal Complexes
May 15		**EXAMINATION # 3**, covering Chapters 16-18

Point distribution: Hour Exams: 45%; Recitation work: 25%, including 10% for the homework (Aleks) and 15% for quizzes; Final (cumulative): 30%.

There is no make-up for any missed midterm exam.

Deadlines for the homework:
35% of pie chart must be complete by 11:59 pm on Mar 9
60% of pie chart must be complete by 11:59 pm on Apr 13
85% of pie chart must be complete by 11:59 pm on May 11
100% of pie chart must be complete by 11:59 pm on May 18

Homework website: www.aleks.com **Class Key: 6YQGT-JRAX4**

Financial Aid Access Code for Aleks: 77A93-04C72-655C2-64157

Lecturer: Michael V. Mirkin; Remsen Hall # 120E, phone: (718) 997-4111, mmirkin@qc.cuny.edu

Office hours: Thursday 4:50 PM – 5:50 PM and by appointment.

A grade of C or better is required to register for the next Chemistry course.

***W and WU Grade policy*: The drop deadline (w or change to p/nc) has been changed from the covid-era last day of class to April 1, 2025. Students who do not officially withdraw by April 1 (and receive a W grade) but stop attending classes and do not participate in any way after the withdrawal date will be given a WU grade. Any participation in class (i.e. lab work, homework, taking quizzes and exams) after the withdrawal date will disqualify you from receiving the WU grade, and you will be given the appropriate letter grade.'**

Chemistry and Biochemistry Department, Queens College - CUNY

CHEM 1131- General Chemistry I Laboratory Spring 2025

Course Section and Code #: 9 (42875), Th 7:30 – 10:20 pm, Rem. 156

Instructor's Full Name: Mr. Henry Shum

Instructor's Email: **hshum@qc.cuny.edu**

Instructor's Office Hour: Thu 6:30-7:30 pm Remsen 156 or by Appt.

Textbook for the course: No charge to students, and it is posted on Brightspace.

Other required items: A lab notebook with carbonless copy pages (available on Amazon) is required for your experimental data. In addition, a scientific or graphing calculator is required and can be purchased anywhere. Note that lab coat, safety goggles, and required glassware are provided upon check-in.

Pre-Requisite/Co-Requisite: CHEM 1134

[Note: Students should contact their lab instructor for all lab-related questions.]

Syllabus

I. Laboratory Course Format: In-person

A. ALL In-person lab sessions will be held on Queens College campus in Remsen at your scheduled time and day. Lateness by more than 15 min. is counted as an unexcused absence and you must leave the lab room.

B. This is a laboratory class with a limited capacity in the classroom. As a result, there are NO make-up options (Excused or Unexcused) for any missed lab. YOU ARE EXPECTED TO ATTEND ALL LAB SESSIONS. If you miss a lab class due to QC-approved religious reasons OR due to emergencies, inform the instructor and make sure it is excused. A valid documentation for the excused absence will be required.

1st Excused Absence: The missed lab will be excluded from calculating your overall lab score.

2nd Excused Absence: A quiz may be given for the missed lab, OR the Final Exam score will be used to replace the missed lab score. Any further absences will result in a grade penalty, irrespective of the reasons (excused or unexcused).

3rd Absence: You will receive a ZERO for the lab. [Note: If your 3rd absence is ALSO an excusable absence, you may be eligible for the 'INC' grade. See instructions below for INC grade]

4th Absence: If you were absent for the 4th regular lab session, you will NOT be allowed to take the lab final. You should withdraw on time or be issued WU.

IMPORTANT: For students who have attended ALL labs, their lowest lab scores may be dropped when calculating their letter grades. All unexcused absences are given a zero and will be included in calculating the average lab score.

II. General Laboratory Rules

A. Always wear safety goggles.

B. NO short pants, skirts if worn must extend to the ankle, open toe shoes are NOT allowed, tie back long hair.

C. NO food, beverages, gum, horseplay, or unauthorized experiments allowed.

D. NO computer, tablet or cell phone use in the laboratory during class activities.

III. Laboratory Manual

A custom laboratory manual is used and is available free of charge, posted on Brightspace in the Experiment write-up Section. You **must bring a printed** copy of the experiment write-up to the lab in order to complete the experiment. You will not be allowed to use electronic devices.

IV. Prelab Preparation AND Lab Reports

A. Prelab preparation is required for each experiment BEFORE you come to the lab. This includes reading the full experiment from start to finish in the lab manual and watching posted videos (if posted) on blackboard. **The Prelab write-up should include section**

IV C (1-4)*, listed below and must be initialed by the instructor before the lab experiment begins. You should review the safety protocols for each experiment. **You should complete the prelab questions posted on Blackboard before each experiment.**

B A completed typed LAB REPORT as per specified format is ALSO required for EACH experiment. **Lab reports must be uploaded to Blackboard by the end of the day of the subsequent lab session**. Late lab reports are strongly discouraged. They will receive a severe reduction in points (see section V(B)).

C. **Format of Lab Report (*Reflect Items that should be completed in the lab notebook before each lab, i.e., the Prelab write-up).**

*1. **Title/Cover page:** Include your name, section number, experiment title, AND date of the experiment. Experiment title can be copied from the syllabus or lab book.

*2. **Abstract:** A brief summary of the experimental results and their meaning.

*3. **Introduction**: Explain concisely the chemistry of the experiment in your

own words. Include any equations and other scientific and mathematical explanations; i.e., the theory.

4. **Data:** Include your original data, signed by the instructor; i.e., the "carbon copy" of measurements or observations you directly recorded during the experiment.

5. **Calculations and Results:** Show all work; If there is a repetitive calculation, you need to show the equation and its use only once; Include any tables, graphs or diagrams that may be required.

6. **Conclusions:** Summarize your final conclusions in this section.

7. **Discussion:** State whether results were good or bad, and reasons why, what may have affected them, and any potential problems with the experiment. Be brief but complete. There may be questions you must answer, based on the lab manual. Work them into your discussion. If you know your expected value from instructor or from reference sources, be sure to list the percent error and discuss experimental errors that can account for it.

8. **References:** Include the lab experiment write-up and other references, including those from the internet.

Finally, Lab Reports do not have to be excessively long, but they do have to cover all the important ideas of the experiment.

V. Grading: (Part A) Each lab is graded for 100 points distributed as follows - 10% Prelab Questions; 10% Prelab write-up in lab notebook; 60% Lab Report; 20% Performance in the Laboratory. Part A will be weighted 85% of your lab grade.

(Part B) A written comprehensive lab final will be administered during finals week. Check cunyfirst for the date. This part will be weighted 15% of final lab grade. The lab final will cover lab safety, and the contents that were covered during the entire semester.

Further,

A. Prelab will not be accepted after the lab session is over. If material for completing prelab questions has not been covered in the lecture, utilize the office hours of the lab instructor to get help with prelab activity. No excuses will be accepted.

B. ALL lab reports are due by the subsequent lab session. LATE reports are strongly discouraged, and they will receive a penalty as follows - 10% reduction with each delayed week; Lab reports will NOT be accepted after two weeks or the last lab class (i.e., Check Out Day).

C. Reports will be graded for conformance to the above-described format and checked for plagiarism. Introduction, discussion, and conclusions are expected to be your original sentences.

D. If you have attended all the labs without any excused absences, your instructor will drop one of the lowest grades when calculating the lab average.

E. Automatic Withdrawal with W: The deadline is April 1st. If you are not passing

the course by this deadline, you will have to make a choice between staying in the course for whatever letter grade you get OR apply for W to avoid a hit to GPA. A failing student will not be eligible to apply for retroactive withdrawal or INC grade request later in the course.

The criteria for Performance in The Laboratory Experiments are as follows:

1. **Safety:** If you do not work safely, your instructor will deduct points at their discretion. **Eye protection and lab coat must be worn at all times in the lab**; penalty for failure to do so is a 0 (zero) for the day and/or dismissal from that day's lab with no possibility of make-up [Points will be deducted from your final grade for safety offenses at instructor's discretion]. You should also cover your nose and mouth by wearing a mask during your in-person labs. Safety shower, eyewash, and fire extinguisher locations must be noted. Chemical waste handling protocols must be observed; if in doubt, ask! Points will be deducted for unsafe practices or violations of waste protocols; You may be ejected from lab and receive a zero (0) for that day's work.

2. **Independence**: Your ability to work and think independently, as determined by your instructor.

3. **Efficiency and Effectiveness**: Your ability to efficiently accomplish the goals of the experiment within the lab time frame. This also includes the quality of your results.

There will be no extra credit provided at the end of the semester. An INC grade will not be given to a student to avoid an F or WU grade.

VI. Other Important Information

(i) If you drop the course, you must notify your lecture instructor in order to stay in the lecture. You must check-out ASAP! Otherwise, you do so at the normal time on the final check-out day. If you do not check-out, you will be charged a fine as listed in the stockroom.

(ii) On the check-in day, a combination lock will be issued to you.

(iii) You must have an approved laboratory notebook with carbonless copy pages (for example, ISBN 978-1-930882-74-4 or 978-1-617319-14-3; there are other acceptable ones), and use it to collect and document your data. You can check the availability at QC online bookstore. Do NOT take any notes on scrap paper.

(iv) **Code of Conduct**

A. Plagiarism- Plagiarism or any other forms of cheating is NOT tolerated and will be severely punished by point, other penalties, and/or referral to the Chairman and the Dean; Any assignment involved will receive a grade of zero. Failure to appropriately cite a source of information may also be considered plagiarism.

B. Inappropriate Behavior, e.g., horseplay or off-color language, oral or written, will NOT be tolerated and may lead to expulsion from class and a grade of zero.

(v) COVID-19 Issues: If you have COVID-19, symptoms thereof, or otherwise ill, do not come in, stay home, seek medical advice. Inform your instructor if you are sick.

Inform your instructor, the lab coordinator and Parmanand Panday ,Office of Environmental Health and Safety (parmanand.panday@qc.cuny.edu),718-997-4171)ASAP if you have COVID-19.

(vii) Available accommodation for students with learning disabilities: Students with disabilities needing academic accommodation should register with the Special Services Office by emailing QC.SPSV@qc.cuny.edu. For more information about services available to Queens College students, visit the Office of Special Services website: https://www.qc.cuny.edu/studentlife/services/specialserv/Pages/default.aspx

(viii) Counseling Services are also available to any Queens College student. This office assists students with personal concerns that can affect their enjoyment of and success in college. Services are free and confidential. All sessions take place on Zoom or by Telephone, depending on student preference. To make an appointment, students should call 718-997-5420 and leave a message with their phone number and CUNY ID. They may also e-mail counselingservices@qc.cuny.edu

(ix) CUNY Policy on Academic Integrity: Academic dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion as provided at https://www.cuny.edu/about/administration/offices/legalaffairs/policies-procedures/academic-integrity-policy/

Schedule of Experiments

Week 1 **(1/30)** IN PERSON Check In, Safety Review, Discuss Syllabus, Take Safety Quiz.

A score of 80% or above on the lab safety quiz is required before working in the lab.

Safety Video Links: https://www.youtube.com/watch?v=9o77QEeM-68

https://www.youtube.com/watch?v=gi3DeFY0cfw

Exp. 1 (2/06) Density

Exp. 2 (2/13) Hydrate

Exp. 3 (2/20) Precipitation

Exp. 4 (2/27) Iron-Copper (II) Sulfate Redox

Exp. 5 (3/13) Qualitative Study of Redox

Exp. 6 (3/20) Copper Cycle

Exp. 7 (3/27) Molar Mass of a Metal

Exp. 8 (4/03) Solutions

Exp. 9 (4/10) KHP Titration

Exp. 10 (4/24) FAS Titration

Exp. 11 (5/01) Calorimetry I and II

Exp. 12 (5/08) Heat of Neutralization

Checkout & Final Review (5/15)

Basic Organic Chemistry Laboratory (Chem 102.1)
Chemistry & Biochemistry
Spring 2025

CHEM102.1 Section Number: 2 (42827) (Meeting Day/Time: We / 1:40 PM - 4:30 PM)
Lab Instructor's Name: Dr. Jim Dimitrakopoulos
Instructor's Email: jim.dimitrakopoulos@qc.cuny.edu
Office hour (In-person): Tuesday 4:30 pm - 5:30 pm
Lab room: Remsen 351

Coordinator: Prof. Sanjai Pathak (Sanjai.kumar@qc.cuny.edu)
[Note: Students should contact their Lab Instructor for ALL lab-related questions.]

Course Description

Students will learn fundamental organic laboratory techniques, including the isolation, purification, and identification of organic compounds. Techniques such as chromatography and chemical tests will be emphasized, with a focus on problem-solving through the application of these analytical methods. Structural organic chemistry, a key topic in the lecture portion of the course, will be explored through hands-on molecular modeling sessions. Additionally, students will gain experience in preparing compounds and mixtures. By the end of the course, they will have developed a solid foundation in basic organic laboratory procedures. They will also be trained in maintaining an organic laboratory notebook and following essential safety protocols, including proper handling of hazardous waste.

Course Requirements

PREREQ or COREQ: CHEM 1023. PRE: C or better in CHEM 1013 and 1011 (or CHEM 1134 and 1131 or CHEM 1144 and 1141

Course Goals

To introduce students to essential reactions and laboratory techniques involving organic compounds and their derivatives.

Course Learning Objectives

After the completion of the class, students in Chem 102.1 lab will be able to:

1. Apply safe laboratory practices, including the proper use of protective gear and the safe handling of laboratory glassware, equipment, and chemical reagents.
2. Identify the risks associated with specific reagents used in each experiment by referencing the MSDS Database.
3. Apply the Scientific Method to design experimental procedures or protocols (see Appendix I: Scientific Method).

4. Write a comprehensive laboratory report (see Appendix II: Components of a Laboratory Report and Appendix III: Assessment Rubric).
5. Calculate the limiting reagent, yield, and percent yield for reactions.
6. Calculate accuracy and precision, and perform an error analysis (see Appendix IV: Elements of Error Analysis).
7. Identify laboratory instruments used to determine product identity, purity, and yield.
8. Perform basic laboratory techniques, including recrystallization, vacuum filtration, aqueous extraction, and thin layer and column chromatography.
9. Explain classic organic chemistry mechanisms applied in each procedure and recognize them by their discoverer (see Appendix V: Key Mechanisms in Organic Chemistry 102.1 Lab).
10. Relate learned organic chemistry mechanisms to key human physiological and biochemical processes (see Appendix VI: Key Biochemical Reactions).
11. Synthesize new information and apply it to prior knowledge.
12. Create data tables in Excel, perform statistical analyses (mean, median, mode), and conduct error analysis on a given set of data.

The first step in becoming a skilled scientist is keen observation. Through observation, questions arise, leading to the development of hypotheses that can then be tested. In this class, both the science and art of observation will be emphasized. Learners will be assessed according to a rubric based on the Application of the Scientific Method, with particular emphasis on observational skills. Observations can be categorized into qualitative and quantitative measures.

Qualitative observations are subjective, relying on our senses—such as color, light, texture, and smell. These observations are often communicated using descriptive adjectives (e.g., aqua, translucent, viscous, fragrant liquid). Students will become familiar with common scientific descriptors and will be encouraged to use additional terms when reporting their findings.

Quantitative observations, on the other hand, are objective and based on measurable physical dimensions, such as mass, length, diameter, and circumference. These measurements will be taken with calibrated instruments to minimize bias (e.g., comparing readings from two thermometers). Each instrument has an inherent percent error, typically indicated by the manufacturer, which must be considered during analysis. The reported value will only include significant figures consistent with the instrument's accuracy. This concept will become clearer as we explore and use various lab glassware and equipment.

Books, materials, tools, and accounts

Queens College Online Bookstore: https://qc.textbookx.com/institutional/index.php

Text: Laboratory Experiments for Introduction to General, Organic and Biochemistry, F. Bettelheim and J. Landesberg, 8th Edition, Brooks/Cole, 2013 (ISBN-10: 1133106021; ISBN-13: 978-1133106029)

Carbonless Lab Notebook (Scientific Grid Format) - 8.5" x 11", 50 Sets of Pages, 100 Sheets Total - Duplicator [Wire-O Bound]

Required Tools and Accounts

CUNY Brightspace and Email

Technical Support

If you require technical help with your Queens College email or CUNYfirst/Brightspace account please contact the Queens College helpdesk by emailing support@qc.cuny.edu or visiting their website: https://www.qc.cuny.edu/Computing/helpdesk/Pages/Welcome.aspx.

SAFETY FIRST

The following safety guidelines must ALWAYS be followed:

- No electronic devices (cellphones, tablets, or computers) are allowed in the lab. You must have a calculator for calculations, but cellphones cannot be used for this purpose.
- Goggles must be worn at all times in the lab, even if you have completed your experiment or wear prescription glasses.
- Food and drink are strictly prohibited in the laboratory.
- Masks are recommended to be worn while in the lab.
- Never leave a flame unattended.
- Tie back long hair and secure all loose clothing before conducting experiments.
- Feet must be completely covered in the lab—open-toed shoes, sandals, flip-flops, or similar footwear are not allowed.
- Report any accidents immediately to your lab instructor.
- No running or throwing anything in the lab.
- Read the lab and procedure before class as part of your safety preparation. Failure to do so will result in an automatic F for the lab.
- Listen carefully to your lab instructor for safety instructions and any procedure modifications.
- Dispose of chemical waste properly. Your instructor will provide specific instructions on how to handle waste for each experiment.
- Failure to adhere to these safety guidelines will result in points being deducted from your lab report and may lead to your removal from the lab and an automatic failure for the experiment.

Chemistry 102.1 Grading Rubric

Lab Notebook: You are required to use a carbonless organic chemistry notebook to record all your work. Your lab notebook will be graded based on clarity, accuracy, and thoroughness.

Assessment: Lab instructors will assess students through both online and in-person assignments. In-person assessments will involve collecting lab notebooks, reviewing laboratory products for yield, purity, and the accuracy of reported results. Additionally, students will be observed during lab sessions and evaluated on their technique and adherence to safety protocols.

Grade Breakdown

Lab reports and lab notebooks	50%
6 Lab Quizzes	20%
Lab Techniques	15%
Lab Final Exam	15%

Your lab notebook must include the following components for each experiment:

1. **Experiment**:
    - Title of the experiment
    - Date performed
    - Purpose of the lab
2. **Introduction**:
    - Summarize the objective of the experiment in your own words.
    - Include any relevant chemical formulas, structures, equations, and reactions.
    - Write down any important background information related to the experiment.
3. **Procedure**:
    - Summarize the experimental procedure in your own words.
    - Ensure the procedure is detailed and clear enough to follow without additional resources during the experiment.
    - You can organize this section step-by-step or as a "shopping list" of tasks.
4. **Safety**:
    - List the chemicals used in the experiment and outline their safety precautions.
    - Look up and summarize the MSDS (Material Safety Data Sheet) for each chemical.
    - Note the disposal instructions for the chemical waste.
    - You can find MSDS information on the ChemWatch website:
        - Website: http://jr.chemwatch.net/chemwatch.web
        - Account: queensmsds
        - Username: everyone
        - Password: eqkq+2SFEl4=
5. **Datasheet**:
    - Create a clear data sheet in your notebook (do not paste the sheet from the lab book).
    - Tables should be neatly drawn using a ruler.
6. **Conclusion / Discussion**:
    - Summarize your data and explain whether the experiment was successful.
    - Discuss any errors that may have occurred during the experiment.

Important Notes:

- **Pre-lab Requirements**:
    - Sections 1-5 (Pre-lab and an empty data sheet) must be completed before you attend lab.
    - The instructor will check your notebook before the lab and initial it.
    - Failure to complete these sections will result in a zero for the lab, and you will not be allowed to perform the experiment that day.
- **Notebook Submission**:
    - Your notebook will be collected after every two labs.
    - Completed labs must be submitted to your instructor for grading.
    - Notebooks will not be returned, but you can review your grade with the instructor.
- **Individual Work**:
    - All experiments are to be performed individually unless otherwise stated by your instructor.
    - You will be graded based on your individual performance, which accounts for 15% of your grade.

Class performance includes your lab techniques, efficiency of work, safety, independence, and cleaning of station as well as disposal of waste.

Criteria for Performance in the Laboratory:

1. **Safety**:
    - Safety is paramount. Failure to work safely will result in point deductions at the instructor's discretion.
    - **Eye protection and a lab coat** must be worn at all times in the lab. Failure to comply will result in a **zero for the day** and/or **dismissal from the lab** with no possibility of make-up.
    - **Masks** must be worn to cover your nose and mouth during in-person labs.
    - Know the locations of the **safety shower, eyewash station, and fire extinguisher**.
    - Follow proper **chemical waste disposal** protocols. If you're unsure, ask.
    - Points will be deducted for unsafe practices, violations of waste protocols, or failure to follow safety rules. You may be ejected from the lab and receive a **zero** for that day's work.
2. **Independence**:
    - Your ability to work and think independently, as assessed by your instructor.
3. **Efficiency and Effectiveness**:
    - Your ability to efficiently complete the experiment within the allotted lab time.
    - This also includes the quality and accuracy of your results.
4. **Cleanness**:
    - Clean your workbench, hood, and any common areas (such as chemical storage, balances, and waste stations).
    - Properly dispose of waste materials.

Quizzes:

- You are scheduled to take **6 quizzes** throughout the course.
- Quizzes are **not cumulative** but will cover material from the previous lab and the lab scheduled for the day of the quiz.

Final Exam:

- The final exam will include **conceptual and procedural questions** based on the experiments performed during the course.
- There will also be questions specific to each lab.
- **Make-up exams are not allowed**. You must attend the final exam as scheduled in the syllabus, not according to CUNYFirst.

Important Note on Missed Classes and Late Work

- **Attendance in the laboratory is mandatory.** Students must arrive on time.
- **No make-up labs are allowed.** However, if you miss a lab for a valid reason (e.g., illness with a note from a registered physician, court appearance with documentation from the court, or a death in the family), your absence may be excused with proper documentation.
- A missed lab will receive no credit and will not be factored into your final grade only if your absence is excused by your instructor with valid documentation.
- A second missed lab, if excused, will require you to complete an alternate assignment provided by the instructor.
- Further absences are not excusable.

W and WU Grade policy: THE DROP DEADLINE (W OR CHANGE TO P/NC) HAS BEEN CHANGED FROM THE COVID-ERA LAST DAY OF CLASS TO April 1, 2025.
Students who do not officially withdraw by April 1, 2025 (and receive a W grade) but stop attending classes and do not participate in any way after the withdrawal date will be given a WU grade. Any participation in class (i.e. lab work, homework, taking quizzes and exams) after the withdrawal date will disqualify you from receiving the WU grade, and you will be given the appropriate letter grade.

Reasonable Accommodations for Students with Disabilities

Students with disabilities needing academic accommodation should register with the Special Services Office by emailing QC.SPSV@qc.cuny.edu.

For more information about services available to Queens College students, visit the Office of Special Services website: https://www.qc.cuny.edu/studentlife/services/specialserv/Pages/default.aspx

CUNY Policy on Academic Integrity

Academic Dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion as provided at https://www.cuny.edu/about/administration/offices/legal-affairs/policies-procedures/academic-integrity- policy/. Please read this document, paying careful attention to the sections on plagiarism and Internet plagiarism. If you are not sure how to cite work you have found on the internet, please review the ACS Guidelines provided by the American Chemical Society.

Chem 102.1
Class Schedule
SPRING 2025

This schedule is subject to change. Students will be notified in Writing/Email/Brightspace of such changes.

Class Schedule and lab sequence to be determined with Professor Pathak and Professor Jim Dimitrakopoulos and the tentative schedule appears below:

Week	Date	Experiment	Page
1	2/5	Check-in. Review of safety rules and instruction for waste disposal.	
2	2/19	**Experiment 1** Isolation of pure acetylsalicylic acid from aspirin tablets	Hand out
3	2/26	**Experiment 2**: Molecular Models (Quiz 1)	239
4	3/5	**Experiment 3:** Identification of Hydrocarbons	289
5	3/6	**Experiment 4:** Chromatography (Quiz 2)	275
6	3/12	**Experiment 5:** Identification of Alcohols and Phenols	301
7	3/19	**Experiment 6:** Identification of Aldehydes and Ketones (Quiz 3)	313
8	3/26	**Experiment 7:** Carboxylic Acids and Esters	329
9	4/2	**Experiment 8:** Amines and Amides (Quiz 4)	341
10	4/7	**Experiment 9:** Preparation of Aspirin	365
11	4/23	**Experiment 10:** Isolation of Caffeine from Tea Leaves (Quiz 5)	377
12	4/30	**Experiment 11:** Carbohydrates	389
13	5/7	**Experiment 12:** Preparation of Hand Cream (Quiz 6)	423
14	5/14	Check-out: Final Exam - Open Notebook	

QUEENS COLLEGE OF THE CITY UNIVERSITY OF NEW YORK
DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

CHEMISTRY 1134-03 Dr. A. Altman Spring 2025

Welcome to Che 1134 where we will begin our exploration of the world of matter. After our semester together I hope you will see the world around you from a different perspective, from the perspective of a chemist. I hope that you will grow beyond the mere memorization of definitions to the realization that each definition is a model used to classify and explain matter and its changes; that every equation is the mathematical manifestation of the way chemists quantify matter and its changes. Chemistry isn't about words and numbers, it's about stuff, the stuff we and the rest of the world are made of.

The best way to contact me is by email: alexander.altman@qc.cuny.edu I will usually respond the same day. (Email will not be checked between Friday afternoon and Saturday night.)

Office hours will be held in Remsen 206 on Tuesdays from 5:00 – 6:20 PM. If you need to meet with me at a different time, email me to make an appointment.

You will need to have access to Aleks. See more information in "Guide to Using Aleks"

Text: Overby; Chemistry, 15th ed, McGraw-Hill. You will get access to the eBook bundled with your access to Aleks. You can purchase a loose-leaf copy of the text from the publisher. (See the link in Aleks.)

Optional textbook: OpenStax College. (2019). *Chemistry*. OpenStax. https://openstax.org/details/books/chemistry-2e/
Hardcover: **ISBN-13: 978-1-947172-62-3** Paperback: **ISBN-13: 978-1-59399-578-2**
Digital: **ISBN-13: 978-1-947172-61-6**

Other required items: You should make sure that **Brightspace** is operating appropriately on your tablet or computer. Students must make sure they login to Brightspace to check for course material and announcements and check their email that is associated with Brightspace.
Technical Support: Email Helpdesk@qc.cuny.edu, or call the Student Support Hotline (718-9973000).

Grade: Your grade in the course is based solely on your demonstrated mastery of the material of Che 1134 assessed using the following instruments:
Hour Exams (3) = 60% Aleks = 10% Final Exam = 30%

A simple scientific calculator is required for this course. It should be able to handle scientific notation, square and cube roots and logarithms.

Online Learning: A key ingredient in your success in this course is keeping up with the course material. The Aleks learning system is there to help keep you on track. Part of your course grade is based on your timely mastery of the topics assigned online. Please be aware of the dates of the knowledge checks and of the goal dates. No extensions can be given for these dates. (See the guide to Aleks posted in Blackboard for more information.)

Make-up exams: Cannot be given.

Lectures will be delivered in person on Tuesdays from 6:30 – 9:20 PM.

LECTURE SCHEDULE

Date	Topic	Chapter
1/28	Measurement and the Properties of Matter	1
2/4	Atoms, Ions, and Molecules	2
2/11	Mass Relationships in Chemical Reactions	3
2/25	**EXAM 1,** Followed by lecture	
3/4	Reactions in Aqueous Solutions	4
3/11	Gases	5
3/18	Thermochemistry	6
3/25	**EXAM 2,** Followed by lecture	
4/1*	Quantum Theory and the Electronic Structure of Atoms Periodic Relationships Among the Elements	7 8
4/8	Compounds and Bonding	9
4/22	Compounds and Bonding (finish)	9
4/29	Structure and Bonding Theories	10
5/6	**EXAM 3,** Followed by lecture	

5/13	Open Chemistry Forum	All
TBD	Comprehensive Departmental final exam	

As real life frequently happens, it may be necessary to change this schedule. If any changes are made you will be notified via Blackboard and email.

Suggested Questions and Problems from Overby & Chang; Chemistry, 15th ed, McGraw-Hill.

I will not be teaching you every topic in the textbook, and you are only responsible for the material that I teach you. This list of questions and problems reflects the material that I plan to cover this semester. Any question in the textbook that is significantly different from the questions in this list is beyond the scope of this course and will not be showing up on any of our exams.

Chapter 1: 5, 6, 9, 10, 11, 13, 14, 16 ,17, 19, 20, 21, 22, 23, 24,27, 28, 29, 30, 34, 39, 45, 46, 47, 49, 50, 51, 52, 53, 55, 56, 57, 58, 60, 62, 63, 65, 67,

Chapter 2: 9, 10, 11, 13, 14, 15, 16, 18, 22, 26, 27, 30, 31, 32, 33, 36, 37, 38, 40, 41, 42, 43, 44, 45, 46, 48, 52, 56, 60, 62, 66, 68, 70, 72, 75, 82, 84, 85, 102

Chapter 3: 1, 2, 3, 5, 9, 10, 14, 15, 16, 21, 23, 24, 25, 38, 42, 44, 46, 47, 48, 50, 54, 56, 57, 58, 63, 64, 66, 67, 68, 70, 71, 72, 73, 76, 78, 79, 80, 81, 83, 86, 87, 88, 89, 94

Chapter 4: 1, 2, 4, 6, 8, 10, 12, 15, 20, 22, 23, 25, 26, 27, 30, 31, 33, 34, 37, 39, 41, 43, 44, 46, 47, 50, 54, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 72, 73, 74, 75, 85, 87, 88, 91, 92, 94

Chapter 5: 13, 19, 20, 21, 22, 23, 24, 27, 31, 32, 33, 34, 35, 36, 38, 40, 41, 42, 43, 44, 48, 50, 53, 54, 62, 67, 70, 77, 79, 90, 92, 96, 97

Chapter 6: 1, 2, 7, 14, 17, 18, 21, 24, 29, 31, 33, 34, 37, 39, 40, 45, 46, 48, 51, 53, 54, 59, 61, 62

Chapter 7: 2, 4, 7, 8, 15, 16, 17, 19, 23, 24, 31, 43, 44, 48, 49, 51, 52, 57, 59, 61, 62, 63, 65, 71, 76, 81, 87, 95, 120, 126

Chapter 8: 5, 21, 24, 26, 28, 30, 33, 34, 35, 37, 42, 43, 44, 45, 46, 49, 51, 55, 59, 87

Chapter 9: 6, 19, 20, 21, 23, 26, 30, 31, 33, 34, 35, 36, 40, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 55, 56, 60, 61, 66, 67, 68, 69, 72, 76, 79, 94

Chapter 10: 7, 8, 9, 10, 11, 12, 14, 18, 22, 23, 26, 30, 31, 32, 34, 36, 39, 41, 43, 44, 44, 46, 47, 48, 52, 53, 54, 55, 57, 59, 63, 64, 68, 70, 99

Academic Integrity: Students are expected to maintain the highest standards of academic integrity in all aspects of the course. I strive to assess every student's mastery of the course material fairly and accurately. I assume everything submitted by you represents your knowledge of the course material. If that isn't true, it is impossible for me to do my job. I am sure that most of you are honest, hard-working students who appreciate the fact that grades are based on student achievement and that those few who attempt to get by dishonestly will not succeed. Any violations be treated seriously. For example, any violations observed in an exam can result in the student receiving a zero for that exam as well as disciplinary action from the College. I will never write a letter of recommendation for a student who has committed a violation of academic integrity in my class.

W and WU Grade policy – THE DROP DEADLINE (W OR CHANGE TO P/NC) HAS BEEN CHANGED FROM THE COVID-ERA LAST DAY OF CLASS TO APRIL 1, 2025. Students who do not officially withdraw by Apr. 1 (and receive a W grade) but stop attending classes and do not participate in any way after the withdrawal date will be given a WU grade. Any participation in class (i.e., lab work, homework, taking quizzes and exams) after the withdrawal date will disqualify you from receiving the WU grade, and you will be given the appropriate letter grade you earned.

Restrictions on Sharing of Posted Lecture Materials: Lecture materials that are posted (such as presentations, lectures, welcome video clips etc.) are shared with the class for the purpose of facilitating the learning experience and are not to be copied, downloaded or shared with anyone outside of the class.

Queens College Classroom Recording Policy: Audio or video recordings of all or parts of classes at Queens College may not be made without permission from the course instructor(s). The Office of Student Affairs and the Office of Special Services may provide for the recording of classes on behalf of a student receiving disability accommodations, missing class due to religious beliefs, or experiencing extended absence due to medical or other exigent circumstances. The Queens College Classroom Recording Policy applies to both students and visitors. Students and visitors are not authorized to copy, download, or disseminate authorized recordings to others. Students in violation of this policy are subject to disciplinary action, and visitors in violation of this policy are subject to removal from the classroom and/or campus.

REASONABLE ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES
The Office of Special Services (SPSV) is committed to supporting students with qualifying disabilities under the Americans with Disabilities Act (ADA) by providing reasonable accommodations to ensure equal access. If you have previously received accommodations due to a disability, believe you may have a disability, or have a temporary disability, please visit the office's website (https://www.qc.cuny.edu/sp/) for further information on the assistance they can offer you. Accommodations are not retroactive, so you are encouraged to get registered sooner rather than later. You may also contact their office at qc.spsv@qc.cuny.edu or call 718-997-5870 during office hours for assistance as well.

CUNY Policy on Academic Integrity: Academic Dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion as provided at: **https://www.cuny.edu/about/administration/offices/legal-affairs/policies-procedures/academic-integrity-policy/.** Please read this document, paying careful attention to the sections on plagiarism and Internet plagiarism. If you are not sure how to cite work you have found on the internet, please review the APA Guidelines provided by the Purdue OWL **(https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/re ference_list_electronic_sources.html).**

Department of Chemistry and Biochemistry
Queens College CUNY

Basic Biochemistry Laboratory [CHEM 1031] Syllabus for Spring 2025

I. KEY INFORMATION

Instructor:	Prof. Aida Abbasiazam	Email: aida.abbasiazam@qc.cuny.edu
Course coordinator:	Dr. Eleonora Gianti	Email: eleonora.gianti@qc.cuny.edu
Location:	Remsen 218B	
Laboratory section:	CHEM103.1/2 (Thursday 1.40-4.30 PM)	
Office Hour:	By appointment via email	

Please direct **all** e-mails regarding the lab course to your lab instructor. If your question(s) require input from the course coordinator, your instructor will contact the course coordinator via e-mail and 'cc you on the e-mail.

II. REQUIRED COURSE MATERIAL

Lab manual to be purchased from the Queens College online bookstore: ***Introduction to Biochemistry Chemistry 103.1, 5th edition, August 2018*** **by Wilma Saffran and Olga Binyaminov**

To find the lab manual, please search 'QC online bookstore' on Google and click on the first search result. Type *'Basic Biochemistry lab'* into the search bar that is at the top right of the webpage. This will bring up a dropdown menu of all the sections of 103 lab; click on the one that has your instructor's name attached to it. This will bring you to the page where you can purchase the lab manual.

III. GRADING

Attendance is mandatory. A missed lab will receive no credit. Students must report to lab on time. There is NO make-up for any missed laboratory experiment. A lab can only be excused with documentation relating to an unplanned emergency (medical or legal) or religious observance.

Your final score will be determined using the formula:

1. Pre-lab questions (10%)

Each pre-lab assignment must be completed and submitted on Brightspace prior to the beginning of the class. In addition, you are expected to be familiar with the general topic of the lab that is going to be discussed.

2. Lab Report (65%)

Each lab report must be submitted both on Brightspace and a physical copy the week following the completion of the lab exercise.

3. In-Person Final exam (20%)

The final exam will be **cumulative** (covering **all** labs) and will be given during the last class meeting day as indicated in the lab schedule that can be found at the end of this syllabus. The exam will be a maximum of 2 hours long and will be given in-person. Question types will include (but are not limited to): fill-ins, short responses, mini-essays, and calculations. **There are no make-ups for the FINAL EXAM. If you miss the Final Exam for the lab, you will be given a grade of zero (0) for the test and your grade will be calculated according to the grading formula.**

4. Participation (5%)

You are required to come **on time** to the lab prepared with your lab manual and appropriate PPE. Participation will also be based on how efficiently and cleanly you work throughout the lab exercise)

Arrival at the lab later than 10 minutes will result in your exclusion from the lab on that day. Please make sure that you attend all in-person labs and that you complete all the coursework that is assigned work by the deadlines that are set in place. **No extensions** for assignments will be given. The following grading scale used to determine your final letter grade:

Grade	Score	Numerical value / Definition
A+	97-100	4.0
A	93-96	4.0
A-	90-92	3.7
B+	87-89	3.3
B	83-86	3.0
B-	80-82	2.7
C+	77-79	2.3
C	73-76	2.0
C-	70-72	1.7
D+	67-69	1.3
D	63-66	1.0
D-	60-62	0.7 (Grade of D- is the lowest passing grade in the undergraduate division)
F	0-59	0.0

IV. ATTENDANCE AND WITHDRAWL POLICIES

This is a laboratory class with a limited capacity in the classroom. As a result, there are NO make-up options (Excused or Unexcused) for any missed lab. YOU ARE EXPECTED TO ATTEND ALL LAB SESSIONS. If you miss a lab class due to QC approved religious reasons OR due to emergencies, inform instructor and make sure it is excused. A valid documentation for the excused absence will be required. If a doctor's note, it must be on the doctor's letterhead and signed by a physician with a different last name from the student, and a statement that the physician is not a relative of the student.

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Basic Biochemistry Laboratory [CHEM 1031] Syllabus for Spring 2025

<u>Unexcused absences are given a zero and included in the calculation of final lab score.</u>

In case of absence(s), the following policy will be adopted:

1st Excused Absence: The missed lab will be excluded from calculating your overall lab score.

2nd Excused Absence: A quiz will be given for the missed lab OR the final lab exam score will be used to replace the missed lab score.

Any further absences will result in a zero grade for the lab irrespective of the reasons. If you are absent for 4 or more lab periods, you will NOT be allowed to take the lab final and expected to withdraw from the course. If you are not withdrawn by the deadline, you will be issued a WU grade.

<u>INC grade:</u> There is no INC grade for this course. If your grade is suffering due to absences in the lab, you are expected to withdraw on time and re-enroll for the next semester. The instructor will not give advice on rules, deadlines and financial aid consequences of any letter grade.

W and WU Grade policy – THE DROP DEADLINE (W OR CHANGE TO P/NC) HAS BEEN CHANGED FROM THE COVID-ERA LAST DAY OF CLASS TO APR. 1, 2025. Students who do not officially withdraw by Apr. 1 (and receive a W grade) but stop attending classes and do not participate in any way after the withdrawal date will be given a WU grade. Any participation in class (i.e., lab work, homework, taking quizzes and exams) after the withdrawal date will disqualify you from receiving the WU grade, and you will be given the appropriate letter grade.

All laboratory experiments are to be performed individually (and evaluated by the instructor). There are no team experiments. Each person registered for lab is to perform each laboratory experiment individually.

V. GENERAL LABORATORY RULES

Failure to adhere to safety guidelines may result in your removal from the lab and an automatic failure for that experiment. Always listen carefully to your lab instructor for safety precautions and procedure modifications. If an accident occurs, notify your lab instructor immediately.

a. Always wear safety goggles.

b. NO short pants, skirts, open toe shoes are allowed; tie back long hair; secure all loose clothing.

c. NO food, beverages, gum, horseplay, or unauthorized experiments allowed.

d. NO computer, tablet or cell phone use in the laboratory during class activities.

e. Never leave a flame unattended.

f. All chemical waste must be disposed of properly. Your instructor will provide you with specific instruction at the beginning of each lab regarding how to handle the chemical waste for that experiment.

VI. OTHER COURSE-RELATED INFORMATION

a) The prerequisites for this course are a grade of C or better in Chemistry 102.3 and a grade of C or better in 102.1. The corequisite for this course is Chemistry 103.3.
b) This laboratory course will introduce students to common laboratory techniques that are implemented to examine the properties of macromolecules and metabolic reactions. Students will perform titrations, and colorimetric, chromatographic, and enzymatic assays to learn about vitamins, proteins, phospholipids, and sugars.
c) This course provides students with an introduction to a variety of laboratory techniques that are commonly used to isolate, quantify, and characterize biomolecules. Upon completing this course, students:
    a. should be familiar with laboratory techniques such as spectrophotometry, chromatography, extraction, and titration
    b. should understand how to interpret and analyze data collected from colorimetric, chromatographic, enzymatic, and titration assays
    c. should understand basic characteristics of proteins, sugars, lipids, and vitamins

VII. OTHER POLICIES AND ACCOMMODATIONS

a) CUNY POLICY ON ACADEMIC INTEGRITY

Academic dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion as provided at https://www.cuny.edu/about/administration/offices/legal-affairs/policies-procedures/academic-integrity-policy/. Please read this document, paying careful attention to the sections on plagiarism and Internet plagiarism. If you are not sure how to cite work you have found on the internet, please review the APA Guidelines provided by the Purdue OWL.

b) REASONABLE ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Candidates with disabilities needing academic accommodation should: 1) register with and provide documentation to the Special Services Office, Frese Hall, Room 111; 2) bring a letter indicating the need for accommodation and what type. **This should be done during the first week of class.** For more information about services available to Queens College candidates, visit the website, or contact: Special Service Office; Director, Miriam Detres-Hickey, Frese Hall, Room 111; 718-997-5870 (Monday – Thursday 8:00 a.m. to 5:00 p.m. & Friday 8:00 a.m. to 4 pm.) The Office of Special Services (SPSV) is committed to

Department of Chemistry and Biochemistry
Queens College CUNY

Basic Biochemistry Laboratory [CHEM 1031] Syllabus for Spring 2025

supporting students with qualifying disabilities under the Americans with Disabilities Act (ADA) by providing reasonable accommodations to ensure equal access. If you have previously received accommodations due to a disability, believe you may have a disability, or have a temporary disability, please visit the office's website (https://www.qc.cuny.edu/sp/) for further information on the assistance they can offer you. Accommodations are not retroactive, so you are encouraged to get registered sooner rather than later. You may also contact their office at qc.spsv@qc.cuny.edu or call 718-997-5870 during office hours for assistance as well.

LABORATORY EXERCISES – Thursday Section

WEEK#	DATE	EXPERIMENT	MANUAL (pages)
1	1/30	Check-in; Safety Video, Beer's Law	12
2	2/6	Spectrophotometry	10 - 23
3	2/13	Extraction of Vegetable Carotene	24 - 29
4	2/20	Size Exclusion Chromatography	30 - 41
5	2/27	Analysis of Phospholipids by TLC	42 - 51
6	3/13	Enzyme Kinetics – Part I (Enzyme conc.)	52 - 59
7	3/20	Enzyme Kinetics – Part II (Substrate conc.)	60 - 64
8	3/27	Enzyme Kinetics – Part III (Enzyme spec/temp)	65 - 67
9	4/3	Cellular Respiration	114 - 121
10	4/10	Acid-base Properties of Amino Acids	92 - 103
11	4/24	Protein assay by Biuret Reaction/Dye-binding	82 - 91
12	5/1	Vitamin C Content in Juice	104 - 113
13	5/8	Determination of Carbohydrates.	122 – 131
14	5/15	Check-out and Review for Exam	
15	5/22	Final Lab Exam. Date on CUNYFirst	

*** Please note that March 06, 2025 is a Thursday following Wednesday schedule.**

Queens College, CUNY Department of Chemistry and Biochemistry
Professor Edward G. Look; Coordinator Chen Wang **Spring 2025**

CHEM 113.1- General Chemistry I Laboratory

Section **4**- **Tuesdays** 9:10 AM – 12:00 PM, 156 RE

Laboratory Syllabus

I. General Laboratory Rules

A. **Pre- or Corequisite course-** Chem 113.4
B. **Always** wear safety goggles and contact lenses **not** allowed.
C. No short pants, skirts, nor open toe shoes are allowed, and tie back long hair.
D. **NO** food, beverages, gum, horseplay, ***nor*** stunt experiments allowed.
E. No coats, jackets, bags, or backpacks are allowed in lab; use the hallway lockers.
F. No computer nor tablet nor cell phone use in the laboratory during class activities.
G. Therefore, **PRINT OUT** EACH DAY'S PROCEDURES FOR USE IN LAB.
H. Clean up your area after each lab session.

II. Laboratory Manual: posted on Brightspace

III. Laboratory Reports

A. A report is required for ***EACH*** experiment.
B. Lab reports are always due **next lab session**, for any lab. All lab reports will be uploaded to Brightspace. **Late reports are strongly discouraged**, and they will receive a severe reduction in points, as determined by your instructor.
C. **Format:**
   1. ***Heading:*** Always be sure ***your name, section number, experiment title AND date the experiment was performed*** is included- **DO *NOT use* a cover or title page**.
   2. ***Objective:*** Clearly specify the aim for that day's experiment. It often starts with "To find", "To measure", *etc.*, *e.g.*, "To determine the heat energy released by the neutralization reaction of hydrochloric acid and sodium hydroxide."
   3 ***Introduction:*** Explain *concisely* the chemistry of the experiment, including any equations and other scientific and mathematical explanations; *i.e.*, the **theory**. No fluff, please.
   4. ***Experimental:*** A **concise** but complete summary of the steps, materials, and apparatus of the experiment.
   5. ***Data:*** Include your *original data*; *i.e.*, the "carbon copy" of measurements or observations you directly recorded during the experiment, signed by the instructor stapled to back of report. However, rewritten data *are to be included in the Data section of the report*.
   6. ***Calculations and Results:*** Show all work; but if there is a repetitive calculation, you need only show the equation and its use only once; after that, just list the answer. Include here also any **graphs** or **diagrams** that may be required.
   7. ***Discussion:*** State whether results were good or bad, and reasons why, what may have affected them, and any problems with the experiment. Be brief but complete. There may be questions you must answer, or blanks from the manual to fill; work them into your discussion.
   8. ***Conclusion:*** Summarize your final conclusions in your discussion section along with your results and very basically what you did. (The discussion section is where you actually draw your important conclusions.)
   9. ***References:*** Include the lab experiment write-up and other references, including those from the internet.
D. Reports will be graded for conformance to the above-described format and checked for plagiarism. *Introduction, results & discussion,* and *conclusions* are expected to be in your own words.

IV. Grading

A. **Each report** is graded on 100 points, distributed as follows: *Heading and Objective*, 12 points; *Introduction*, 18 pts.; *Experimental*, 18 pts.; *Data*, 9 pts.; *Calculations and Results*, 15 pts.; *Discussion*, 15 pts.; *Conclusion*, 8 pts.; and *References*, 5 pts. Each is due one week after that lab ends. Reports *cannot* be accepted *more than **7*** days after the experiment. These are 70% of your lab course grade.

B. **Prelabs**- these are quizzes you need to take on Brightspace *before* you come to lab and are due 10 minutes before lab class starts. They may cover the previous and/or the experiment for that day. If prelab question material wasn't covered in the lecture class, utilize office hours or better, the discussion board on Brightspace to get help with prelab activity. No excuses will be accepted. Prelabs are 10% of your lab course grade.

C. A written comprehensive lab final will be administered during the last lab day. This is 20% of the lab course grade. The lab final will cover lab safety, and contents covered during the entire semester.

D. Apportionment of course points is also to be determined by your instructor, but there will be points for your performance while in the laboratory. The criteria are as follows:
   1. safety- if you do not work safely, you instructor will deduct points at his discretion
   2. independence- your ability to work and think independently, as determined by your instructor
   3. efficiency- your ability to correctly and quickly accomplish the experiment
   4. effectiveness- and of course, how well the results turned out

E. If you attend all labs, the lowest report score may be dropped in figuring your course grade. All unexcused absences receive zero (0) and included in your final course grade.

F. Grades for Special Circumstances
   1. **W grade:** Automatic withdrawal with W- if you are not passing by April 1, you will have to make a choice between staying in the course for whatever letter grade you will get ***or*** apply for W to avoid lowering GPA. A failing student will not be eligible to apply for retroactive withdrawal or **INC grade** (*see below*) request later in the course.
   2. **INC grade:** INC grade is applicable only if the student is passing the course already and has to make up NO more than one lab due to a third excused absence. Students need to request instructors for this option, and the terms for resolving the INC grade must be clearly communicated and approved by the course coordinator.

V. Laboratory Requirements:

A. **Eye protection must** be worn at all times in the lab; penalty for failure to do so is **dismissal** from that day's lab and/or 0 (zero) points for the day.

B. *If you drop the course, you **must** check-out ASAP!* Otherwise, you do so at the normal time on the final check-out day. If you do not check-out you will be charged a fine as listed in the Stockroom.

C. You must watch the lab safety video during the first lab. If you missed it, you must watch it yourself online; the link is available on Brightspace and necessary for the safety quiz.

D. You **must** have safety goggles, a lab coat and a combination lock; ***we** will issue these to you*. Your belongings must be stowed in the lockers outside the lab.

E. **You must have an approved laboratory notebook with carbonless copy pages (*e.g.*, ISBN 978-1-533969-52-1; there are others acceptable ones), do not take any notes on scrap paper or other things. It is available through the QC online bookstore. Write in it *first*; no copying *into* it allowed.**

F. You will need a scientific calculator. Maybe a USB flash drive or SD card could prove handy.

G. You will read the day's experiment *before* coming to lab, and bring a copy with you.

VI. Safety:

First, you must sign and submit the safety contract. Wear long pants or skirts, closed toe shoes, and long hair tied back are required. Eating, drinking, gum chewing, horseplay, stunt experiments, and contact lenses are not allowed, wear glasses to lab instead. Safety shower, fire extinguisher, and eyewash locations must be noted. Chemical waste handling protocols must be observed; if in doubt ***ask!*** **Points will be deducted for unsafe practices or violations of waste protocols, and you may be ejected from lab and receive a *zero* (0) for that day's work.** Again, you must watch the safety video before any work starts, regardless of whether you have seen it before. If you miss it, arrange a session ASAP. Additionally, 5 points will be assessed against your grade for:

1. eye protection violation (§I. B)
2. improper disposal of any chemicals (*i.e.*, not disposed into designated waste containers)
3. food or drink (candy, gum, even drinking water included) brought into lab
4. coats, jackets, bags, backpacks, *etc.*, brought into lab- **use the lockers in the hallway**
5. not cleaning your station after you are done for the day

VII. Code of Conduct

A. **Plagiarism-** Plagiarism or any other form of cheating is not tolerated and will be severely punished by point and other penalties and/or referral to the Chairman and the Dean; any assignment involved will receive a grade of zero (0). Failure to properly cite a source may also be considered plagiarism.

B. **CUNY Policy on Academic Integrity:** Academic dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion as provided at: CUNY Legal Affairs Academic Integrity Policy.

C. **Inappropriate behavior**, *e.g.*, horseplay or off-color language, oral or written, will not be tolerated and may lead to expulsion from class and a zero if during an examination or assignment.

D. **If You Are Sick:**
If you even just believe you may have COVID-19 or RSV or the flu, ***please stay home and do not come to campus***, e-mail me, and we can work with you with respect to the course material.

E. **Attendance**

1. Attendance is required. There is NO make-up for any missed laboratory experiment. A missed lab will receive no credit. If you are absent, then you cannot submit a lab report for that day.
2. Lateness by ***more than* 15 min.** is counted as an absence.
3. If you must miss for religious or emergency reasons, be sure to inform me to be excused. Valid documentation is required to be excused.
4. The first excused lab is dropped from calculation of your lab score. A second excused lab may either be replaced by a quiz or by your lab final exam score. A third absence receives a zero (0) for that lab. A fourth absence will prevent you from taking the lab final exam; if you have four absences, either withdraw within the allowed timeframe or you will receive a **WU grade**. If your third absence is also an excused one, you may be eligible for the **INC** grade; *see* **§IV. F** *above*.

(*cont'd next page***)**

VIII. Communication

A. The preferred, primary way of reaching me is through the Discussion Board on Brightspace; just post your message. I check it often.

B. You may also e-mail me at: **edward.look@qc.cuny.edu**
However, please reserve this for more private matters. Otherwise, use the message board.

C. **Office Hours:** Tuesdays, 2:30-3:30 PM in Remsen 120D

D. The lab coordinator, Dr. Chen Wang, can be reached at: **chen.wang@qc.cuny.edu**
However, *all lab questions should be addressed to me*.

IX. Accomodations

A. Students with learning disabilities- You may register with the Office of Special Services by e-mailing QC.SPSV@qc.cuny.edu. For more information- website:

https://www.qc.cuny.edu/sp/

B. Counseling- Counseling Services are available to any Queens College student. This office assists with personal concerns that can affect enjoyment and success in college. Services are free, confidential, via Zoom or telephone; contact:

(718) 997-5420

or

counselingservices@qc.cuny.edu

Be sure to include in either way telephone number and CUNY ID.

X. Schedule of Experiments:

Lab #	Experiment
1	Check-in, Syllabus, and Safety
2	Density
3	Hydrate
4	Precipitation
5	Fe-$CuSO_4$
6	Qualitative Redox
7	Copper Cycle
8	Molar Mass of a Metal
9	Solutions
10	Titrations – Part I
11	Titrations – Part II
12	Calorimetry
13	Neutralization
14	Check-out and Final Lab Quiz

Queens College, CUNY Department of Chemistry and Biochemistry
Professor Edward G. Look; Coordinator Chen Wang **Spring 2025**

CHEM 114.1- General Chemistry II Laboratory

Section **4**- **Wednesdays** 9:15 – 12:05 PM, 153 RE
Section **5**- **Wednesdays** 1:40 – 4:30 PM, 153 RE
Section **6**- **Thursdays** 1:40 – 4:30 PM, 153 RE

LABORATORY SYLLABUS

I. General Laboratory Rules

A. **Pre- or Corequisite course-** Chem 114.4
B. **Always** wear safety goggles and contact lenses **not** allowed.
C. No short pants, skirts, nor open toe shoes are allowed, and tie back long hair.
D. **NO** food, beverages, gum, horseplay, ***nor*** stunt experiments allowed.
E. No computer nor tablet nor cell phone use in the laboratory during class activities.

II. Laboratory Manual: posted on Brightspace

III. Laboratory Reports

A. A report is required for ***EACH*** experiment

B. Lab reports are always due **next lab session**, for any lab. All lab reports will be electronically submitted through Brighspace; upload links will be established in each section on Blackboard for each lab report. **Late reports are strongly discouraged**, and they will receive a severe reduction in points, as determined by your instructor. They *don't* have to be excessively long, but be complete; *see below*.

C. **Format:**

1. ***Heading:*** Always be sure ***your name, section number, experiment title AND date the experiment was performed*** is included- ***DO NOT*** *use a cover page*.
2. ***Objective:*** Clearly specify the aim for that day's experiment. It often starts with "To find", "To measure", *etc.*, *e.g.*, "To determine the heat energy released by the neutralization reaction of hydrochloric acid and sodium hydroxide."
3 ***Introduction:*** Explain *concisely* the chemistry of the experiment, including any equations and other scientific and mathematical explanations; *i.e.*, the **theory**. No fluff, please.
4. ***Experimental:*** A **concise** but complete summary of the steps, materials, and apparatus of the experiment.
5. ***Data:*** Include your *original data*; *i.e.*, the "carbon copy" of measurements or observations you directly recorded during the experiment, signed by the instructor stapled to back of report. However, rewritten data *are to be included in the Data section of the report*.
6. ***Calculations and Results:*** Show all work; but if there is a repetitive calculation, you need only show the equation and its use only once; after that, just list the answer. Include here also any **graphs** or **diagrams** that may be required.
7. ***Discussion:*** State whether results were good or bad, and reasons why, what may have affected them, and any problems with the experiment. Be brief but complete. There

III. C. 7. may be questions you must answer, or blanks from the manual to fill; work them into your discussion.

8. ***Conclusion:*** Summarize your final conclusions in your discussion section along with your results and very basically what you did. (The discussion section is where you actually draw your important conclusions.)
9. ***References:*** Include the lab experiment write-up and other references, including those from the internet.

IV. Grading

A. General Weekly Breakdowns
1. Each lab is graded for 100 points distributed as follows: 10% prelab questions, 10% prelab write-up in lab notebook, 60% Lab Report; 20% Performance in the Laboratory. Part A.1 will be weighted 85% of your lab grade.
2. A written comprehensive lab final will be administered during finals week; check CUNYFirst for the date. This part (A.2) will be weighted 15% of final lab grade. The lab final will cover lab safety, and contents covered during the entire semester.
3. **Week 1 grading will be different than the rest.** There will be Math quiz (20%), Safety Quiz (20%), Lab report for Exploring Boiling points (60%).

B. Prelabs
1. Prelabs, both types (*see below*), will not be accepted after the lab session. If prelab question material wasn't covered in the lecture class, use office hours or better, the Brightspace Discussion Board for help with prelab activity. No excuses are accepted.
2. **EACH** lab report is due by the subsequent lab session. Late reports are strongly discouraged and will receive a 10% penalty with each delayed week, and will NOT be accepted after two weeks or the last lab class (*i.e.*, checkout day).
3. Reports will be graded for conformance to the above-described format and checked for plagiarism. Introduction, discussion, and conclusions are expected to be in your own words.

C. Apportionment of course points is also to be determined by your instructor, but there will be points for your performance while in the laboratory. The criteria are as follows:
1. safety- if you do not work safely, you instructor will deduct points at his discretion
2. independence- your ability to work and think independently, as determined by your instructor
3. efficiency- your ability to correctly and quickly accomplish the experiment
4. effectiveness- and of course, how well the results turned out

D. If you attend all labs, the lowest report score may be dropped in figuring your course grade. All unexcused absences receive zero (0) and included in your final course grade.

E. Grades for Special Circumstances

1. **W grade:** Automatic withdrawal with W- if you are not passing by April 1, you will have to make a choice between staying in the course for whatever letter grade you will get ***or*** apply for W to avoid lowering GPA. A failing student will not be eligible to apply for retroactive withdrawal or **INC grade** (*see below*) request later in the course.
2. **INC grade:** INC grade is applicable only if the student is passing the course already and has to make up NO more than one lab due to a third excused absence. Students

IV. E. 2. need to request instructors for this option, and the terms for resolving the INC grade must be clearly communicated and approved by the course coordinator.

V. Laboratory Requirements:

A. **PRELAB: Write, in your own words, the theory and procedure for the experiment in your notebook before coming to lab.** Thus, all notes must be preceded by the prelab. *This* is *in addition* to the prelab quizzes. Consult schedule in §XI for order of experiments.

B. *If you drop the course, you **must** check-out ASAP!* Otherwise, you do so at the normal time on the final check-out day. If you do not check-out you will be charged a fine as listed in the Stockroom.

C. **Eye protection must** be worn at all times in the lab; penalty for failure to do so is a 0 (zero) for the day and/or **dismissal** from that day's lab with **no possibility** of make-up.

D. You must watch the lab safety video during the first lab. If you missed it, you must watch it yourself online; the link is available on Brightspace and necessary for the safety quiz.

E. You **must** have safety goggles, a lab coat and a combination lock; ***we** will issue these to you*. Your belongings must be stowed and locked in the lockers outside the lab.

F. **You *must* have an approved laboratory notebook with carbonless copy pages (for example, ISBN 978-1-533969-52-1; there are other acceptable ones), do not take any notes on scrap paper or other things. It is available through the QC online bookstore. Write in it *first*; no copying *into* it allowed.**

G. You will need a scientific calculator. and either a USB flash drive or a SD card.

H. You will read the day's experiment *before* coming to lab, and bring a hard copy with you.

VI. Safety:

A. Goggles and lab coat must be worn at all times in the lab, long pants or skirts, closed toe shoes, and long hair tied back are required. Eating, drinking, gum chewing, horseplay, stunt experiments, and contact lenses are not allowed, wear glasses to lab instead.

B. Safety shower, eyewash, and fire extinguisher locations must be noted.

C. Chemical waste handling protocols must be observed; if in doubt ***ask!***

D. Points will be deducted for unsafe practices or violations of waste protocols, and you may be ejected from lab and receive a *zero* (0) for that day's work.

E. Sign safety contract, and you must watch the safety video before any work starts, regardless of whether you have seen it before. If you miss it, watch it on Brightspace ASAP.

VII. Code of Conduct

A. Plagiarism- Plagiarism or any other form of cheating is not tolerated and will be severely punished by point and other penalties and/or referral to the Chairman and the Dean; any assignment involved will receive a grade of zero (0). Failure to properly cite a source may also be considered plagiarism.

B. CUNY Policy on Academic Integrity: Academic dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion as provided at: CUNY Legal Affairs Academic Integrity Policy.

VII. C. Inappropriate behavior, *e.g.*, horseplay or off-color language, oral or written, will not be tolerated and may lead to expulsion from class and a zero if during an examination or assignment.

D. If You Are Sick:

If you even just believe you may have COVID-19 or RSV or the flu, ***please stay home and do not come to campus***, e-mail me, and we can work with you with respect to the course material.

E. Attendance

1. Attendance is required. There will be ***no*** make-ups for missed experiments. It gets no credit and is dropped from your record **only** if the absence is excused by me. Lateness by ***more than* 15 min.** is counted as an absence. If you must miss for religious or emergency reasons, be sure to inform me to be excused. Valid documentation is required to be excused. The first excused lab is dropped from calculation of your lab score. A second excused lab may either be replaced by a quiz or by your lab final exam score. A third absence receives a zero (0) for that lab. A fourth absence will prevent you from taking the lab final exam; if you have four absences, either withdraw within the allowed timeframe or you will receive a **WU grade**.
2. If your third absence is also an excused one, you may be eligible for the **INC** grade; *see* **§IV. E** *above.*

IX. Communication

A. The preferred, primary way of reaching me is through the Discussion Board on Brightspace; just post your message. I check it often.

B. You may also e-mail me at: **edward.look@qc.cuny.edu**
However, please reserve this for more private matters. Otherwise, use the message board.

C. Office Hours: Tuesdays, 2:30-3:30 PM in Remsen 120D

D. The lab coordinator, Dr. Chen Wang, can be reached at: **chen.wang@qc.cuny.edu**
However, *all lab questions should be addressed to me*.

X. Accomodations

A. Students with learning disabilities-
You may register with the Office of Special Services. This can be done by e-mailing QC.SPSV@qc.cuny.edu. For more information, their website is:

https://www.qc.cuny.edu/sp/

B. Counseling: Counseling Services are available to any Queens College student. This office assists with personal concerns that can affect enjoyment and success in college. Services are free, confidential, and may done by Zoom or telephone. To contact:

(718) 997-5420

or

counselingservices@qc.cuny.edu

Be sure to include in either way telephone number and CUNY ID.

XI. Schedule of Experiments:

Week	Laboratory Experiments and Assignmnents
1	**IN PERSON** Check In , Safety Review, Discuss Syllabus, and Refresh Basic Math (e.g., common log, natural log, quadratic equation etc.) **Homework: Exploring Boiling Points; Prepare and Take Safety and Basic Math Quiz**
2	Iron Content of a Tablet by Redox Titration; **Online Safety Quiz AND Basic Math Quiz Due This Week**
3	Beer's Law
4	Analyzing a Complex Mixture with Paper Chromatography and Visible Light Spectroscopy
5	Osmosis and the van't Hoff *i* Factor
6	Kinetics
7	Equilibrium - Part I: Le Châtelier's Principle
8	Equilibrium - Part II: Measuring an Equilibrium Constant
9	Acids, Bases, Buffers and Salts
10	Identifying an Acidic Salt by Titration and Preparation and Analysis of a Complex Ion Compound – Part **I**
11	Preparation and Analysis of a Complex Ion Compound - Finish
12	Qualitative Analysis of Cations: Do It Yourself
13	Electrochemistry
14	Review for Lab Final and Check Out: **IN PERSON**
15	Laboratory Final Quiz

Department of Chemistry and Biochemistry
Queens College CUNY
Tentative Lecture Schedule for Chemistry 101.3, Section 01, Spring 2025

TEXT: *General, Organic, & Biological Chemistry, 6th edition by Smith) Packaged with ALEKS 360 18-Week Access Code (with eBook access)*. This may be purchased through the QC bookstore or go to aleks.com, sign up for the course code indicated below, and purchase the package directly through ALEKS. After purchasing the online package, the purchase of a print copy is optional but strongly recommended.

Class Hours: Lecture: Tue., Thurs., 10:45 AM–12:00 PM
Instructor: Mr. T. Sangiorgi
Email: Thomas.Sangiorgi@qc.cuny.edu

Room: Remsen 017
Office Hours: Thursdays, after class
Office: RE 206

Tuesday	Thursday	Chapter	Topic	Notes	ALEKS Due*
Jan 28	Jan 30	1.1–1.3	Matter and Measurements (Part 1)		Feb 4
Feb 4	Feb 6	1.4–1.10	Matter and Measurements (Part 2)		Feb 13
Feb 11	Feb 13 Feb 20	2	Atoms and the Periodic Table		Feb 27
Feb 25 Mar 4	Feb 27	3	Ionic Compounds	**Feb 27 – Quiz #1 (Chapters 1 & 2)**	Mar 11
Mar 4 Mar 11	Mar 13	4	Molecular Compounds *(Omit 4.3)*		Mar 20
Mar 18		5A 5.1-5.3	Chemical Reactions: Classification & Balancing *(Omit 5.4)*	**Mar 18 – Quiz #2 (Chapters 3 & 4, up to the material covered through Mar 13)**	Mar 25
	Mar 20		**Exam #1, (Chapters 1-4) 60 min.**		
Mar 25	Mar 27	5B 5.5-5.9	Chemical Reactions: Mole and Mass Relationships *(Omit 5.10)*		Apr 3
Apr 1	Apr 3	6	Energy Changes, Reaction Rates, and Equilibrium		Apr 10
Apr 8 Apr 22	Apr 10	7	Gases, Liquids and Solids *(Omit 7.6)*	**Apr 10 – Quiz #3 (Chapters 4, 5, beginning of 6)**	Apr 29
Apr 29	Apr 24	8	Solutions Part 1		
	May 1		**Exam #2, (Chapters 4-7) 60 min.**		
May 6		8	Solutions Part 2 *(Omit 9.10)*		May 13
May 13	May 8 May 15	9	Acids and Bases	**May 13 – Quiz #4 (Chapters 7 & 8)**	May 20
May 20			***Final Exam, Chapters 1-9***		

TAKING OUT CELL PHONES IN CLASS IS STRICTLY FORBIDDEN

GRADING

- Grading. Your final score is based on the following calculation:
  ALEKS Online Homework: 30%; Recitation Quizzes: 10%; Lecture Exams: 35%; Final Exam: 25%.
  ***Please note**: A final grade of "C" or better is required to continue on to Chem 102.*
- Homework assignments must be completed by the due date online using the ***ALEKS Online Homework Program***, course code: **X3JGG-XDERR**. The following financial aid code will grant you free access for the first two weeks after which you must purchase an ALEKS package: **41AC3-6FFA5-AC068-F60D3**. See the accompanying chart for ALEKS assignment due dates.

GRADING (continued)

- Four quizzes will be administered throughout the semester. The best three of the four quiz grades will be used to calculate your overall quiz grade. There will be no make-ups for missed quizzes.
- Any questions on grading must be given in writing within one week of receipt of answer scripts. However, making any marks directly on graded answer scripts will nullify your request.
- No makeup is given for missed lecture exams. If you miss one exam, your final exam score will be duplicated to replace the missed exam score.
- Note: Bring a scientific calculator and the textbook/current power point slides to all classes and exams.

GENERAL

Chemistry 101.3 is a one semester, basic chemistry course roughly equivalent in caliber to the Regents Chemistry course taught in high schools within New York State. The course serves as a foundation for students who will go on to take Organic (Chem 102) and Biochemistry (Chem 103). A grade of C or higher is required to register for these courses. The course meets for 3 credit hours and includes both the recitation and lecture. Two ten minute breaks will be given during each class (one during the normal summer session class) . The laboratory course, Chem 101.1 is a separate co-requisite for Chem 101.3 and is administered and graded separately.

In chemistry 101.3, the student will develop an understanding of basic atomic structure, including the rationale for the formation of ions and molecules. Students will learn basic skills involved in making measurements, understand the scientific method, stoichiometry, solution chemistry, equilibrium, and acid-base chemistry. Students will master gas laws and develop an understanding of the energetics of chemical reactions.

LECTURE

Students are expected to attend all lectures. Prior to each lecture, the students are expected to read the material in the textbook and be familiar with the concepts in the readings. The purpose of the lecture is to summarize the material, highlight important concepts, and provide illustrative examples of these concepts including solving typical problems. The attached lecture schedule is tentative and any variations which may arise will be addressed in class during lecture and via Brightspace postings.

Problem solving is a critical aspect of this course. By working to solve problems, students will come to better understand and master the various concepts. Homework assignments on the ALEKS online homework system are designed to provide instructional support of the course material but are also a significant (30%) component of the final grade. I encourage students to work in groups to solve problems; however, you must do the final entry to the homework system yourself.

There will be 4 quizzes administered during the first 20 to 30 minutes of lecture so you must arrive on time, or you will have less time for the quiz. The best 3 of the 4 quizzes will be used to determine your quiz average and will be used to provide 10% of your course grade.

Two lecture exams will be administered during recitation and will consist of both free response and multiple-choice problems. Each student must bring a #2 pencil, pen, photo ID, and a scientific calculator to the exams. Each exam will start at the beginning of class so you must arrive on time, or you will have less time for the exam. The exam average will determine 35% of your course grade.

Grade & College Policies and Student Services

W and WU Grade policy – THE DROP DEADLINE (W OR CHANGE TO P/NC) HAS BEEN CHANGED FROM THE COVID-ERA LAST DAY OF CLASS TO APRIL 1, 2025. Students who do not officially withdraw by Apr. 1 (and receive a W grade) but stop attending classes and do not participate in any way after the withdrawal date will be given a WU grade. Any participation in class (i.e., lab work, homework, taking quizzes and exams) after the withdrawal date will disqualify you from receiving the WU grade, and you will be given the appropriate letter grade.

Restrictions on Sharing of Posted Lecture Materials: Lecture materials that are posted (such as presentations, lectures, welcome video clips etc.) are shared with the class for the purpose of facilitating the learning experience and are not to be copied, downloaded or shared with anyone outside of the class.

Reasonable Accommodations for Students with Disabilities: Students with disabilities needing academic accommodation should register with the Special Services Office by emailing QC.SPSV@qc.cuny.edu.
The Office of Special Services (SPSV) is committed to supporting students with qualifying disabilities under the Americans with Disabilities Act (ADA) by providing reasonable accommodations to ensure equal access. If you have previously received accommodations due to a disability, believe you may have a disability, or have a temporary disability, please visit the office's website (https://www.qc.cuny.edu/sp/) for further information on the assistance they can offer you. Accommodations are not retroactive, so you are encouraged to get registered sooner rather than later. You may also contact their office at qc.spsv@qc.cuny.edu or call 718-997-5870 during office hours for assistance as well.

CUNY Policy on Academic Integrity: Academic Dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion as provided at: https://www.cuny.edu/about/administration/offices/legal- affairs/policies-procedures/academic-integrity-policy/. Please read this document, paying careful attention to the sections on plagiarism and Internet plagiarism. If you are not sure how to cite work you have found on the internet, please review the APA Guidelines provided by the Purdue OWL (https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/reference_list_electronic_sources.html).

Netiquette: Please maintain a professional demeanor when posting online. You can be respectful even when you have a difference of opinion. Treat others as you'd want to be treated yourself. Don't type in all caps, as that is the online equivalent of shouting. If you need to emphasize a word or phrase, use italics.

Statement on student wellness: As a student, you may experience a range of challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may diminish your academic performance and/or reduce your ability to participate in daily activities. QC services are available free of charge. You can learn more about confidential mental health services available on campus at: https://www.qc.cuny.edu/StudentLife/services/counseling/counseling/

Use of Student Work: All programs in New York State undergo periodic reviews by accreditation agencies. For these purposes, samples of student work are occasionally made available to those professionals conducting the review. Anonymity is assured under these circumstances. If you do not wish to have your work made available for these purposes, please let the professor know before the start of the second class. Your cooperation is greatly appreciated.

Course Evaluations: During the final four weeks of the semester, you will be asked to complete an evaluation for this course by filling out an online questionnaire. Please remember to participate in these course evaluations. Your comments are highly valued, and these evaluations are an important service to fellow students and to the institution, since your responses will be pooled with those of other students and made available online, at the Teaching Evaluations Data: Spring 2010 – Present (http://ctl.qc.cuny.edu/evaluations/data/). All responses are completely anonymous; no identifying information is retained once the evaluation has been submitted.

Classroom Recording Policy: Neither photographs nor video recordings (audio or video) of all or parts of classes at Queens College may be made without written permission from the course instructor(s).
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The Queens College Classroom Photography and Recording Policy applies to both students and visitors. Students and visitors are not authorized to copy, download, or disseminate authorized recordings and photographs to others. Students in violation of this policy are subject to disciplinary action, and visitors in violation of this policy are subject to removal from the classroom and/or campus.

Department of Chemistry and Biochemistry
Queens College CUNY
Tentative Lecture Schedule for Chemistry 101.3, Section 03, Spring 2025

TEXT: *General, Organic, & Biological Chemistry, 6th edition by Smith) Packaged with ALEKS 360 18-Week Access Code (with eBook access)*. This may be purchased through the QC bookstore or go to aleks.com, sign up for the course code indicated below, and purchase the package directly through ALEKS. After purchasing the online package, the purchase of a print copy is optional but strongly recommended.

Class Hours: Lecture: Thursdays., 6:30-9:20 PM
Instructor: Mr. T. Sangiorgi
Email: Thomas.Sangiorgi@qc.cuny.edu

Room: Remsen 101
Office Hours: Thursdays, after class
Office: RE 206

Date	Chapter	Topic	Notes	ALEKS Due Date*
Jan 30	1A 1.1–1.3	Matter and Measurements (Part 1)		2/06
Jan 30 Feb 6	1B 1.4–1.10	Matter and Measurements (Part 2)		2/13
Feb 13 Feb 20	2	Atoms and the Periodic Table		2/27
Feb 20 Feb 27	3	Ionic Compounds	**Feb 27 - Quiz #1 (Chapters 1 & 2)**	3/13
Mar 13	4	Molecular Compounds		3/20
Mar 20	5A 5.1-5.3	Classification & Balancing of Chem. Reactions	**Mar 20 - Quiz #2 (Chapters 3 & 4)**	3/27
Mar 27		**Exam #1 (Chapters 1-4), 50 min.**		
Mar 27	5B 5.5-5.9	Chemical Reactions: Mole and Mass Relationships		4/03
Mar 27 Apr 3	6	Energy Changes, Reaction Rates, and Equilibrium		4/10
Apr 10 Apr 24	7	Gases, Liquids and Solids	**April 10 - Quiz #3 (Chapters 4, 5, beginning of 6)**	5/01
May 1		**Exam #2, (Chapters 4-7) 50 min.**		
May 1 May 8	8	Solutions		5/15
May 8 May 15	9	Acids and Bases	**May 15 - Quiz #4 (Chapters 7 & 8)**	5/22
May 22		***Final Exam, Chapters 1-10 (6:15-8:15 PM)***		**Review**

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  Please note: *A final grade of "C" or better is required to continue on to Chem 102.*
- Homework assignments must be completed by the due date online using the ***ALEKS Online Homework Program***, course code: **VXY93-HTYXQ**. The following financial aid code will grant you free access for the first two weeks after which you must purchase an ALEKS package: **6018B-D8637-54ADF-D7250**. See the accompanying chart for ALEKS assignment due dates.

GRADING (continued)

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Queens College of the City University of New York
Department of Chemistry and Biochemistry
Basic Organic Chemistry
Dr. Gloster

Chem 102.3 **Spring 2025**

Lecture: Wed. 6:30 - 9:20 PM, Remsen 017. Basement Location

Dr. Gloster
Office Hour*: Wednesday 5:30 PM – 6:20 PM Remsen Hall 206.
e-mail: Daniel.Gloster@qc.cuny.edu

Course Requirements:

102.3: C or better in Chem 101.3 and 101.1, or C or better in Chem 113.4 and 113.1

Pre or corequisite: Chem 102.1 (C or better if prerequisite)

Note: a C- in any prerequisite will not permit you to take 102.3/102.1!

You must earn a C or better in Chem 102.3 and 102.1 to take Chem 103.3 and 103.1

Note: If you are a transfer student with a CR in a prerequisite course but your earned grade was a C- or less, there is a strong likelihood that you will not pass 102.3.

You will need access to Brightspace for announcements and content.

If you qualify for extra time you need to get me the paperwork in my hand…Not Mailbox one week prior to our exam….your exam date is the same as the class exam date.

LECTURE TEXT (required): *General, Organic, & Biological Chemistry*, 5th Edition, Janice Smith (McGraw Hill, ISBN: 9781264247974). This is the **same** book used for Chem 101 (since Sp 2023) and 103 going forward, so plan ahead when buying or renting – ebook and a looseleaf version are available.

https://qc.textbookx.com/institutional/index.php?action=browse#books/4727317/

The text contains many problems - you should do those that appear in the body of the text and at the end of each chapter. Answers to all problems may be found at the end of each chapter, but don't look at the answers when you try to answer the problems; if you can't answer the problem, go to the relevant part in the chapter to help figure it out.

A great way to understand the lecture material is to read the textbook chapter before class. For the vast majority of students, it is not possible to understand lecture material if you are seeing it for the first time in class!

An important bit of advice: ATTEND EVERY CLASS! Attendance has been highly correlated with passing the course with a grade of C or higher.

Recommended: Molecular model kit (available on-line, about $20-60; the ~$20-30 kits on Amazon look good)

LAB TEXT (Required **if you're also taking the separate laboratory course**): *Laboratory Experiments for Introduction to General, Organic and Biochemistry*, F. Bettelheim and J. Landesberg, 8th Edition, Brooks/Cole, 2013

Grading:	**3 75-minute Midterm Exams**	**54%**
	ALEKS homework	**16%**
	Final Exam	**30%**
	Total	**100%**

Exams will stress lecture material, problems in the book, and recitation problems.
Bring photo ID to exams.

You ***will*** be permitted to use molecular models during exams. You will ***not*** be permitted to use books, notes computers, or calculators during exams. Cell phones are strictly prohibited during exams. If you need any special services during the exams, contact Dr. Gloster as soon as possible. If you have any questions concerning the grading, contact Dr. Gloster within 10 days following the exam.

If you miss a midterm exam, written verification of your reason for missing the exam is required. There are no make-up exams; your midterm grade will be the average of the exams you took.

Cheating of any kind will not be tolerated. Your entire exam grade will be zero, and you will be brought up on charges of academic dishonesty to the College.

Approximate Lecture and Examination Schedule

Date	Chp	Topic
Feb. 5	11	Syllabus and Introduction to Organic Molecules and Functional Groups
Feb. 19	11	Introduction to Organic Molecules and Functional Groups
Feb. 26	12	Alkanes
Mar. 5	13	Unsaturated Hydrocarbons
Mar. 6	14	Organic Compounds That Contain Oxygen, Halogen, or Sulfur
Mar. 12	14	**Exam 1 Chapters 11-13 ALEKS H-work (11-13) due 3/12 at 5:59 PM**
Mar. 19	14, 15	Org. Compounds Containing Oxygen, Halogen, or Sulfur & The Three D Shape of Molecules
Mar. 26	15	Three Dimensional Shapes of Molecules
Apr. 2	16	Aldehydes and Ketones
Apr. 9	16	Aldehydes-Ketones **Exam 2 Chapters 14-15 ALEKS H-work (14-15) due 4/9 at 5:59 PM**
Apr. 23	17	Carboxylic Acids, Esters, and Amides
Apr. 30	17, 18	Carboxylic Acids, Esters, and Amides and Amines and Neurotransmitters
May 7	18	Amines and Neurotransmitters
May 14		Recitation and **Exam 3 Chapters 16-18 ALEKS H-work (16-18) due 5/14 at 5:59 PM**
May 21		**Final Exam: Chapters 11 – 18 (6:15-8:15)**

Course Objectives: Students will learn basic structural organic chemistry, including structures and nomenclature of hydrocarbons and compounds containing the most common functional groups including halides, alcohols, thiols and disulfides, amines, carbonyl compounds including aldehydes, ketones, carboxylic acids, esters, and amides. Stereochemistry will be introduced, and students will learn to draw structures and convey three-dimensional information about structures. Reactions of these compounds will be introduced, but mechanisms of reactions, synthesis, and spectroscopy will not be covered in this course. By the conclusion, students will have a foundation that will allow them to enter a course in basic molecular biochemistry.

Assessment: Problem solving ability will be tested using exams; while memorization of naming conventions and reactions will be required, the emphasis will be on understanding structures of organic compounds. Sample problems and answers both in the book and on the course web site will be representative of the material that will be found on exams.

GRADE KEY. This course is not graded on a curve. Everyone in the class can get an A, or everyone can get an F. There is no predetermined percentage of the class that will get any particular grade.

Chem 102 exam and course grade key:

A+ 97-100
A 93-96
A- 90-92

B+ 87-89
B 83-86
B- 80-82

C+ 77-79
C 73-76
C- 70-72

D+ 67-69
D 60-66

F 0-59

Queens College of the City University of New York
Department of Chemistry and Biochemistry
Basic Organic Chemistry
Dr. Gloster

Chem 102.3 **Spring 2025**

Lecture: Wed. 6:30 - 9:20 PM, Remsen 017. Basement Location

Dr. Gloster
Office Hour*: Wednesday 5:30 PM – 6:20 PM Remsen Hall 206.
e-mail: Daniel.Gloster@qc.cuny.edu

Course Requirements:

102.3: C or better in Chem 101.3 and 101.1, or C or better in Chem 113.4 and 113.1

Pre or corequisite: Chem 102.1 (C or better if prerequisite)

Note: a C- in any prerequisite will not permit you to take 102.3/102.1!

You must earn a C or better in Chem 102.3 and 102.1 to take Chem 103.3 and 103.1

Note: If you are a transfer student with a CR in a prerequisite course but your earned grade was a C- or less, there is a strong likelihood that you will not pass 102.3.

You will need access to Brightspace for announcements and content.

If you qualify for extra time you need to get me the paperwork in my hand…Not Mailbox one week prior to our exam….your exam date is the same as the class exam date.

LECTURE TEXT (required): *General, Organic, & Biological Chemistry*, 5th Edition, Janice Smith (McGraw Hill, ISBN: 9781264247974). This is the **same** book used for Chem 101 (since Sp 2023) and 103 going forward, so plan ahead when buying or renting – ebook and a looseleaf version are available.

https://qc.textbookx.com/institutional/index.php?action=browse#books/4727317/

The text contains many problems - you should do those that appear in the body of the text and at the end of each chapter. Answers to all problems may be found at the end of each chapter, but don't look at the answers when you try to answer the problems; if you can't answer the problem, go to the relevant part in the chapter to help figure it out.

A great way to understand the lecture material is to read the textbook chapter before class. For the vast majority of students, it is not possible to understand lecture material if you are seeing it for the first time in class!

An important bit of advice: ATTEND EVERY CLASS! Attendance has been highly correlated with passing the course with a grade of C or higher.

Recommended: Molecular model kit (available on-line, about $20-60; the ~$20-30 kits on Amazon look good)

LAB TEXT (Required **if you're also taking the separate laboratory course**): *Laboratory Experiments for Introduction to General, Organic and Biochemistry*, F. Bettelheim and J. Landesberg, 8th Edition, Brooks/Cole, 2013

Grading:	**3 75-minute Midterm Exams**	**54%**
	ALEKS homework	**16%**
	Final Exam	**30%**
	Total	**100%**

Exams will stress lecture material, problems in the book, and recitation problems.
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If you miss a midterm exam, written verification of your reason for missing the exam is required.
There are no make-up exams; your midterm grade will be the average of the exams you took.

Cheating of any kind will not be tolerated. Your entire exam grade will be zero, and you will be brought up on charges of academic dishonesty to the College.

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May 7	18	Amines and Neurotransmitters
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Assessment: Problem solving ability will be tested using exams; while memorization of naming conventions and reactions will be required, the emphasis will be on understanding structures of organic compounds. Sample problems and answers both in the book and on the course web site will be representative of the material that will be found on exams.

GRADE KEY. This course is not graded on a curve. Everyone in the class can get an A, or everyone can get an F. There is no predetermined percentage of the class that will get any particular grade.

Chem 102 exam and course grade key:

A+ 97-100
A 93-96
A- 90-92

B+ 87-89
B 83-86
B- 80-82

C+ 77-79
C 73-76
C- 70-72

D+ 67-69
D 60-66

F 0-59

Queens College of the City University of New York
Department of Chemistry and Biochemistry
Organic Chemistry I
Chem 251.1 Lab Schedule, Remsen Annex 351 Spring 2025

Course Requirements:

Prerequisites for Chem 251.1: C or better in Chem 114.4 and 114.1
Pre or corequisite: Chem 251.4 (C or better if prerequisite)

LAB TEXT: *Macroscale and Microscale Organic Experiments*, Williamson and Masters, 7th ed.
Cengage Learning, 2017, ISBN: 978-1-305-57719-0 ***(NOT** the newer 8th edition).*

Chem 251.1 Section Number: 3
Lab Instructor: J. Eduardo Ocando
Instructor's Email: jocando@qc.cuny.edu
Lab Instructor's Office Hour (on-line or in-person): T 5:30-6:30pm
Lab coat, safety goggles, and required glassware are provided upon check-in.
Coordinator: Prof. Yu Chen (yu.chen1@qc.cuny.edu)
[Note: Students should contact their lab instructor for all lab-related questions.]

All experiments to be done are the Macroscale version.

Week	Experiment	Williamson & Masters Chp (Page)
1	Check-in. No laboratory work can be done. Review of safety in the Orgo. Lab., Instructions on disposal of chemical waste, Lab. protocols, Maintenance of a laboratory note-book	Chp 1-2
2-3	I. Melting Point Determination Determination of Boiling Point via Distillation and via Micro Boiling Point Method	Chp 3 (48-55) Chp 5 (87) Chp 3 (55-60)
4	II. Isolation of Clove Oil from Cloves	Chp 6 (103), Exp 5
5	II (continued). Extraction: Isolation of Eugenol from Clove Oil. Thin Layer Chromatography of Clove Oil and of Eugenol (Instructor will cut TLC strips and provide instructions)	Continues p112-114
6	III. Crystallization i. Isolation of Crystalline Acetylsalicylic Acid from Aspirin tablets (Lab Notes) ii. Recrystallization of Benzil (Lab Notes)	 Lab Notes Chp 4 (82-3)
7	IV. Preparation of Cyclohexene	Chp 19 (336)
8	V. Preparation of 1-Bromobutane	Chp 16 (313)
9	VI. Nucleophilic Substitution Reactions of Alkyl Halides	Chp 17 (320)
10	VII. Oxidation of Cyclohexanol	Chp 22 (358), Exp 4
11	VIII. Grignard Reaction: Preparation of Triphenylmethanol	Chp 38 (493), Exp 4-7
12	Complete VIII. IX. Reactions of Triphenylmethanol – Parts 1, 2, and 3	Chp 33 (447) Exp 1-3
13	Finish IX and any other unfinished experiments	
14	Check out and Lab Final Exam. No laboratory work can be done.	

It is important that you check the Chemistry 251 "Lab Notes" for details of all experiments,

because there are sometimes significant changes from the procedures described in the laboratory manual.

Attendance is required. There is NO make-up for any missed laboratory experiment. A missed lab will receive no credit and will be dropped from final average calculation ONLY if your absence is excused by your lab instructor. A second missed lab, if excused by your instructor, will require completion of an alternate assignment given by your instructor in lieu of the lab experiment. Further absences are NOT excusable.

Safety glasses and lab coats are required in the laboratory at all times – even if you already wear glasses.
NO short pants, skirts, or open toe shoes are allowed; tie back long hair.
NO computer, tablet or cell phone use in the laboratory during class activities other than digital lab textbook.
Do not bring food, chewing gum, coats or backpacks into the lab – use the hall lockers.
All experiments are to be done individually – no team experiments.

Course Objectives: Students will learn basic organic lab safety, waste disposal, and techniques, and will learn how to keep an organic laboratory notebook. At the conclusion of this semester students will be prepared to do organic research if they so choose.

Assessment: You will need to keep a neat, legible laboratory notebook; a lined 100 page, 9 ¾ x 7 ½ inch composition book is best. Your lab instructor will periodically check your notebook, so it must be up-to-date, and will announce when it will be collected for grading. Lab books will not be accepted after the last day of lab class (i.e. Check Out day).
70% - lab book (Report: 35%, Results, 35%).
15% - Performance in the Laboratory (see below).
15% - A written 1 hour lab final given on the last day of lab class (Check Out) or possibly during Finals week. The lab final will cover lab safety, and the contents that were covered during the entire semester. It will not cover lecture material. You will need a calculator (no cell phones allowed).

The criteria for Performance in the Laboratory:
1. **Safety (5%):** If you do not work safely, you instructor will deduct points at their discretion. **Eye protection and lab coat must be worn at all times in the lab**; penalty for failure to do so is a 0 (zero) for the day and/or dismissal from that day's lab with no possibility of make-up [Points will be deducted from your final grade for safety offenses at instructor's discretion]. Safety shower, eyewash, and fire extinguisher locations must be noted. Chemical waste handling protocols must be observed; if in doubt, ask! Points will be deducted for unsafe practices or violations of waste protocols; You may be ejected from lab and receive a zero (0) for that day's work.
2. **Independence (5%)**: Your ability to work and think independently, as determined by your instructor.
3. **Efficiency and Effectiveness (5%)**: Your ability to efficiently accomplish the goals of the experiment within the lab time frame. This also includes the quality of your results.

Queens College of the City University of New York
Department of Chemistry and Biochemistry
Organic Chemistry II
Chem 252.1 Lab Schedule, Remsen Annex 352 Spring 2025

Course Requirements:

Prerequisites for Chem 252.1: C or better in Chem 251.4 and 251.1
Pre or corequisite: Chem 252.4 (C or better if prerequisite)

LAB TEXT: *Macroscale and Microscale Organic Experiments*, Williamson and Masters, 7th ed.
Cengage Learning, 2017, ISBN: 978-1-305-57719-0

Chem 252.1 Section Number:
Lab Instructor:
Instructor's Email:
Lab Instructor's Office Hour:
Lab coat, safety goggles, and required glassware are provided upon check-in.
Coordinator: Prof. William H. Hersh (william.hersh@qc.cuny.edu)
[Note: Students should contact their lab instructor for all lab-related questions.]

For the Macroscale and Microscale text book, all experiments to be done are the Macroscale version.

Week	Experiment	Williamson & Masters Chp (Page)
1	Check-in. No laboratory work can be done.	
2	I. Reduction of a ketone with sodium borohydride	55 (670)
3	II. Preparation of the alkyne, diphenylacetylene, from stilbene	58 (687) Exp 2,3
4	III. Diels-Alder reaction	Lab Notes Part 1
5	IV. Aromatic Electrophilic Substitution Preparation of 1,4-tert-butyl-2,5-dimethoxybenzene Finish any uncompleted experiments from earlier weeks	29 (409) Exp 4
6	V. Side Chain oxidation. Oxidation of para-nitrotoluene	Lab Notes Part 1
7	VI. Fischer Esterification: Preparation of methyl benzoate	40 (517) Exp 4
8	VII. Nitration of methyl benzoate Start Organic Qualitative Analysis (Identification of "Unknowns") – *see Lab Notes Parts 1 & 2*	28 (404) Lab Notes Part 1 **Lab Notes Part 2***
9	VIII. Preparation of aniline Continue Organic Qualitative Analysis as time allows each week	45 (567) Exp 2
10	IXa. Preparation of acetanilide IXb. Aromatic nucleophilic substitution reaction	45 (567) Exp 5 Lab Notes 1
11	X. Aldol condensation. Preparation of dibenzalacetone	37 (487)
12-13	Finish any uncompleted preps AND continue with Organic Qualitative Analysis	
14	Check out. No laboratory work can be done.	
15	Lab Final Exam – during Finals week but 1 hour during the same time as lab – exact time and room to be determined.**	

Lab Notes Part 2*: If you have the *Macroscale and Microscale* textbook, use Lab Notes Part 2 for the Organic Qualitative Analysis explanations and experiments, and use the tables of mp's and bp's, and derivative mp's, in your lab instructor's copy of the Williamson *Organic Experiments* book.

**It is up to students to notify the lab instructor early in the semester if there is a conflict with any other exam time.

It is important that you check the Chemistry 252 "Lab Notes Part 1" for details of all experiments, because there are sometimes significant changes from the procedures described in the laboratory manual.

Safety glasses and lab coats are required in the laboratory at all times – even if you already wear glasses.
NO short pants, skirts, or open toe shoes are allowed; tie back long hair.
NO computer, tablet or cell phone use in the laboratory during class activities other than to access electronic text book.
Do not bring food, chewing gum, coats or backpacks into the lab – use the hall lockers.
All experiments are to be done individually – no team experiments.

Laboratory Attendance Policy

This is a laboratory class with a limited capacity in the classroom. As a result, there are NO make-up options (Excused or Unexcused) for any missed lab. YOU ARE EXPECTED TO ATTEND ALL LAB SESSIONS. If you miss a lab class due to QC approved religious reasons OR due to emergencies, inform the instructor and make sure it is excused. Valid documentation for the excused absence will be required. If a doctor's note, it must be on the doctor's letterhead and signed by a physician with a different last name from the student, and a statement that the physician is not a relative of the student.
Unexcused absences are given a zero and will be included in the calculation of the final lab score.
In case of absence(s), the following policy will be adopted:

1st Excused Absence: The missed lab will be excluded from calculating your overall lab score.
2nd Excused Absence: A quiz will be given for the missed lab OR the final lab exam score will be used to replace the missed lab score.

Any further absences will result in a zero grade for the lab irrespective of the reasons. If you are absent for 4 or more lab periods, you will NOT be allowed to take the lab final and are expected to withdraw from the course. If you are not withdrawn by the deadline, you will be issued a WU grade.

INC grade: There is no INC grade for this course. If your grade is suffering due to absences in the lab, you are expected to withdraw on time and re-enroll for the next semester.

Course Objectives: Students will continue to learn basic organic lab safety, waste disposal, and techniques, will continue to learn how to keep an organic laboratory notebook, and through the identification of unknowns experiment, start to learn to solve lab problems on their own. At the conclusion of this semester students will be prepared to do organic research if they so choose.

Assessment: You will need to keep a neat, legible laboratory notebook; a lined 100 page, 9 ¾ x 7 ½ inch composition book is best. Your lab instructor will periodically check your notebook, so it must be up-to-date, and will announce when it will be collected for grading. Lab books will not be accepted after the last day of lab class (i.e. Check Out day).
70% - lab book (Report: 35%, Results, 35%).
15% - Performance in the Laboratory (see below).
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The criteria for Performance in the Laboratory:

1. **Safety:** If you do not work safely, you instructor will deduct points at their discretion. **Eye protection and lab coat must be worn at all times in the lab**; penalty for failure to do so is a 0 (zero) for the day and/or dismissal from that day's lab with no possibility of make-up [Points will be deducted from your final grade for safety offenses at instructor's discretion]. Safety shower, eyewash, and fire extinguisher locations must be noted. Chemical waste handling protocols must be observed; if in doubt, ask! Points will be deducted for unsafe practices or violations of waste protocols; You may be ejected from lab and receive a zero (0) for that day's work.
2. **Independence**: Your ability to work and think independently, as determined by your instructor.
3. **Efficiency and Effectiveness**: Your ability to efficiently accomplish the goals of the experiment within the lab time frame. This also includes the quality of your results.

Queens College of the City University of New York
Department of Chemistry and Biochemistry
Organic Chemistry II
Chem 252.1 Lab Schedule, Remsen Annex 352 Spring 2025

Course Requirements:

Prerequisites for Chem 252.1: C or better in Chem 251.4 and 251.1
Pre or corequisite: Chem 252.4 (C or better if prerequisite)

LAB TEXT: *Macroscale and Microscale Organic Experiments*, Williamson and Masters, 7th ed.
Cengage Learning, 2017, ISBN: 978-1-305-57719-0

Chem 252.1 Section Number: 3
Lab Instructor: J. Eduardo Ocando
Instructor's Email: jocando@qc.cuny.edu
Lab Instructor's Office Hour: T 5:30-6:30PM
Lab coat, safety goggles, and required glassware are provided upon check-in.
Coordinator: Prof. William H. Hersh (william.hersh@qc.cuny.edu)
[Note: Students should contact their lab instructor for all lab-related questions.]

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12-13	Finish any uncompleted preps AND continue with Organic Qualitative Analysis	
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15	Lab Final Exam – during Finals week but 1 hour during the same time as lab – exact time and room to be determined.**	

Lab Notes Part 2*: If you have the *Macroscale and Microscale* textbook, use Lab Notes Part 2 for the Organic Qualitative Analysis explanations and experiments, and use the tables of mp's and bp's, and derivative mp's, in your lab instructor's copy of the Williamson *Organic Experiments* book.

**It is up to students to notify the lab instructor early in the semester if there is a conflict with any other exam time.

It is important that you check the Chemistry 252 "Lab Notes Part 1" for details of all experiments, because there are sometimes significant changes from the procedures described in the laboratory manual.

Safety glasses and lab coats are required in the laboratory at all times – even if you already wear glasses.
NO short pants, skirts, or open toe shoes are allowed; tie back long hair.
NO computer, tablet or cell phone use in the laboratory during class activities other than to access electronic text book.
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2. **Independence**: Your ability to work and think independently, as determined by your instructor.
3. **Efficiency and Effectiveness**: Your ability to efficiently accomplish the goals of the experiment within the lab time frame. This also includes the quality of your results.

Queens College of the City University of New York
Department of Chemistry and Biochemistry
Organic Chemistry II

Chem 252.4 **Lecture Syllabus** **Spring 2025**

Course Requirements:

Prerequisites for Chem 252.4: C or better in Chem 251.4 and 251.1
Pre or corequisite: Chem 252.1 (C or better if prerequisite)

Note: a C- in any pre or corequisite will not permit you to take 252.4/252.1!
You must earn a C or better in Chem 252.4 to go on to Chem 371.

You will need access to Brightspace for handouts, including this syllabus. It is your responsibility to provide a valid e-mail address that you monitor. Announcements will be made via Brightspace and as long as you set Brightspace to notify you, by e-mail.

Lecture: Tu, Thurs 2:15 - 4:05 PM, in person. There will be a 10 minute break and I am available then and normally after class if you have questions.

Professor William H. Hersh
Office Hour
Thursday 1:00 PM - 1:50 PM
in Remsen 109 and by appointment if you have class or work scheduled Thursday 1-2 PM.
e-mail: william.hersh@qc.cuny.edu - only way to contact me (college phone does not work)

LECTURE TEXT and on-line Achieve Homework (Required): *Organic Chemistry*, 7th Ed., Loudon and Parise (2021). ***There are many options but you must purchase Achieve alone or as a package (see below); Achieve includes the text book in electronic form (E-book). If you bought 2-term access last semester you can just apply that access to Achieve on the macmillan site. The course code is*** **s6rgf7**. For questions use this link: https://mhe.my.site.com/macmillanlearning/s/article/Achieve-Enroll-in-the-second-term-of-a-course-using-multi-term-access

The Achieve Link for this course is https://achieve.macmillanlearning.com/courses/s6rgf7
If you are asked for the course code, it is s6rgf7 (I know, this is the 3rd time on this syllabus).
Achieve will be active January 13, so you can access the E-book and assignments then. If you have not used Achieve for organic chem yet, there are some ungraded training assignments.

The first class assignment is due Feb. 4 (the third class) but I recommend you do it before the first class.

You will have access to the E-book for 4 years when you buy Achieve, and to Achieve assignments for the number of terms you buy – you should only need one term for Chem 252 Spring 2024. If you rent, you only have access to the E-book for the semester.

Your choices (all prices approximate):
1. Macmillan: go to https://store.macmillanlearning.com and in the Search bar put in the ISBN:
9781319481322 (one term), Achieve and E-book and Solutions Manual: $129.99 (strongly recommended)
9781319335878 (one term), Achieve and E-book only: $109.99
2. QC bookstore, one term Achieve (includes E-book) and the Study Guide/Solutions Manual **(strongly recommended)**: $144.80. If you already have the Solutions Manual, Achieve alone will be less but for some reason is not available at the bookstore now.
I don't know why the prices are higher than from Macmillan.

3. Many purchase options and packages from the Macmillan website but the best prices by far are the above options. The options from Macmillan are there if you want paper copies of the textbook.
https://store.macmillanlearning.com/us/product/Organic-Chemistry/p/1319188427 (or just store.macmillanlearning.com and then search on Loudon).

The text contains many problems - you should do those that appear in the body of the text and at the end of each chapter. These problems will not be graded. ***They should be done together with the required on-line problems (see below); the on-line problems are not enough by themselves to prepare you to do well in this course.***

If you want to understand the lecture material, you must read the textbook chapter before class. For the vast majority of students, it is not possible to understand lecture material if you are seeing it for the first time in class! When you read the textbook and do problems in the text with the reading, plan for a pace of about 4 pages/hour. Do not read it like a novel if you hope to learn the material.

Final piece of advice for how to succeed in organic: ATTEND EVERY CLASS! Attendance has been highly correlated with passing the course with a grade of C or higher.

AN ADVISORY NOTE: THE DROP DEADLINE (W OR CHANGE TO P/NC) HAS BEEN CHANGED FROM THE COVID-ERA LAST DAY OF CLASS TO Tuesday April 1.

WU grades will not be given after April 1 unless you have not done any work or attended class after April 1, and evidently forgot to submit the W request.

DON'T WAIT UNTIL THE LAST DAY - IF YOU WANT TO DROP LECTURE BUT KEEP LAB, YOU NEED THE DEPT. SECRETARY TO DO THIS. SHE IS ONLY HERE IN THE MORNING.

REQUIRED ON-LINE PROBLEMS: You are required to purchase access to the Achieve on-line problem web site for this course. The cost includes the textbook as explained above.

EACH CHAPTER'S ADAPTIVE QUIZ MUST BE COMPLETED BY THE DEADLINE POSTED - except for Chapter 12, EACH QUIZ MUST BE COMPLETED BEFORE WE START THAT CHAPTER IN CLASS. YOU MUST *"ACHIEVE"* THE TARGET SCORE TO GET CREDIT. IT IS 100% OR 0%, all or nothing. THE PURPOSE IS TO FORCE YOU TO READ EACH CHAPTER BEFORE IT IS DISCUSSED IN CLASS. There will be no exemptions. As you do the quiz, you have the options to read (or re-read) the relevant part of the text, or for a point penalty, ask for a hint. If you get problems correct, you will move along to the target faster (hence the adaptive part).

After each chapter is done in lecture, you will have an additional homework assignment in Achieve; due dates will mostly be 2-4 days after the chapter is finished in lecture, and on the day we do recitation problems for the chapter in class. As noted above there are training modules (no points) that you can complete before you start on the chapter problems.

If you need help contact Macmillan tech support by clicking on the blue ? at the bottom of the Achieve left-hand panel, and select the first option.
MACMILLAN TECH SUPPORT: Students can contact tech support online at
https://macmillan.force.com/macmillanlearning/s/
(this is not an email but probably the same site as the blue ? noted above) or by phone at (800) 936-6899.

While studying organic with other students is recommended, you will get the maximum benefit from these problems by doing them on your own, and ***not*** doing them at the last minute.

Recommended: Molecular model kit (available on-line, about $20-60; the ~$30 kits on Amazon look good)

LAB TEXT (Required): *Macroscale and Microscale Organic Experiments*, Williamson and Masters, 7th ed.
Cengage Learning, 2017, ISBN: 978-1-305-57719-0

Grading:	**3 1 hour Midterm Exams**	**63%**
	On-line Achieve Adaptive pre-class Quizzes	**5%**
	On-line Achieve after-lecture homework	**5%**
	Final Exam	**27%**
	Total	**100%**

The final exam will be similar to the midterm exams. The midterm exams will be given at the beginning of the class, followed by a break and a 30 minute lecture (approximately) after each of the midterm exams.

Exams will stress lecture material and recitation problems.
Bring photo ID to exams.
You will be allowed to bring only to the Midterm Exams (not the Final Exam) an 8.5x11 inch "help" sheet – fill in both sides as you wish. No magnifying glass allowed. They will not be collected.

You ***will*** be permitted to use molecular models during exams. You will ***not*** be permitted to use books, notes (except for the help sheet on the midterms, but ***not*** the final), computers, or calculators during exams. Cell phones are strictly prohibited during exams. If you have any questions concerning the grading, contact Dr. Hersh within 10 days following the exam.

There are absolutely no regrades for exams taken in pencil. If you want to have the possibility of a regrade, you must take the exam in pen, and submit the exam for regrade within 10 days.

All re-grade requests must be made in writing and attached to the exam; do not *under any circumstances* write anything on the exam itself. **Exams are scanned prior to being returned.**

If you miss a midterm exam, written verification of your reason for missing the exam is required. If it is a doctor's note, it must be a different last name than yours. There are no make-up exams; your midterm grade will be the average of the midterms you have taken.

Cheating of any kind will not be tolerated. Your entire exam grade will be zero, and you will be brought up on charges of academic dishonesty to the College.

Approximate Lecture and Examination Schedule

Date	Chp	Topic	Suggested Chapter-End Problems
Jan. 28	12	Ethers, Epoxides, Glycols, and Sulfides	46-66, 76, 87
Feb. 4	13	Infrared Spectroscopy (IR) and Mass Spectrometry (MS)	29-37,42-45a, 46,47a,c, 48,50,51a,b, 52
Feb. 11	14	Nuclear Magnetic Resonance Spectroscopy (NMR)	11.57-59, 11.73;
		(See also Chp 11, p. 598-606)	14.37, 39, 41a-f,i, 42a-f,i,j, 43-45, 48a-d
Feb. 25	15	Dienes and Aromaticity	37-40, 45-58, 60-61, 64-66, 70-72, 79, 82
Mar. 11 Exam 1 Chapters 12-14			
Mar. 13	16	Chemistry of Benzene and Its Derivatives	38-43, 47, 52, 54, 67, 71
Mar. 20	17	Allylic and Benzylic Reactivity	20-26, 29, 30, 32-37, 41, 45, 46, 50, 54, 55
Mar. 27	18	Aryl & Vinylic Halides, Phenols, & Transition Metal Catalysis (skip 18.5-6, 18.10b)	46-48, 50, 53, 55, 56, 62, 76, 77, 88, 89
April 3 Exam 2 Chapters 15-17			
Apr. 3	19	Aldehydes and Ketones	41-44, 48-55, 59, 68, 69
Apr. 10	20	Carboxylic Acids	31, 33-36, 38, 41, 43-45, 48-50, 60, 63a-d,f-l, 71a
Apr. 24	21	Carboxylic Acid Derivatives	32-34, 35b,f, 36-42, 44a-d, 45a-g, 58, 60
May 1	22	Enolate Ions, Enols, and α,β-Unsaturated Carbonyl Compounds	52-59, 64-66, 67a-h,k, 68, 69b, 71*, 72, 89 *typo in problem, look up mesityl oxide
May 8 Exam 3 Chapters 18-21			
May 15	23	Amines	44, 45a, 46-48, 51-54, 55a-d,g, 56a-i, 66, 67a-e, 80
May 20 or 22 (tentative), Final Exam: Chapters 1 – 23 but strong emphasis on 12-23.			

College Closed Wed. Jan. 29, Wed. Feb. 12, Monday Feb. 17, Monday March 31.
No lecture Tuesday Feb. 18 (Monday schedule) and Thursday March 6 – (Wed. schedule)
Spring Break April 14-18

Course Preparation and Advice: Understanding the basic concepts from Organic Chemistry I is critical. Attend every class and read the book before lecture; take seriously the instructions that you really do need to know and understand every reaction (no exceptions). Do problems in the text, and do the on-line problems on your own and not at the last minute – take your time and understand them. Understanding mechanisms will help you remember the reactions. In most cases hiring a tutor will not help and most likely will be a hindrance because you will rely on the tutor rather than yourself.

Most students find the on-line Achieve homework helpful. It is simply another tool to help you understand the material, but by itself will not prepare you for exams. The only way the problems can be helpful is if you do them on your own and use the book or the hints to try figure out problems that you do not get correct the first time.

Course Objectives: Students will complete their initial one-year course in organic chemistry, with topics including spectroscopy, dienes and aromatic compounds, the chemistry of the carbonyl and related functional groups, and amines. At the conclusion, students will have a solid foundation in organic chemistry that will enable them to carry out organic chemistry research and understand the molecular basis of biochemical processes.

Assessment: Contrary to its reputation, success in organic chemistry depends far more on understanding of course material than on rote memorization. Problem solving ability will be tested on exams, and representative problems will be discussed in lecture recitations and will be found in the textbook, on the Brightspace course site, and in graded on-line problems for each chapter. Careful reading of the textbook prior to lectures, and attendance at all lectures, is strongly recommended.

Understanding of the course material will be assessed via three midterm exams and one 2 hour final exam. Since organic chemistry is a cumulative subject, it is not possible to succeed in this course without knowing the first semester material, so any exam is in effect cumulative.

GRADE KEY. This course is not graded on a curve. Everyone in the class can get an A, or everyone can get an F. There is no predetermined percentage of the class that will get any particular grade. The key for all exams is shown below, except for + and – cutoffs. For instance, while "A" is shown as 80-100, an average of 80 will be an A-, and while "B" is shown as 65-79, the cutoffs are approximately 1/3 in each range, i.e. around 65-69 B-, 70-74 B, 75-79 B+. The exact ranges will not be given out except for the C cutoff, since you need a C to go on to further chemistry courses.

The ranges given will never be raised, but they have on occasion been lowered if a test was too hard. Tests in this course average around 50. Since I am constantly asked to use the ACS final, please read the following: I will not be using the ACS final. It is often available on the Internet, and so it is no longer used at Queens. It is not easier than the tests I give, and the average grade on the ACS exam is 50. No one gets a perfect score on the ACS organic final, and almost no one gets above 90%.

Chem 252 exam and course grade key:

80-100 A
65-79 B
55-64 C
50-54 C-
40-49 D
0-39 F

From Queens College, Jan. 2, 2025:

The Office of Special Services (SPSV) is committed to supporting students with qualifying disabilities under the Americans with Disabilities Act (ADA) by providing reasonable accommodations to ensure equal access. If you have previously received accommodations due to a disability, believe you may have a disability, or have a temporary disability, please visit the office's website (https://www.qc.cuny.edu/sp/) for further information on the assistance they can offer you. Accommodations are not retroactive, so you are encouraged to get registered sooner rather than later. You may also contact their office at qc.spsv@qc.cuny.edu or call 718-997-5870 during office hours for assistance as well.

Department of Chemistry & Biochemistry SP 2025
Chem. 114.4 sec 1, 42921

1. Lecture Instructor Information

Lecturer:	Dr. Sheila Sanders
Office:	Remsen 206-D (Chemistry & Biochemistry Department)
Office Hours:	Tu 12:30 – 1:00 pm or appointment by email
Contact:	ssanders@qc.cuny.edu
	(every effort will be made to respond by email within 24 hrs)

2. Course Information & Description

	In-Person
Lecture Times:	M 9:30 – 11:20 am & W 9:30 – 10:30 am, Remsen 101
Recitation Times:	W 10:30 – 11:20 am, Remsen 101

Items Required: Internet Access, Google Chrome, CUNYfirst account, CUNY Blackboard, Office 365, scientific non-graphing calculator, ALEKS access card for on-line assignments
Textbook: Chemistry, 15th edition by Overby. The eBook is available with purchase of the on-line assignments.

GENERAL Chemistry 114.4 is the second semester of a two-semester science majors/pre-health professions level introductory college chemistry course. The lecture meets for 3 hours weekly, and the recitation meets for one 50-min. period weekly. The laboratory course 114.1 is a separate co-requisite for chemistry 114.4 and is administered and graded separately. This course is required for more advanced study in chemistry, biochemistry, and biology. It is intended for students in the physical and life sciences, science education, pre-health professional students, and pre-engineering students and is designed to provide a thorough knowledge of facts and theory in the fundamental areas of chemistry. As appropriate, topics are presented in terms of contemporary scientific issues such as global warming, energy production, and hazardous waste.
The relationship between chemistry and society is discussed. This course requires a large quantity of work in ALEKS.

Learning Objectives:

- Develop an understanding of intermolecular forces
- Understand quantitative aspects of phase changes
- Interconvert concentration units
- Understand colligative properties of solutions
- Determine the extent of chemical reactions
- Solve problems involving rates and mechanisms of chemical reactions
- Identify and solve problems involving acids and bases
- Solve equilibrium problems
- Develop an understanding of chemical change and electrical work

3. Grading Policy & Types of Assignments

Official Queens College Grade Scale:
https://www.qc.cuny.edu/Academics/SupportPrograms/advising/Academic-and-Grading-Policies/Pages/Default.aspx

15% ALEKS Homework: Aleks homework should be completed one week after we cover the full chapter in lecture; however, the official due date is May 17 th. After every few modules, there may be a *"Post Objective Progress Assessment"* – **Do not click "I don't know" unless you don't know. This will set you back. There will be no extensions.**

50% Exams: Mid-term exams will be based on topics covered in lecture and recitation. The format may be a combination of the following: *Multiple Choice, Fill in the blank, Definitions, Short Response and Long Answer Calculations*. Exams will be given **in-person** in Lecture or Recitation
There are no make-up exams.

25% ACS-style Final: The American Chemical Society-style examination is a 50 – 60 question multiple choice comprehensive examination. It will be given **in-person** at the end of the semester.
Check cunyfirst for the final exam date and time.

10% Quizzes: Quizzes will be based on topics covered in recitation and lecture. The format may be a combination of the following: *Multiple Choice, Fill in the blank, Definitions, Short Response and Long Answer Calculations*. Quizzes will be given **in-person** in the Lecture and Recitation sessions.
There are no make-up quizzes.

4. Tentative Lecture Schedule

Date	Theme/Topic
M 1/27	Introduction; Chp. 11 Intermolecular Forces and Liquids and Solids
W 1/29	College Closed
M 2/3	Chp. 11 Intermolecular Forces and Liquids and Solids
W 2/5	Chp. 12 Physical Properties of Solutions
M 2/10	Chp. 12 Physical Properties of Solutions
W 2/12	College Closed
M 2/17	College Closed
T 2/18*	Chp. 12 Physical Properties of Solutions
W 2/19	Chp. 13 Chemical Kinetics
M 2/24	Chp. 13 Chemical Kinetics
W 2/26	Chp. 13 Chemical Kinetics
M 3/3	Exam #1
W 3/5	Chp. 14 Chemical Equilibrium
R 3/6*	Chp. 14 Chemical Equilibrium
M 3/10	Chp. 14 Chemical Equilibrium
W 3/12	Chp. 15 Acids and Bases
M 3/17	Chp. 15 Acids and Bases
W 3/19	Chp. 15 Acids and Bases
M 3/24	Chp. 16 Acid-Base Equilibria and Solubility Equilibria
W 3/26	Exam #2

M 3/31	College Closed
W 4/2	Chp. 16 Acid-Base Equilibria and Solubility Equilibria
M 4/7	Chp. 16 Acid-Base Equilibria and Solubility Equilibria
W 4/9	Chp. 17 Entropy, Gibbs Energy, and Equilibrium
M 4/14	Spring Recess; College Closed
W 4/16	Spring Recess; College Closed
M 4/21	Chp. 17 Entropy, Gibbs Energy, and Equilibrium
W 4/23	Chp. 17 Entropy, Gibbs Energy, and Equilibrium
M 4/28	Chp. 18 Electrochemistry
W 4/30	Chp. 18 Electrochemistry
M 5/5	Exam #3
W 5/7	Chp. 18 Electrochemistry
M 5/12	Chp. 23 Coordination Chemistry
W 5/14	Review for final exam

The schedule is tentative; the instructor will notify students in writing of any changes.

The final exam will be a comprehensive 2-hour American Chemical Society-Style exam. Check cunyfirst for the date.

Any changes to the exam dates will be announced in class at least 1 week in advance. There will be no make-up exams.

5. How to access ALEKS

For this course you will be required to purchase McGraw-Hill Education **ALEKS Access** for Chemistry, 15th edition by Overby. You are not required to have a print text and please be aware if you purchase a used textbook, you will still need to purchase access to ALEKS (which includes access to the eBook).

How to access Aleks HW:

Go to the Content section of Blackboard, click on the Queens ALEKS link, and log in (if you've used ALEKS before) or click the 'New Student? Sign Up

Now' Button in yellow. Then enter course code: **JNL4P – P3XPE** and click 'Continue'. Check that the section is correct, if so, click 'Continue' again. Choose 'I have never used ALEKS before or I do not have an ALEKS login name' and 'Continue'. Enter your ALEKS Registration Code (provided on access card shipped to you, after purchasing from the QC Online Bookstore), enter the code and click 'Continue'. If you haven't received your Registration Cards yet, you can use the Financial Aid Access Code, **96C71-C99DD-04C86-1C043**, but **be sure to purchase access at above immediately, as it will take 7-10 business days to ship**. Complete the remaining steps to finish registering for ALEKS.

6. Important Notes

- This course requires a large quantity of work in ALEKS.
- Please purchase the Aleks homework as soon as possible **(within the first week)**. It will take a week to deliver and your courtesy access is only available for two weeks. Do not wait until your courtesy access expires. No student will be exempt from completing the ALEKS assignments.
- There will be **no** extensions on ALEKS assignments. The date is posted and set.
- There will be **no** make-ups. If you know you will miss an exam, please contact me **in advance**.
- There will be **no** extra credit provided at the end of the semester.
- An INC grade will not be given when a student is failing the course.
- The last day to withdraw from or P/NC a course is Tuesday, April 1st.
- Problems within and at the end of each chapter should be completed for additional practice.
- There will be **no** curve in this class.
- No material (now or in the future) obtained from this course can be distributed, sold, or purchased.

Automatic Withdrawal with W: deadline is 4/1. If you are not passing the course by this deadline, you will have to make a choice between staying in the course for whatever letter grade you get OR apply for W to avoid a hit

to GPA. A failing student will not be eligible to apply for retroactive withdrawal or INC grade request later in the course.

Requests for Retroactive Withdrawal for current semester, INC grade: Evidence of good score in the exams/quizzes/homework indicating a passing grade in the course and sudden emergency situations preventing completion of the course is the minimum requirement for consideration. Talk to your instructor for options if you have a genuine situation. We are here to help.

REASONABLE ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Students requiring a disability accommodation, or need technical assistance with accessible course materials, should contact:

Wahidur Roni
Disability Accommodation Specialist
Office of Special Services for Students with Disabilities
Email: wahidur.roni@qc.cuny.edu

Students are allowed to register with the department anytime while attending Queens College, but it is recommended that they do it as soon as possible so they can be accommodated properly.

CUNY POLICY ON ACADEMIC INTEGRITY

Academic Dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion as provided at

https://www.cuny.edu/about/administration/offices/legal-affairs/policies-resources/academic-integrity-policy/

Statement on student wellness

As a student, you may experience a range of challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may diminish your academic performance and/or reduce your ability to participate in daily activities. QC student wellness services are available free of charge. You can learn more about confidential mental health services available on campus at: Counseling Services Department.

Use of Student Work

All programs in New York State undergo periodic reviews by accreditation agencies. For these purposes, samples of student work are occasionally made available to those professionals conducting the review. Anonymity is assured under these circumstances. If you do not wish to have your work made available for these purposes, please let the professor know before the start of the second class. Your cooperation is greatly appreciated.

Course Evaluations

During the final four weeks of the semester, you will be asked to complete an evaluation for this course by filling out an online questionnaire. Please participate in these course evaluations. Your comments are highly valued, and these evaluations are an important service to fellow students and to the institution since your responses will be pooled with those of other students and made available online. Please note that all responses are completely anonymous; no identifying information is retained once the evaluation has been submitted.

Tutoring or Other Support Services

QC offers different academic support services. The QC Learning Commons provides peer tutoring, study spaces and other services. The Writing Center is a multilingual academic and intellectual support space where Queens College students work in collaboration with peer tutors to improve their writing.

Technical Support

Students who need help with their Queens College accounts (email, CUNY portal, Brightspace, and CUNYfirst) can call the ITS help desk at 718-997-4444 Monday to Friday from 9 am to 5 pm or email Support@qc.cuny.edu. For more information, visit Information Technology Services

Students can use desktop computers in the Powdermaker Hall 210 computer lab or in the library, as well borrow loaner laptops: Computers & Printing – Queens College Library).

Biochemistry I (Chemistry 371/650) – Spring 2025

Syllabus and Tentative Schedule

Lectures: TUE, THU 12:10 -2:00pm, REMSEN 101
Instructor's Name: Professor Iva Burdett, Ph.D. (**Email:** iva.burdett@qc.cuny.edu)
Office Hours: Thursdays 2:30pm-3:30pm or by appointment

Course Structure:

1. **ALL LECTURES and EXAMINATIONS will be held In-Person (Remsen 101)**
2. Book: Lehninger Principles of Biochemistry by David L. Nelson and Michael M. Cox, 8th Edition, W. H. Freeman and Company;
3. Two Midterms (30% Each) and a Cumulative Final Examination (40%)

Learning Goals: Structure, properties, biosynthesis, and metabolism of major groups of compounds of biological importance: proteins, amino acids, carbohydrates, lipids, and coenzymes. The course emphasizes the relationship between the biochemical pathways and their location in the cell as well as metabolic regulation.

General Guidelines: You must appear in all three class examinations. Please note that there will be NO makeup examination, in general. In case of an emergency that you are unable to attend an examination, a legal valid proof of absence must be presented. If you are unable to furnish a valid proof of absence within a reasonable time period, a zero grade will be assigned for the examination. It is strongly recommended that you study the entirety of the Chapters listed below in the schedule. Lecture slides are not enough to master or even vaguely grasp the material. Lecture time is limited and will be used to highlight the most important concepts, as it is not possible to cover all the details that the book already explains. It is anticipated that the reading assignments will help you understand the lecture material much more effectively. Exams will be based on the material written in the book. You must obtain a valid Queens College email id, so you can access the course materials online, posted periodically on Brightspace. Please check Brightspace to ensure you are getting notifications and alerts and that you can see the course materials. If you encounter an issue, please notify your instructor as soon as possible.
The use of cell phones is NOT permitted during exams. Use of a scientific calculator is permitted.

Only Applicable to **Chem 650 Students: As part of this course, you are required to write a mini research review article (4-6 pages (excluding References), 1.5 spacing, font size 11), and submit it electronically via the link provided on Brightspace on or before **May 22, 2025. at 11:59pm. (NO late submission will be accepted).** The topics will be announced in Brightspace. This report will constitute 10% of your total overall grade. **[Caution: Be very aware that plagiarism and the use of AI are not allowed]. Students registered for 371 can not use the research review in lieu or in addition to exams.**

Available accommodation for students with learning disabilities: Students with disabilities needing academic accommodation should register with the Special Services Office by emailing QC.SPSV@qc.cuny.edu. For more information about services available to Queens College students, visit the Office of Special Services website:
https://www.qc.cuny.edu/studentlife/services/specialserv/Pages/default.aspx
Counseling Services are also available to any Queens College student. This office assists students with personal concerns that can affect their enjoyment of and success in college. Services are free and confidential. All sessions take place on Zoom or by Telephone, depending on student preference. To make an appointment, students should call 718-997-5420 and leave a message with their phone number and CUNY ID. They may also e-mail counselingservices@qc.cuny.edu

CUNY Policy on Academic Integrity: Academic dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion as provided at https://www.cuny.edu/about/administration/offices/legalaffairs/policies-procedures/academic-integrity-policy/

W and WU Grade policy – THE DROP DEADLINE (W OR CHANGE TO P/NC) HAS BEEN CHANGED FROM THE COVID-ERA LAST DAY OF CLASS TO APRIL 1, 2025. Students who do not officially withdraw by April 1 (and receive a W grade) but stop attending classes and do not participate in any way after the withdrawal date will be given a WU grade. Any participation in class (i.e., lab work, homework, taking quizzes and exams) after the withdrawal date will disqualify you from receiving the WU grade, and you will be given the appropriate letter grade.

Restrictions on Sharing of Posted Lecture Materials: Lecture materials that are posted (such as presentations, lectures, welcome video clips etc.) are shared with the class for the purpose of facilitating the learning experience and are not to be copied, downloaded or shared with anyone outside of the class.

Queens College Classroom Recording Policy: Audio or video recordings of all or parts of classes at Queens College may not be made without permission from the course instructor(s). The Office of Student Affairs and the Office of Special Services may provide for the recording of classes on behalf of a student receiving disability accommodations, missing class due to religious beliefs, or experiencing extended absence due to medical or other exigent circumstances. The Queens College Classroom Recording Policy applies to both students and visitors. Students and visitors are not authorized to copy, download, or disseminate authorized recordings to others. Students in violation of this policy are subject to disciplinary action, and visitors in violation of this policy are subject to removal from the classroom and/or campus.
Reasonable Accommodations for Students with Disabilities: Students with disabilities needing academic accommodation should register with the Special Services Office by emailing QC.SPSV@qc.cuny.edu.
The Office of Special Services (SPSV) is committed to supporting students with qualifying disabilities under the Americans with Disabilities Act (ADA) by providing reasonable accommodations to ensure equal access. If you have previously received accommodations due to a disability, believe you may have a disability, or have a temporary disability, please visit the office's website

(https://www.qc.cuny.edu/sp/) for further information on the assistance they can offer you. Accommodations are not retroactive, so you are encouraged to get registered sooner rather than later. You may also contact their office at qc.spsv@qc.cuny.edu or call 718-997-5870 during office hours for assistance as well.

Tentative Schedule of Classes and Exams (Subject to modifications, when required)

DAY	DATE	TOPIC
TUE	28-Jan	Chapter 1 - Foundations of Biochemistry
THU	30-Jan	Chapter 2 - Structure of Water & Chapter 3 - Amino Acids, Peptides and Proteins
TUE	4-Feb	Chapter 3 - Amino Acids, Peptides and Proteins
THU	6-Feb	Chapter 4 - The 3-D Structure of Proteins
TUE	11-Feb	Chapter 4 - The 3-D Structure of Proteins
THU	13-Feb	Chapter 5 - Protein Function (Hemoglobin and Allosteric Regulation)
TUE	18-Feb	NO CLASS - MONDAY SCHEDULE
THU	20-Feb	Chapter 5 - Protein Function (Hemoglobin and Allosteric Regulation)
TUE	25-Feb	Chapter 6 - Enzyme Catalysis and Enzyme Kinetics
THU	**27-Feb**	Chapter 6 - Enzyme Catalysis and Enzyme Kinetics
TUE	4-Mar	**Midterm Exam I - Chapter 1, 2, 3, 4, 5, 6**
THU	6-Mar	NO CLASS - WEDNESDAY SCHEDULE
TUE	11-Mar	Chapter 7 - Carbohydrates and Glycobiology
THU	13-Mar	Chapter 10 - Lipids & Chapter 11 - Biological Membrane and Transport
TUE	18-Mar	Chapter 11 - Biological Membrane and Transport & Chapter 12 - Signal Transduction
THU	20-Mar	Chapter 13 - Bioenergetics and Introduction to Metabolism
TUE	25-Mar	Chapter 14 - Glycolysis, Gluconeogenesis, and the Pentose Phosphate Pathways
THU	27-Mar	Chapter 14 - Glycolysis, Gluconeogenesis, and the Pentose Phosphate Pathways
TUE	1-Apr	Chapter 15 - Glycogen Metabolism
THU	**3-Apr**	Chapter 16 - The Citric Acid Cycle
TUE	8-Apr	**Midterm Exam II - Chapter 7, 10, 11, 12, 13, 14, 15 (no 16)**
THU	10-Apr	Chapter 16 - The Citric Acid Cycle
TUE	15-Apr	NO CLASS - SPRING RECESS
THU	17-Apr	NO CLASS - SPRING RECESS
TUE	22-Apr	Chapter 17 - Fatty Acid Catabolism
THU	24-Apr	Chapter 17 - Fatty Acid Catabolism
TUE	29-Apr	Chapter 18 - Amino Acid Oxidation and The Production of Urea
THU	1-May	Chapter 18 - Amino Acid Oxidation and The Production of Urea
TUE	6-May	Chapter 19 - Oxidative Phosphorylation
THU	8-May	Chapter 19 - Oxidative Phosphorylation
TUE	13-May	Chapter 23 - Integration of Metabolism
THU	15-May	Chapter 23 - Integration of Metabolism; Final Thoughts and Review
THU	**22-May**	**FINAL EXAM, cumulative, 11:00am-1:00pm Remsen 101**

Chemistry and Biochemistry Department, Queens College - CUNY

CHEM 1011- Basic Chemistry Lab (Spring 2025)

Section Number: 101/5 [42907]

Instructor's Full Name: **Abderrahim Chouaib**

Instructor's Email: Abderrahim.Chouaib@qc.cuny.edu

Instructor's Office Hour: Wednesdays 6:30pm, email me for appointment

Other required items: A scientific or graphing calculator is required and can be purchased anywhere. Note that lab coat, safety goggles, and required glassware are provided upon check-in.

Pre-Requisite/Co-Requisite: Chem 1013

Coordinator: Prof. Iva Burdett (iva.burdett@qc.cuny.edu)

[Note: Students should contact their lab instructor for all lab-related questions.]

Syllabus

I. Laboratory Course Format- Hybrid

A. ALL In-person lab sessions will be held on Queens College campus in Remsen 151 at your scheduled time and day.

B. Attendance is mandatory. A missed lab will receive no credit. Students must report to lab on time. There is NO make-up for any missed laboratory experiment.

C. A lab can only be excused with documentation relating to an unplanned emergency (medical or legal) or religious observance. If you cannot attend the lab due to the COVID quarantine requirement, a COVID test record must be provided afterwards.

D. Attendance will be taken at 6:40 pm. Due to safety concerns, any student that arrive after 7:00 pm will not be allowed to perform the experiment.

II. Learning Outcomes

This course satisfies the following two Queens College General Education learning outcomes: QC 1: Address how, in the discipline (or disciplines) of the course, data and evidence are construed and knowledge is acquired; that is, how questions are asked and answered. QC 2: Position the discipline(s) in the liberal arts curriculum and the larger society

This QC College Option SCI course satisfies the following three learning outcomes:

SCI 1: Familiarity with a body of knowledge in the physical or biological sciences.

SCI 2: Successful study of the methods of science, including the use of observation, the information of hypotheses and the testing of models.

SCI 3: Experience and awareness of the impact of science on modern society

This course satisfies the Life and Physical Science (LPS) requirements of the Pathways General Education Required Core

LPS 1: Identify and apply the fundamental concepts and methods of a life or physical science.

LPS 2: Apply the scientific method to explore natural phenomena, including hypothesis development, observation, experimentation, measurement, data analysis, and data presentation.

LPS 3: Use the tools of a scientific discipline to carry out collaborative laboratory investigations.

LPS 4: Gather, analyze, and interpret data and present it in an effective written laboratory or fieldwork report.

LPS 5: Identify and apply research ethics and unbiased assessment in gathering and reporting scientific data.

III. General Laboratory Rules

Failure to adhere to safety guidelines may result in your removal from the lab and an automatic failure for that experiment. Always listen carefully to your lab instructor for safety precautions and procedure modifications. If an accident occurs, notify your lab instructor immediately.

A. Always wear safety goggles.

B. NO short pants, skirts, open toe shoes are allowed; tie back long hair; secure all loose clothing.

C. NO food, beverages, gum, horseplay, or unauthorized experiments allowed.

D. NO computer, tablet or cell phone use in the laboratory during class activities.

E. Never leave a flame unattended.

F. All chemical waste must be disposed of properly. Your instructor will provide you with specific instruction at the beginning of each lab regarding how to handle the chemical waste for that experiment.

IV. Laboratory Manual

A custom laboratory manual is used and is available free of charge, posted on the BlackBoard in the Content Section.

V. Grading:

Each lab is graded for 100 points distributed as follows –

10% Prelab Questions

10% Post-lab Assignments

60% Lab Report

20% Experimental Final Exam.

All laboratory experiments are to be performed individually (and evaluated by the instructor). There are no team experiments. Each person registered for lab is to perform each laboratory experiment individually.

A. There are pre-labs, lab write-ups, report sheets, and post-lab questions for all experiments performed. Bring the lab write-ups for each scheduled lab. **Students who fail to bring the lab write-up for the scheduled lab to class will not be permitted to enter the lab.**

B. A pre-lab activity, posted on **Blackboard**, is due before the beginning of each lab. Each pre-lab is based upon the background and procedure for the lab activity to be conducted and will be available for one week prior to the scheduled lab. Before you come into class, you are required to read the laboratory procedure, as well as the background information pertaining to the lab that will be performed that day.

C. Data measured in laboratory is to be recorded directly on your report sheets. Report sheets can be located at the end of each lab write-up document (located under the content tab in Blackboard). Each student must print their own lab write-up. Report sheet will be collected at the end of each lab experiment. Failure to hand in a lab report will result in a grade of zero for that lab, which will be averaged into your overall laboratory grade.

D. If you have attended all the labs without any absences, one lowest scored lab sheet will be dropped from your final lab reports average.

E. Each lab experiment will have a post-lab activity posted on **Blackboard**. Each postlab is due before the next scheduled lab (generally one week later).

F. **Final Exam** will be conducted in person and will include an experiment each student will perform individually. The details will be uploaded to blackboard and discussed in lab prior to the date of the final exam. **There are no make-ups for the FINAL EXAM. If you miss the Final Exam for the lab, you will be given a grade of zero (0) for the test and your grade will be calculated according to the grading formula.**

VI. Attendance policy

This is a laboratory class with a limited capacity in the classroom. As a result, there are NO make-up options (Excused or Unexcused) for any missed lab. YOU ARE EXPECTED TO ATTEND ALL LAB SESSIONS. If you miss a lab class due to QC approved religious reasons OR due to emergencies, inform instructor and make sure it is excused. A valid documentation for the excused absence will be required. If a doctor's note, it must be on the doctor's letterhead and signed by a physician with a different last name from the student, and a statement that the physician is not a relative of the student.

Unexcused absences are given a zero and included in the calculation of final lab score.

In case of absence(s), the following policy will be adopted:

1st Excused Absence: The missed lab will be excluded from calculating your overall lab score.

2nd Excused Absence: A quiz will be given for the missed lab OR the final lab exam score will be used to replace the missed lab score.

Any further absences will result in a zero grade for the lab irrespective of the reasons. If you are absent for 4 or more lab periods, you will NOT be allowed to take the lab final and expected to withdraw from the course. If you are not withdrawn by the deadline, you will be issued a WU grade.

INC grade: There is no INC grade for this course. If your grade is suffering due to absences in the lab, you are expected to withdraw on time and re-enroll for the next semester.

VII. Other Important Information

(i) If you drop the course, you must check-out ASAP! Otherwise, you do so at the normal time on the final check-out day. If you do not check-out, you will be charged a fine as listed in the stockroom.

(ii) On the check-in day, a combination lock will be issued to you.

(iii) **Code of Conduct**

A. Plagiarism- Plagiarism or any other forms of cheating is NOT tolerated and will be severely punished by point, other penalties, and/or referral to the Chairman and the Dean; Any assignment involved will receive a grade of zero. Failure to appropriately cite a source of information may also be considered plagiarism.

B. Inappropriate Behavior, e.g., horseplay or off-color language, oral or written, will NOT be tolerated and may lead to expulsion from class and a grade of zero.

(iv) COVID-19 Issues: If you have COVID-19, symptoms thereof, or otherwise ill, do not come in, stay home, seek medical advice, and inform your instructor AND coordinator ASAP.

(v) CUNY Legal Notice on Live Recordings:
When applicable: "Students who participate in this class with their camera on or use a profile image are agreeing to have their video or image recorded solely for the purpose of creating a record for students enrolled in the class to refer to, including those enrolled students who are unable to attend live. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live."

(vi) Available accommodation for students with learning disabilities: Candidates with disabilities needing academic accommodation should: 1) register with and provide documentation to the Special Services Office, Frese Hall, Room 111; 2) bring a letter indicating the need for accommodation and what type. **This should be done during the first week of class.** For more information about services available to Queens College candidates, visit the website, or contact: Special Service Office; Director, Miriam Detres-Hickey, Frese Hall, Room 111; 718997-5870 (Monday – Thursday 8:00 a.m. to 5:00 p.m. & Friday 8:00 a.m. to 4 pm.).

(vii) Counseling Services are also available to any Queens College student. This office assists students with personal concerns that can affect their enjoyment of and success in college. Services are free and confidential. All sessions take place on Zoom or by Telephone, depending on student preference. To make an appointment, students should call 718-997-5420 and leave a message with their phone number and CUNY ID. They may also e-mail: counselingservices@qc.cuny.edu

(viii) CUNY Policy on Academic Integrity: Academic Dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion as provided at https://www.cuny.edu/about/administration/offices/legalaffairs/policies-procedures/academic-integrity- policy/. Please read this document, paying careful attention to the sections on plagiarism and Internet plagiarism. If you are not sure how to cite work you have found on the internet, please review the APA Guidelines provided by the Purdue OWL.

Schedule of Experiments

Week	Date	Experiment
1	01/28/25	Check-in, Safety Video, #1 – The Bunsen Burner
2	02/04/25	#2 – Laboratory Measurements
3	02/11/25	#3 – Conversion Factors
4	02/25/25	#4 – Density
5	03/04/25	#5 – Determination of the formula of a Metal Oxide
6	03/11/25	#6 – Water of Hydration
7	03/18/25	#7 – Chemical Reactions Part 1: Combination and Decomposition Reactions
8	03/25/25	#8 – Chemical Reactions Part 2: Single and Double Replacement Reactions
9	04/01/25	#9 – Calorimetry
10	04/08/25	#10 – Kinetics
11	04/22/25	#11 – Equilibrium
12	04/29/25	#12 – Charles's Law
	04/12/25	**NO CLASS - SPRING RECESS**
	04/20/25	**NO CLASS - SPRING RECESS**
13	05/06/25	#13 – Analysis of Vinegar by Titration
14	05/13/25	Check-out
15	05/20/25	FINAL EXAM

Department of Chemistry and Biochemistry
Queens College CUNY

Basic Biochemistry Lecture [CHEM 1033] Syllabus for Spring 2025

I. KEY INFORMATION

Instructor:	**Dr. Eleonora Gianti**
Email:	eleonora.gianti@qc.cuny.edu
Email etiquette:	Always use "**CHEM1033**" in the subject line for prompt communication.
Lecture Times:	Tuesdays and Thursdays 11:00 AM – 12:15 PM, Remsen Hall (RE) 105
Office Hours:	Tuesdays 2:00 PM – 3:00 PM (RE 120F) or by appointment (e.g., for documented conflict). Generally, will be held in person. For full instructions, please refer to Brightspace.
Course description:	**CHEM 103.3, Basic Biochemistry, 2 lectures, 3 cr.**

Pre-requisite: A grade of C or better in CHEM 102.3 and CHEM 102.1; corequisite: CHEM 103.1. This is the third course of a three-semester sequence intended for students planning careers in the allied health fields (nutrition, dietetics, and nursing). The course presents a study of the structure, properties, and metabolism of the major groups of biological importance, with special emphasis on the role of those compounds required for a healthy diet. *This course fulfills the Pathways Required Core requirements for LPS/COSCI (learning outcomes SCI 1, 2, and 3).*

Course goals/learning objectives.

Students will gain a thorough conceptual foundation for the structural and functional relationships of major biomolecules involved in nutrition (e.g., proteins, nucleic acids, carbohydrates, and lipids), and chemical pathways used by the body to maintain homeostatic control of energy balance.

II. REQUIRED COURSE MATERIAL

Lectures: Classes will be in-person. Any changes in the class schedule will be communicated by your Instructor in class and/or via Brightspace. It is your responsibility to check Brightspace regularly.

Textbook: For this course you will be required to purchase McGraw-Hill ALEKS Access for J.G. Smith, "General, Organic, & Biological Chemistry" (6th Edition).

You are not required to have a print text and please be aware if you purchase a used textbook, you will still need to purchase ALEKS access. ALEKS Access Cards can be purchased in the QC Online Bookstore. The best way to purchase it is using the "ALEKS" link in Brightspace.

ALEKS 360 Online Access for General, Organic, and Biochemistry 6e (18 weeks) – 9781264497003
ALEKS 360 Online Access for General, Organic, and Biochemistry 6e (52 weeks) – 9781264498949

(The latter is probably ideal for students planning on using the book in a subsequent semester.)

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Required tools and accounts:

- Instructions for registering directly into the ALEKS platform (not via Brightspace) can be found here: ALEKS First Day of Class standalone | McGraw Hill (mheducation.com)
  1. Please register by going to: https://ALEKS.com and using course code: **M349F-EG9KG**
  2. Verify that you're registering for the correct class.
  3. Enter your access code (provided on access card shipped to you after purchasing).
  4. If you haven't purchased/received your access code, enter the 20-character Financial Aid Access Code:

     C057E-65CDC-2B99E-C2F58

     Note: This code gives you **temporary** access to ALEKS for a two-week period. Once the code expires, you will be locked out of your ALEKS account until you purchase a regular Student Access Code. **It is highly recommended that you purchase the Student Access Code immediately, as it will take 7-10 business days to ship.**

  5. Next you will see a page with the date your temporary access expires, click "**Continue**."
  6. You will arrive at the **My Classes** page.
  7. You can extend your access to your new class at any time by selecting "**Extend access**" from the class tile menu and enter your new access code. **You do not need to create a new ALEKS account to continue your class**.

  How does Aleks work: At the start of the semester, you will be given an assessment that determines what you know and what you do not know. **During any assessment, do not hit the "I Don't Know" button unless you REALLY do not know how to work a problem.** Afterwards, your individual homework space will be populated based on the topics defined by the instructor and by what you have demonstrated that you already know.

- Computer and Wi-Fi access, Brightspace access, **CUNY email account access**.
  For technical support for your QC email or CUNY First account, contact the QC helpdesk: helpdesk@qc.cuny.edu

Important Notes:

- This course requires a large quantity of work in ALEKS; be prepared to a significant weekly workload working in ALEKS.
- Please purchase the ALEKS homework as soon as possible (**within the first week**). No student will be exempt from completing the ALEKS assignments.
- There will be **no extensions on the ALEKS assignments**. You should complete the homework for each chapter **within one week after the chapter is covered in the lecture**. If you find that a different due date is indicated in ALEKS, please ignore it. Assignments are always due within one week, unless notified in writing by your instructor.
- No material (now or in the future) obtained from this course can be distributed, sold, or purchased.

Technical Support: Email Helpdesk@qc.cuny.edu, or call the Student Support Hotline (718- 9973000).

Optional Textbook: OpenStax College. (2019). *Biology2e*. OpenStax. https://openstax.org/details/books/biology-2e/
Digital: **ISBN-13: 978-1-947172-52-4**

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Basic Biochemistry Lecture [CHEM 1033] Syllabus for Spring 2025

III. GRADING AND EVALUATION

The grade is a 10-point grade scale as shown in **Official Queens College Grade Scale** (see also Table below). There will be no curve in this class. No extensions for assignments will be given at student's request. No extra credit provided at the end of the semester at student's request. An INC grade will not be given to a student to avoid an F or WU grade.

Official Queens College Grade Scale (Table will implement official updates):

Grade	Score	Numerical value / Definition
A+	97-100	4.0
A	93-96	4.0
A-	90-92	3.7
B+	87-89	3.3
B	83-86	3.0
B-	80-82	2.7
C+	77-79	2.3
C	73-76	2.0
C-	70-72	1.7
D+	67-69	1.3
D	63-66	1.0
D-	60-62	0.7 (Grade of D- is the lowest passing grade in the undergraduate division)
F	0-59	0.0

ASSESSMENT

The final course grade will be calculated based on:

Three (3) in-person exams (including Exam 1, Exam 2 and the Final Exam) will count together as **75%** (where Exam 1 and Exam 2 will count together as 45%; the Final Exam will count 30%), three (3) quizzes will count together as **15%**, and all objective knowledge checks/Pie Progress on ALEKS (ALEKS grade) will count as **10%** of the final grade.

The material covered on the Final Exam will be cumulative. The instructor will not give advice on rules, deadlines or financial aid consequences of any letter grade.

An incomplete (INC) grade cannot be requested by a student to avoid a grade of F or WU in the transcript.

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Tentative Schedule of Topics:

This schedule is subject to change. You will be notified in writing of such changes. For the most up to date information and activities, always refer to Brightspace.

Topic	Chapter/Notes	Dates
Review of chemical principles	Notes	1/28, 1/30
Amino acids and protein structure	21	1/30, 2/4, 2/6
Enzymes	21	2/11, 2/13 **(Quiz-1)**
Carbohydrates	20	2/20, 2/25
Wrap-up & Review		2/27
EXAM 1		**3/4**
Nucleic Acids	22	3/11, 3/13
Lipids: structure and cell membranes	19.1-19.7	3/18, 3/20
Overview of metabolism	23	3/25, 3/27 **(Quiz 2)**, 4/1
Wrap-up & Review		4/3
EXAM 2		**4/8**
Carbohydrate metabolism	24.2 -24.6	4/10, 4/22
Lipid metabolism	24.7	4/24, 4/29
Protein and amino acid metabolism	24.9	5/1, 5/6 **(Quiz-3)**
Metabolic pathways, energy & nutrition	Notes	5/8, 5/13
Wrap-up & Review		5/15
FINAL EXAM	**CUMULATIVE**	**Date T.B.D.***

Schedule notes:

Chapter numbers refer to Textbook.
2/18 (Tuesday) follows a Monday Schedule – No CHEM103.3 class held
3/6 (Thursday) follows a Wednesday Schedule – No CHEM103.3 class held
4/10 – 4/20 Spring Recess
*Final Exam Week: 05/16/25 to 05/22/25. Refer to Brightspace for updates on the Final Exam date.

MAKEUP POLICY

In general, there will be **no makeup exams** given. The only acceptable excuse is if you provide **written documentation** of serious illness, accident, or family-related death, etc. In any event, a valid documentation will be required and evaluated. If a doctor's note, it must be on the doctor's letterhead and signed by a physician with a different last name from the student, and a statement that the physician is not a relative of the student. Students who miss classes will be responsible for the lecture material and classroom activities.

Department of Chemistry and Biochemistry
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Basic Biochemistry Lecture [CHEM 1033] Syllabus for Spring 2025

IV. WITHDRAWL & COLLEGE POLICIES AND STUDENT SERVICES

W and WU Grade policy – THE DROP DEADLINE (W OR CHANGE TO P/NC) HAS BEEN CHANGED FROM THE COVID-ERA LAST DAY OF CLASS TO APR. 1, 2025. The deadline is **April 1, 2025**. If you are not passing the course by this deadline, you will have to make a choice between staying in the course for whatever letter grade you get OR apply for W to avoid a hit to GPA. A failing student will not be eligible to apply for retroactive withdrawal or INC grade request later in the course. Students who do not officially withdraw by April 1 (and receive a W grade) but stop attending classes and do not participate in any way after the withdrawal date will be given a WU grade. Any participation in class (i.e., lab work, homework, taking quizzes and exams) after the withdrawal date will disqualify you from receiving the WU grade, and you will be given the appropriate letter grade.

Requests for Retroactive Withdrawal for current semester, INC grade: Evidence of good score in the exams/quizzes/homework indicating a passing grade in the course and sudden emergency situations preventing completion of the course is the minimum requirement for consideration. Talk to your instructor for options if you have a genuine situation. We are here to help.

Restrictions on Sharing of Posted Lecture Materials: Lecture materials that are posted (such as presentations, lectures, welcome video clips etc.) are shared with the class for the purpose of facilitating the learning experience and are *not* to be copied, downloaded or shared with anyone outside of the class.

Queens College Classroom Recording Policy: Neither photographs nor video recordings (audio or video) of all or parts of classes at Queens College may be made without written permission from the course instructor(s). The Office of Student Affairs and the Office of Special Services may provide for the recording of classes on behalf of a student receiving disability accommodations, missing class due to religious beliefs, or experiencing extended absence due to medical or other exigent circumstances. The Queens College Classroom Photography and Recording Policy applies to both students and visitors. Students and visitors are not authorized to copy, download, or disseminate authorized recordings and photographs to others. Students in violation of this policy are subject to disciplinary action, and visitors in violation of this policy are subject to removal from the classroom and/or campus.

Reasonable Accommodations for Students with Disabilities: The Office of Special Services (SPSV) is committed to supporting students with qualifying disabilities under the Americans with Disabilities Act (ADA) by providing reasonable accommodations to ensure equal access. If you have previously received accommodations due to a disability, believe you may have a disability, or have a temporary disability, please visit the office's website (https://www.qc.cuny.edu/sp/) for further information on the assistance they can offer you. Accommodations are not retroactive, so you are encouraged to get registered sooner rather than later. You may also contact their office at qc.spsv@qc.cuny.edu or call 718-997-5870 during office hours for assistance as well.

CUNY Policy on Academic Integrity: Academic Dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion as provided at: https://www.cuny.edu/about/administration/offices/legal- affairs/policies-procedures/academic-integrity-policy/. Please read this document, paying careful attention to the sections on plagiarism and Internet plagiarism. If you are not sure how to cite work you have found on the internet, please review the APA Guidelines provided by the Purdue OWL.

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Netiquette: Please maintain a professional demeanor when posting online. You can be respectful even when you have a difference of opinion. Treat others as you'd want to be treated yourself. Don't type in all caps, as that is the online equivalent of shouting. If you need to emphasize a word or phrase, use italics.

Statement on student wellness: As a student, you may experience a range of challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may diminish your academic performance and/or reduce your ability to participate in daily activities. Counseling Services are available to any Queens College student. This office assists students with personal concerns that can affect their enjoyment of and success in college. Services are free and confidential. All sessions may take place on Zoom or by Telephone, depending on student preference. You can learn more about confidential mental health services available on campus at: https://www.qc.cuny.edu/StudentLife/services/counseling/counseling/

Use of Student Work: All programs in New York State undergo periodic reviews by accreditation agencies. For these purposes, samples of student work are occasionally made available to those professionals conducting the review. Anonymity is assured under these circumstances. If you do not wish to have your work made available for these purposes, please let the professor know before the start of the second class. Your cooperation is greatly appreciated.

Course Evaluations: During the final four weeks of the semester, you will be asked to complete an evaluation for this course by filling out an online questionnaire. Please remember to participate in these course evaluations. Your comments are highly valued, and these evaluations are an important service to fellow students and to the institution, since your responses will be pooled with those of other students and made available online, at the Teaching Evaluations Data: Spring 2010 – Present (https://www.qc.cuny.edu/oie/course-evals/). All responses are completely anonymous; no identifying information is retained once the evaluation has been submitted.

Chemistry and Biochemistry Department, Queens College - CUNY

CHEM 1131- General Chemistry I Laboratory (Spring 2025) Syllabus

Course Section and Code #: 1 (42883), Mon 9:15 – 12:05 pm, Rem. 156

Instructor's Full Name: Dr. Alexander Altman

Instructor's Email: alexander.altman@qc.cuny.edu

Instructor's Office Hour: Tu 5:20 – 6:20 Remsen 206 or by Appt.

Textbook for the course: Is posted on course Brightspace free of charge.

Other required items: A lab notebook is required for collecting your experimental data. In addition, a scientific or graphing calculator is required and can be purchased anywhere. Note that lab coat, safety goggles, and required glassware are provided upon check-in.

Pre-Requisite/Co-Requisite: CHEM 1134

Coordinator: Dr. Chen Wang (Chen.wang@qc.cuny.edu)

[Note: Students should contact their lab instructor for all lab-related questions.]

I. Laboratory Course Format: In-person

A. ALL In-person lab sessions will be held on Queens College campus in Remsen at your scheduled time and day. Lateness by more than 15 min. is counted as an absence.

B. This is a laboratory class with a limited capacity in the classroom. As a result, there are NO make-up options (Excused or Unexcused) for any missed lab. YOU ARE EXPECTED TO ATTEND ALL LAB SESSIONS. If you miss a lab class due to a QC approved religious reason OR due to an emergency, inform your instructor and make sure it is excused. Valid documentation for the excused absence will be required. If a doctor's note, it must be on the doctor's letterhead and signed by a physician with a different last name from the student, and a statement that the physician is not a relative of the student.

Unexcused absences are given a zero and included in the calculation of final lab score.

In case of absence(s), the following policy will be adopted:

1st Excused Absence: The missed lab will be excluded from calculating your overall lab score.

2nd Excused Absence: A quiz will be given for the missed lab OR the final lab exam score will be used to replace the missed lab score.

Any further absences will result in a zero grade for the lab irrespective of the reasons. If you are absent for 4 or more lab periods, you will NOT be allowed to take the lab final and are expected to withdraw from the course. If you are not withdrawn by the deadline, you will be issued a WU grade.

INC grade: There is no INC grade for this course. If your grade is suffering due to absences in the lab, you are expected to withdraw on time and re-enroll for the next semester.

II. General Laboratory Rules

A. Always wear safety goggles.

B. NO short pants, skirts, or open-toed shoes are allowed. Tie back long hair.

C. NO food, beverages, gum, horseplay, or unauthorized experiments allowed.

D. NO computer, tablet or cell phone use in the laboratory during class activities.

III. Laboratory Manual

A custom laboratory manual is used and is available free of charge, posted on Brightspace. You **must bring a printed** copy of the experiment write-up to the lab in order to complete the experiment. You will not be allowed to use electronic devices.

IV. Prelab Preparation AND Lab Reports

A. Prelab preparation is required for each experiment BEFORE you come to the lab. This includes reading the full experiment from start to finish in the lab manual and watching posted videos (if posted) on Brightspace. **The Prelab write-up should include sections IV C (1-4)*, listed below and must be initialed by the instructor before the lab experiment begins.** You should review the safety protocols for each experiment. **You should complete the prelab quiz posted on Brightspace before each experiment.**

B A completed typed LAB REPORT as per specified format is ALSO required for EACH experiment. **Lab reports must be uploaded to Brightspace before the end of the day of the subsequent lab session**. Lab reports cannot be submitted via email. Late lab reports are strongly discouraged. They will receive a severe reduction in points (see section V(B)).

C. **Format of Lab Report (*Reflect Items that should be completed in the lab notebook before each lab, i.e., the Prelab write-up).**

*1. **Title:** Include your name, section number, experiment title, AND date of the experiment. Experiment title can be copied from the syllabus or lab handout.

*2. **Objective:** It should clearly specify the aim for that day's experiment. It most often starts with "To find", "To measure", etc. Example: "To determine the heat energy released by the neutralization reaction of hydrochloric acid and sodium hydroxide."

*3. **Introduction**: Explain concisely the chemistry of the experiment in your own words. Include any equations and other scientific and mathematical explanations, i.e., the theory. Show how Chemistry is being used to accomplish the objective of the experiment. Do not copy or paraphrase the introduction in the lab handout.

*4. **Experimental Procedure:** A concise but complete summary of the steps, materials, and apparatus of the experiment. This should be a "game plan" for you to use to complete the experiment. (In your lab report, this should be written as a report of what was actually done in the lab and NOT as a list of directions.)

5. **Data:** Include a picture of your original data, signed by your instructor, of measurements or observations you directly recorded during the experiment.

6. **Calculations and Results:** Show all work; If there is a repetitive calculation, you need to show the equation and its use only once; Include any tables, graphs or diagrams that may be required.

7. **Conclusions:** Summarize your final conclusions in this section

8. **Discussion:** State whether results were good or bad, and reasons why, what may have affected them, and any potential problems with the experiment. Be brief but complete. There may be questions you must answer, based on the lab manual. Work them into your discussion. If you know your expected value from instructor or from reference sources, be sure to list the percent error and discuss experimental errors that can account for it.

9. **References:** Include the lab experiment write-up and other references, including those from the internet.

Finally, Lab Reports do not have to be excessively long, but they do have to cover all the important ideas of the experiment.

V. Grading: (Part A) Each lab is graded for 100 points distributed as follows - 10% Prelab Quiz; 10% Prelab write-up in lab notebook; 60% Lab Report; 20% Performance in the Laboratory. Part A will be weighted 85% of your lab grade.

(Part B) A written comprehensive lab final will be administered during finals week. Check CUNYfirst for the date. This part will be weighted 15% of final lab grade. The lab final will cover lab safety, and the contents that were covered during the entire semester.

Further,

A. Prelab quizzes are posted on Brightspace. You will have unlimited attempts available, but you must complete the quiz before the beginning of the lab meeting. Prelab will not be accepted after the lab session is over. If material for completing prelab questions has not been covered in the lecture, utilize the office hours of the lab instructor to get help with prelab activity. No excuses will be accepted.

B. ALL lab reports are due by the end of the day of the subsequent lab session. LATE reports are strongly discouraged, and they will receive a penalty as follows - 10% reduction with each delayed week; Lab reports will NOT be accepted after two weeks or the last lab class (i.e., Check Out Day).

C. Reports will be graded for conformance to the above-described format and checked for plagiarism. Introduction, discussion, and conclusions are expected to be your original sentences.

D. If you have attended all the labs without any excused absences, your instructor will drop one of the lowest grades when calculating the lab average.

The criteria for Performance in The Laboratory Experiments are as follows:

1. **Safety:** If you do not work safely, your instructor will deduct points at their discretion. **Eye protection and lab coat must be worn at all times in the lab**; penalty for failure to do so is a 0 (zero) for the day and/or dismissal from that day's lab with no possibility of make-up [Points will be deducted from your final grade for safety offenses at instructor's discretion]. Safety shower, eyewash, and fire extinguisher locations must be noted. Chemical waste handling protocols must be observed; if in doubt, ask! Points will be deducted for unsafe practices or violations of waste protocols; You may be ejected from lab and receive a zero (0) for that day's work.

2. **Independence**: Your ability to work and think independently, as determined by your instructor.

3. **Efficiency and Effectiveness**: Your ability to efficiently accomplish the goals of the experiment within the lab time frame. This also includes the quality of your results.

There will be no extra credit provided at the end of the semester. An INC grade will not be given to a student to avoid an F or WU grade.

VI. Other Important Information

The last day you may withdraw from any course this semester is April 1. This is also the last day you can apply for a P/NC grade.

(i) If you drop the 1131 lab course, you must notify your 1134 lecture instructor in order to stay in the lecture. You must check-out ASAP! Otherwise, you do so at the normal time on the final check-out day. If you do not check-out, you will be charged a fine as listed in the stockroom and may be blocked from registering for further courses.

(ii) On the check-in day, a combination lock, lab coat and safety glasses will be issued to you.

(iii) You must have a bound notebook to record and document your data. Do NOT take any notes on scrap paper.

(iv) **Code of Conduct**

Plagiarism- Plagiarism or any other forms of cheating is NOT tolerated and will be severely punished by point, other penalties, and/or referral to the Chairman and the Dean; Any assignment involved will receive a grade of zero. Failure to appropriately cite a source of information may also be considered plagiarism.

Inappropriate Behavior, e.g., horseplay or off-color language, oral or written, will NOT be tolerated and may lead to expulsion from class and a grade of zero.

(v) Available accommodation for students with learning disabilities: Students with disabilities needing academic accommodation should register with the Special Services Office by emailing QC.SPSV@qc.cuny.edu. For more information about services available to Queens College students, visit the Office of Special Services website: www.qc.cuny.edu/sp

(vi) Counseling Services are also available to any Queens College student. This office assists students with personal concerns that can affect their enjoyment of and success in college. Services are free and confidential. All sessions take place on Zoom or by Telephone, depending on student preference. To make an appointment, students should call 718-997-5420 and leave a message with their phone number and CUNY ID. They may also e-mail counselingservices@qc.cuny.edu

(vii) CUNY Policy on Academic Integrity: Academic dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion as provided at https://www.cuny.edu/about/administration/offices/legal-affairs/policies-resources/academic-integrity-policy

Schedule of Experiments

Week 1 (1/27) Check In, Safety Review, Discuss Syllabus, Take Safety Quiz.

A score of 80% or above on the lab safety quiz is required before working in the lab.

Safety Video Links: https://www.youtube.com/watch?v=9o77QEeM-68

https://www.youtube.com/watch?v=gi3DeFY0cfw

Week 2 (2/3) Exp. 1 Density

Week 3 (2/10) Exp. 2 Hydrate

Week 4 (**TU** 2/18) Exp. 3 Precipitation

Week 5 (2/24) Exp. 4 Iron-Copper (II) Sulfate Redox

Week 6 (3/3) Exp. 5 Qualitative Study of Redox

Week 7 (3/10) Exp. 6 Copper Cycle

Week 8 (3/17) Exp. 7 Molar Mass of a Metal

Week 9 (3/24) Exp. 8 Solutions

Week 10 (4/7) Exp. 9 KHP Titration

Week 11 (4/21) Exp. 10 FAS Titration

Week 12(4/28) Exp. 11 Calorimetry I and II

Week 13 (5/5) Exp. 12 Heat of Neutralization

Week 14 (5/12) Checkout

Week 15 (TBA) Lab Final Quiz

QUEENS COLLEGE OF THE CITY UNIVERSITY OF NEW YORK (CUNY)
DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY
General Chemistry I – CHEM113.4-01, Spring 2025

I. Lecture Instructor Information

Instructor: Prof. T. Sangiorgi
Email: Thomas.Sangiorgi**@qc.cuny.edu**
Important: always use this email address for communications.
Email etiquette: Always use "**CHEM113**" in the subject line to ensure prompt communication.
Office hours: F 10:30 AM – 11:30 AM. Generally, held in person (RE206). For updates, refer to Brightspace. For documented conflicts, email your instructor to set an appointment.

II. Course Information

Lecture Times [42900]: T, F 9:15 AM - 10:30 AM, RE101 (Refer to Brightspace for announcements.)
Recitation Times: 1A [42894] RE105 Friday, 11:10 -12:00 Yesrathnam
1B [42893] RE105 Tuesday, 11:10 -12:00 Garlapati

Course description: Chem 113.4 is the first semester of a two-semester science majors/pre-health professions level introductory college chemistry course. The lecture meets for **3 credit hours weekly** (two 75 min periods per week); each student will also have a **1 credit hour** (one 50 min per week) recitation session. Math 114 (or equivalent) is a pre-requisite, and the laboratory course (Chem 113.1) is a co-requisite. Chem 113.1 is administered and graded separately. A grade of C (not C-) is required to proceed to Chem 114.4. It is recommended that students have passed the New York State Regents Examinations in Chemistry or Physics with a score of 80 or higher or have a grade of C or better in Chem 101.3 and 101.1 before enrolling in this course. This course is required for more advanced study in chemistry, biochemistry, and biology. It is intended for students in the physical and life sciences, science education, pre-health professional students, and pre-engineering students and is designed to provide a thorough knowledge of facts and theory in the fundamental areas of chemistry. As appropriate, topics may be presented in terms of contemporary scientific issues such as global warming, energy production, hazardous waste, biomedical research, etc. The relationship between chemistry and society may be discussed.

Learning Objectives: Develop an understanding of basic atomic structure. Understand formation of ions and molecules. Understand measurements and the scientific method. Balance chemical reactions and solve chemical stoichiometry problems. Understand periodic trends. Master the gas laws. Understand acid-base, oxidation-reduction, and precipitation reactions. Develop an understanding of the energetics of chemical reactions. Understand quantum numbers and write electron configurations. Draw Lewis structures and determine shapes of molecules using the VSEPR theory. Understand hybridization of atomic orbitals.

III. Books and Materials

Textbook: For this course you will be required to purchase McGraw-Hill ALEKS Access for Chemistry, 15th edition by Overby and Chang. This package is a bundle that includes the online textbook and the online homework called ALEKS. You are not required to have a print text and please be aware if you purchase a used textbook, you will still need to purchase ALEKS access. ALEKS Access Cards can be purchased in the QC Online Bookstore or by using the link shown in the text below.

18-week Access to ALEKS ISBN 9781266454042
52-week Access to ALEKS ISBN 9781265229092
(This is the **best deal** for students planning on completing **CHEM 114.4 in a subsequent semester**)

Optional textbook: OpenStax College. (2019). *Chemistry*. OpenStax.
https://openstax.org/details/books/chemistry-2e/
Hardcover: **ISBN-13: 978-1-947172-62-3** Paperback: **ISBN-13: 978-1-59399-578-2**
Digital: **ISBN-13: 978-1-947172-61-6**
License: by OpenStax is licensed under Creative Commons Attribution License v4.0

Other required items: You should make sure that **Brightspace** is operating appropriately on your tablet or computer. Students must make sure they login to Brightspace to check for course material and announcements and check their email that is associated with Brightspace.

Technical Support: Email Helpdesk@qc.cuny.edu, or call the Student Support Hotline (718- 9973000).

Important Notes:

- This course requires a large quantity of work in ALEKS; be prepared to spend a minimum of 5 hours a week working in ALEKS.
- Please purchase the Aleks homework as soon as possible (**within the first week**). It will take a week to deliver, and your courtesy access is only available for two weeks. If you are having difficulties purchasing the codes, please send me an email immediately; do not wait until your courtesy access expires. No student will be exempt from completing the ALEKS assignments.
- There will be no extensions on the ALEKS assignments. The date is posted and set.
- No material (now or in the future) obtained from this course can be distributed, sold, or purchased.

IV. Grading and Evaluation

The grade is a 100-point grade scale as shown in **Official Queens College Grade Scale** (it will implement official updates); there will be no curve in this class. There will be no extra credit provided at the end of the semester at student's request. An INC grade will not be given to a student to avoid an F or WU grade.

Grade	GPA	Numerical value / Definition
A+	97-100	4.0 (In Good Academic Standing)
A	93-96	4.0
A-	90-92	3.7
B+	87-89	3.3
B	83-86	3.0
B-	80-82	2.7
C+	77-79	2.3
C	73-76	2.0
C-	70-72	1.7 (GPA in Academic Probation)
D+	67-69	1.3
D	63-66	1.0
D-	60-62	0.7 (Grade of D- is the lowest passing grade in the undergraduate division)
F	0-59	0.0

The final course grade will be calculated based on:

10% ALEKS Homework

- You should complete the homework for each chapter within one week after the chapter is covered in the lecture. The official due dates for each chapter are indicated on the schedule on the next page.
- After every few chapters, there may be a "Knowledge-Check Progress Assessment" – **Do not click "I don't know" unless you don't know. This will set you back.**

How to access Aleks:

Visit www.ALEKS.com and log in (if you've used ALEKS before) or Sign Up.

1. Enter your Class Code **QJCM6-9VQNH** in the box.
2. Verify that you are registering for the correct class.
3. Enter your access code (provided on access card shipped to you after purchasing).
4. If you haven't purchased/received your access code, enter the 20-character Financial Aid Access Code:

DE942-67E30-7349A-D2A4D

Note: This code gives you **temporary** access to ALEKS for a two-week period. Once the code expires, you will be locked out of your ALEKS account until you purchase a regular Student Access Code. **It is highly recommended that you purchase the Student Access Code immediately, as it will take 7-10 business days to ship.**

5. Next you will see a page with the date your temporary access expires, click "Continue."
6. You will arrive at the **My Classes** page.
7. You can extend your access to your new class at any time by selecting **"Extend access"** from the class tile menu and enter your new access code. **You do not need to create a new ALEKS account to continue your class.**

How does Aleks work: At the start of the semester, you will be given an assessment that determines what you know and what you do not know. **During any assessment, do not hit the "I Don't Know" button unless you REALLY do not know how to work a problem.** Afterwards, your individual homework space will be populated based on the topics defined by the instructor and by what you have demonstrated that you already know.

60% Exams

- Exams will be based on topics covered in lecture and recitation.
- Exams will be given at the beginning of lecture. **There are no make-up exams.** If you know you will miss an exam, please contact your instructor well in advance.

30% American Chemical Society-style Final Exam

- The **ACS-STYLE** examination is a 60 – 80 question multiple choice comprehensive examination (the number of questions may be different to adhere to the actual program covered in class). (Extra credit will be added to the **final exam grade** for those who attend all the **Recitation sessions and perform well in Recitation**.) Please note that the exam is made by the faculty and not an actual ACS exam.

Tentative class schedule. This schedule is subject to change. You will be notified in writing of such changes. For the most up to date information and activities, always refer to the course page in Brightspace.

Date Tue	Date Fri	Book Chapter	Title of the Topic	ALEKS Due Date
Jan 28	Jan 31	Chapter 1	Intro & Measurement and the Properties of Matter	Feb 27
Feb 4	Feb 7	Chapter 2	Atoms, Ions and Molecules	Feb 27
Feb 11	Feb 14 Feb 21	Chapter 3	Mass Relationships in Chemical Reactions	Feb 27
Feb 25		Chapter 4	Reactions in Aqueous Solutions	Mar 31
	Feb 28	--	**Exam 1 (Unit 1: Chapters 1, 2 and 3) – No Chapter 4**	
Mar 4	Mar 7	Chapter 4	Reactions in Aqueous Solutions (continued)	Mar 31
Mar 11 **Mar 18**	Mar 14	Chapter 5	Gases	Mar 31
Mar 18 Mar 25	Mar 21	Chapter 6	Thermochemistry	Mar 31
	Mar 28	Chapter 7	Quantum Theory & the Electronic Structure of Atoms	May 8
Apr 1		--	**Exam 2 (Unit 2: Chapters 4, 5 and 6) – No Chapter 7**	
Apr 8	Apr 4	Chapter 7	Quantum Theory & the Electronic Structure of Atoms (continued)	May 8
Apr 22	Apr 11	Chapter 8	Periodic Relationship among Elements	May 8
Apr 22 Apr 29	Apr 25 May 2	Chapter 9	Compounds and Bonding	May 8
May 6		Chapter 10	Structure and Bonding Theory	
	May 9	--	**Exam 3 (Unit 3: Chapters 7, 8, 9 and part of 10 if covered)**	
May 13		Chapter 10	Structure and Bonding Theory (continued) (The ALEKS Module will be due the day before the Final)	TBA
TBA		--	**Final Exam (All Chapters – Date to be confirmed)**	

VI. Grade & College Policies and Student Services

W and WU Grade policy – THE DROP DEADLINE (W OR CHANGE TO P/NC) HAS BEEN CHANGED FROM THE COVID-ERA LAST DAY OF CLASS TO APRIL 1, 2025. Students who do not officially withdraw by Apr. 1 (and receive a W grade) but stop attending classes and do not participate in any way after the withdrawal date will be given a WU grade. Any participation in class (i.e., lab work, homework, taking quizzes and exams) after the withdrawal date will disqualify you from receiving the WU grade, and you will be given the appropriate letter grade.

Restrictions on Sharing of Posted Lecture Materials: Lecture materials that are posted (such as presentations, lectures, welcome video clips etc.) are shared with the class for the purpose of facilitating the learning experience and are not to be copied, downloaded or shared with anyone outside of the class.

Reasonable Accommodations for Students with Disabilities: Students with disabilities needing academic accommodation should register with the Special Services Office by emailing QC.SPSV@qc.cuny.edu. The Office of Special Services (SPSV) is committed to supporting students with qualifying disabilities under the Americans with Disabilities Act (ADA) by providing reasonable accommodations to ensure equal access. If you have previously received accommodations due to a disability, believe you may have

a disability, or have a temporary disability, please visit the office's website (https://www.qc.cuny.edu/sp/) for further information on the assistance they can offer you. Accommodations are not retroactive, so you are encouraged to get registered sooner rather than later. You may also contact their office at qc.spsv@qc.cuny.edu or call 718-997-5870 during office hours for assistance as well.

CUNY Policy on Academic Integrity: Academic Dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion as provided at: https://www.cuny.edu/about/administration/offices/legal- affairs/policies-procedures/academic-integrity-policy/. Please read this document, paying careful attention to the sections on plagiarism and Internet plagiarism. If you are not sure how to cite work you have found on the internet, please review the APA Guidelines provided by the Purdue OWL (https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/reference_list_electronic_sources.html).

Netiquette: Please maintain a professional demeanor when posting online. You can be respectful even when you have a difference of opinion. Treat others as you'd want to be treated yourself. Don't type in all caps, as that is the online equivalent of shouting. If you need to emphasize a word or phrase, use italics.

Statement on student wellness: As a student, you may experience a range of challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may diminish your academic performance and/or reduce your ability to participate in daily activities. QC services are available free of charge. You can learn more about confidential mental health services available on campus at: https://www.qc.cuny.edu/StudentLife/services/counseling/counseling/

Use of Student Work: All programs in New York State undergo periodic reviews by accreditation agencies. For these purposes, samples of student work are occasionally made available to those professionals conducting the review. Anonymity is assured under these circumstances. If you do not wish to have your work made available for these purposes, please let the professor know before the start of the second class. Your cooperation is greatly appreciated.

Course Evaluations: During the final four weeks of the semester, you will be asked to complete an evaluation for this course by filling out an online questionnaire. Please remember to participate in these course evaluations. Your comments are highly valued, and these evaluations are an important service to fellow students and to the institution, since your responses will be pooled with those of other students and made available online, at the Teaching Evaluations Data: Spring 2010 – Present (http://ctl.qc.cuny.edu/evaluations/data/). All responses are completely anonymous; no identifying information is retained once the evaluation has been submitted.

Classroom Recording Policy: Neither photographs nor video recordings (audio or video) of all or parts of classes at Queens College may be made without written permission from the course instructor(s).
The Office of Student Affairs and the Office of Special Services may provide for the recording of classes on behalf of a student receiving disability accommodations, missing class due to religious beliefs, or experiencing extended absence due to medical or other exigent circumstances.
The Queens College Classroom Photography and Recording Policy applies to both students and visitors. Students and visitors are not authorized to copy, download, or disseminate authorized recordings and photographs to others. Students in violation of this policy are subject to disciplinary action, and visitors in violation of this policy are subject to removal from the classroom and/or campus.