Chem10400 (General Chemistry II): Spring 2026

Friday 9:00 – 10:50 am, **Assembly Hall (118N)**



Instructor: Dr. Nadya Kobko-Litskevitch
Email: hc.nkobko@gmail.com
Office Hours: TBA

Except for changes that substantially affect implementation of the grading policy, this syllabus is a guide for the course and is subject to change with advance notice. If the syllabus needs to be amended, an updated version will be emailed to you via Brightspace and will be posted on Achieve.

Goal of the course: This is the second semester of a 2-semester general chemistry sequence that begins to prepare you for a science-based career. General Chemistry II is a demanding course and to achieve success in this course you will need to organize large quantities of information in coherent ways so that you are able to recall and apply your knowledge. Organization of your time will be essential! And the mathematics in Chem104 is much more demanding than in Chem102!

Our General Chemistry course is run using a flipped classroom model of instructions. In this learning model you will watch videos and complete online homework on your own and then participate in peer-learning activities: iClicker sessions (during 9:00-10:50 am class every Friday) and workshops (during your 1-hour recitation).

You should plan to spend ***at least 10-15 hours per week* studying chemistry**: watching videos, doing your online homework, engaging with your classmates, and learning the material. *It is your responsibility to prepare yourself for every topic **before** you come to class to engage in iClicker or workshop activities.* We suggest that before each week you watch the Topic videos and complete the LGA surveys (see below). To be successful in this course *you must take **detailed notes when you watch the course videos*** – just like you would take detailed notes during a lecture. These notes provide the backbone for your learning.

During in-person class meetings on Friday (9:00-10:50am) you will engage in a set of peer-learning activities (clicker class) that have been designed so that we can teach you the course content through problem solving. This means that you should bring your notebook to class every Friday and that *you must take **additional detailed notes about the problems and content we cover during clicker class***. However *we do recommend that during our clicker sessions you don't use your notes from topic videos– instead you should practice remembering the content*. Note that if you do not have notes from topic videos and clicker sessions you may not be able to adequately prepare when you study for the exams.

Remember that we (the teaching team) are here to support you in your learning, but *you must keep up with the material every week* – it is unlikely that you will be able to catch up if you fall behind.

Text: *You are **not** required to purchase a textbook*. There is an e-book as part of your Achieve subscription (see below) but you should feel free to use ***any*** General Chemistry textbook. We will not be working through a textbook in a chapter-by-chapter fashion; rather we will cover 18 chemistry topics and use the textbook as a reference. If you feel the need to buy a recommended textbook *Chemistry, 8th Ed., Zumdahl and Zumdahl* is a good choice. A used textbook from Amazon or eBay is perfectly fine!

Email and Empl ID: *It is important that you use **your Empl ID** as your **Student ID** when you register **your Achieve account** and for **the iClicker Student App*** (see below). Your Empl ID number will be used to upload your grades from iClicker and Achieve to Brightspace. Remember to check emails regularly so you don't miss any important messages from me or your recitation instructor.

Web Site = Achieve: As part of this course we will be using a custom platform called Achieve. This platform has been designed specifically for our course. It will be used to host our course materials and as your online homework system. ***The Achieve platform is now ready for account registration (1/25/26)***. You should log on to Achieve as soon as you can and register for our course so that you can become familiar with the look and feel of the web interface**.** *It is very important that when we meet on Friday January 31st you are* ***already registered*** *on the Achieve website*.

To register for Achieve*:*

1. Go to https://achieve.macmillanlearning.com/courses/g3cbof to log in (if you have used Achieve before) or create an account (if you are a new user). Please ***use your Empl ID as your Student ID*** in your Achieve account. The Achieve course code is **g3cbof**.
2. If you are creating a new account, please be sure to check your email for your account confirmation.
3. Upon logging in, you will need to decide if you'd like to Purchase Achieve Access online, or enter on a two week free trial period.
4. After you've made your payment selection, you will complete your registration and enter your course.
5. **Need More Detailed Instructions?** Please visit our Getting Started Guide for Students: https://mhe.my.site.com/macmillanlearning/s/article/Achieve-Getting-Started-Guide-for-Students-Higher-Ed
6. **Need Technical Support?** Fill out this form to contact Macmillan Customer Support via email, chat, or phone: https://mhe.my.site.com/macmillanlearning/s/chat-with-us

Note, that you can sign up for Achieve now and use it free of charge for 14 days.

The Achieve platform will be used in addition to CUNY Brightspace. The Achieve platform is where you will find ***all course documents*** including (but not limited to) the Learning Goal Analysis surveys (LGA), Topic Videos and Video PDF documents, iClicker PDF documents, online homework assignments, and old general Chemistry exams. The copy of the syllabus will be available on Achieve in the **Course_Documents** folder.

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iClicker student app: As part of this course we will be using an the iClicker student app. You will use the iClicker app to respond to in-class questions during lecture every Friday. These exercises will serve a dual purpose: 1) Your responses will provide me with real-time feedback about student understanding of course content and 2) Your participation will help you practice the material and grow as a chemistry student. Remember that to succeed in our course you should take detailed notes during clicker sessions.

As a part of your Achieve subscription you will be able to download the ***iClickers student app*** from *macmillanlearning.com*. The Achieve course code is **g3cbof**. If you already have an iClicker account from previous courses – you need to add ***General Chemistry II (Chem104) with Dr.Kobko*** as your new course. *In your iclicker account* ***use your official name*** *and* ***put your Empl ID as your Student ID***.

Exams: There will be three equally weighted in-class exams (200 points each for a total of 600 points) given during the course of the semester. There will also be a ***Comprehensive Final Exam*** (400 points) given during the finals week. *If **your final exam grade is higher than your lowest in-class exam grade** your final grade will count out of 600 points and your lowest in-class exam grade will be dropped*.

For your exams you will be required to bring with you a basic scientific calculator. All other materials (e.g. periodic table and/or other necessary information such as a formula sheet) will be provided for you. ***Exams must be taken during the designated class period***. ***NO MAKE-UP EXAMS*** *will be given*. If you miss one in-class exam for any reason you will earn a grade of zero for that exam. This grade will then be dropped as your lowest in-class exam grade and your final exam grade will automatically be counted out of 600 points. If you miss more than one in-class exam you will receive a grade of ZERO for the second missed exam.

Tentative Exam schedule **(see the Pacing Guide included in this file):**

- EXAM 1: **March 6th**

  Think of this exam is a Chem104 placement exam. Your score determines whether or not you have gained the knowledge required to continue in the course. If you fail this exam you should consider withdrawing from the course. If you decide to remain in the course you should meet with us to discuss options for success. You will need to make a drastic change to your study habits!

- EXAM 2: **April 17th**

  If you failed exam 1 and you also fail this exam you should consider withdrawing from the course. Please see the Academic calendar for the *last day to withdraw from the course with the grade of "W."*

- EXAM 3: **May 15th**
- FINAL EXAM: **May 22nd**

  The final is the American chemical society (ACS) test.

Course Outline and Pacing Guide: This semester we will cover the following 17 topics:

1. Equilibrium
2. Predicting Chem. Change
3. Acids and Bases
4. pH Calculations
5. Polyprotic Acids and Bases
6. Buffers
7. Titration Curves
8. Heat and Work
9. Enthalpy
10. Entropy
11. Free energy
12. Applications of Free Energy
13. Redox Reactions
14. Batteries
15. Chemical Kinetics
16. Arrhenius Theory
17. Radiochemistry (**VB,VC**)

Attached to this document is *the tentative **Pacing Guide** for the course - it shows all assignment deadlines as well as the exam dates*. On Achieve site in the ***Course_Documents*** folder you will find the current Pacing Guide and the Video Table of Contents – to help you organize your study time more efficiently.

Grading policy: Every component of this course earns you points towards your final grade, but to earn your points you must ***complete each component by its due date***. Please see the Pacing Guide and the Achieve site for assignment due dates. *Note that (1)* ***we cannot extend any deadlines****; (2)* ***there will be NO EXTRA CREDIT ASSIGNMENTS in our course*** – so make sure to complete the coursework before deadlines to get the full Achieve score. If you have trouble opening assignments or submitting answers on Achieve, *please update your browser and Flash player and enable Flash for Achieve in your browser*.

To earn full credit in our course you must accumulate 1400 points. 400 pts come from your Achieve Topic score and 1000 pts come from your exam grades. Here is the tentative ***Grading Scheme***:

TOPIC	Workshop	i-Clicker	Achieve Assignments				Achieve Total[3]	In-Class Exams[4]	Final Exam[4]
			LGA[1]	Videos[1]	Homework[2]	HW Extra Credit[2]			
Topic 1	5+5	3	1	1	11	2	15		
Topic 2	10	11	1	1	10	1	13		
Topic 3	-	-	1	1	10	1	13	Exam 1	
Topic 4	10	11	1	1	10	1	13	200 pts	
Topic 5	-	-	1	1	9	1	12		
Topic 6	10	11	1	1	12	1	15		
Topic 7	10	11	1	1	9	1	12		
Topic 8	10	-	1	1	10	1	13		
Topic 9	5	11	1	1	7	1	10	Exam 2	400 pts
Topic 10	5	-	1	1	9	1	12	200 pts	
Topic 11	10	11	1	1	9	1	12		
Topic 12	10	11	1	1	9	1	12		
Topic 13	10	-	1	1	9	1	12		
Topic 14	10	11	1	1	8	1	11	Exam 3	
Topic 15	10	-	1	1	11	1	14	200 pts	
Topic 16	10	11	1	1	8	1	11		
Topic 17	-	11	-	-	2	-	2		
TOTALS	130	113					202	600	400
Total Topic Score = 400 out of 445 (130+113+202) possible pts								Total Exam Grade = 1000	
Total number of points to be earned in the course is up to: 400 + 1000 = 1400 (max)									

1. ***The points for LGA or Videos*** are an all or nothing score. 1 point is earned for an assignment completed by the deadline and 0 points are earned for an assignment completed after the deadline.
2. ***The points for each homework assignment***: you get up to 1 point for each video Skill practice set and up to 4 points for a Synthesis set.
3. ***The total score for each topic*** is computed by summing the topic components. There are 445 total Topic points that you can earn if you complete every assignment on Achieve correctly and on time and if you get all the WS and iClicker points. Only the first 400 points that you earn will count toward your grade. Think of the ***45 excess Topic points*** as the points that you can "waste" if you miss a few assignments or a few points here and there for any reason. You cannot earn more than 400 Topic points. *The **45 excess Topic points** cannot be applied to your exam scores*.
4. If you miss one in-class exam, the zero grade for this exam will be dropped and your final exam will be scored out of 600 points instead of out of 400 points. *There are **NO make-up exams***.

The total number of points you earn will be normalized to a score out of 100.00 and then assigned a letter grade according to the Hunter College guidelines (see table to the right). Letter grades will be determined based on a score to 2 decimal places. There will be no rounding of scores to determine letter grades.

Letter Grade	Course Requirement
A+	97.50
A	92.50
A-	90.00
B+	87.50
B	82.50
B-	80.00
C+	77.50
C	70.00
D	60.00
F	<60

Required Learning Goal Analysis (LGA) surveys: Before you begin a new topic you will be required to complete a Learning Goal Analysis survey on Achieve. This analysis asks you to read each learning goal for that topic and assess how comfortable you feel with the content presented. *There is no wrong answer to an LGA question*. The goal is to help you begin accurately self-assessing your own content understanding and focus your attention on the learning goals to drive your learning. These learning goals serve as both an outline for the course and a tool to help you prepare for your exams. Every single Exam question is based on at least 1 learning goal (although some will contain multiple learning goals). There is also an LGA document posted in the ***Course_Documents*** folder on Achieve – *use the LGA file to review the learning goals when you study for our exams*.

Required Recitation Workshops: you are responsible for submitting a weekly recitation assignment called a workshop. Workshops are to be completed in groups of 3 (or 4) students and must be submitted to your recitation instructor during your assigned recitation period.

There are 13 required (graded) workshop assignments this semester. Each workshop is worth ***5 or 10 pts***. *You must attend the recitation section that you registered for every week in order to earn these points*. If you miss a workshop you do not earn the points for that workshop. However, you are allowed to make-up ONE recitation per semester. *To schedule the make-up you need to email your recitation instructor*. Also there are 45 "excess" points built into your Achieve topic grade - so if you miss a workshop, you waste some of these "excess" points. If you miss a workshop – remember to review the assignment to prepare for exams.

Required iClicker sessions: There will be 10 required 2-hour iClicker sessions, each worth a total of 11 points. You earn 1 point for participating in a session and then 0.5/1 point for every question that you answer correctly during the session – up to 11 pts. Most of the sessions will have more than 10 questions – but the maximum number of points you can earn per session is 11 so only 10 points for correct responses will be counted for each session.

If your iClicker Student app malfunctions please restart it as soon as you can or ***you will not earn all points during that session****. Please do NOT ask for points if your iClicker app fails to record your answers*. Once again, remember that there are 45 excess Topic points built into your Achieve topic grade so if you do not earn some points for a clicker session, you waste a few of these excess points.

Required Homework: You will access your homework assignments on Achieve and complete them to review the course content. *The homework points for a Topic come from the Achieve Skill practice assignments (1 pt per video set), the Achieve Synthesis assignments (4 pts per set), and Extra-Credit set (1 pt per set). To get points you need to complete the homework assignments* ***before their deadlines***. Assignments completed after the deadline will not be graded. *Please do not ask me to reopen an assignment after the deadline is passed*. ***Remember, you complete our course assignments to learn chemistry – if you complete an assignment before its deadline, we will reward you with points***.

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Academic Dishonesty: Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The college is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures, see:

http://www.hunter.cuny.edu/studentaffairs/student-conduct/academic-integrity/cuny-policy-on-academic-integrity

Students who are caught cheating on an exam in this course will automatically obtain a grade of ZERO for that exam and will be reported for Academic Dishonesty. This grade of ZERO cannot be used as your lowest exam score to be dropped in the course.

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CUNY's Academic Integrity Policy with Revisions about Gen-AI: Academic Integrity Policy – The City University of New York (https://www.cuny.edu/about/administration/offices/legal-affairs/policies-resources/academic-integrity-policy/)

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Accommodating Disabilities: Hunter College is committed to providing access to all programs and curricula to all students. Students with disabilities who may need classroom accommodations are encouraged to register with The Office of AccessABILITY.
http://www.hunter.cuny.edu/studentservices/access

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ADA Policy:

In compliance with the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and providing appropriate accommodations for all students with documented disabilities and/or medical conditions.
Students with documented disabilities (including Emotional, Medical, Physical, and/or Learning disabilities) are encouraged to consult the Office of AccessABILITY, located in Room E1214B, to secure necessary academic accommodations.
To begin the process of requesting services and submitting documentation, students should register through the Accommodate Platform:
https://www.hunter.cuny.edu/students/health-wellness/accessibility/students/cuny-accommodate-tutorial/ -
The platform allows students to manage their accommodation requests and communicate directly with the office; it is accessible via the AccessABILITY page on the Hunter College website:
https://www.hunter.cuny.edu/students/health-wellness/accessibility/.
For further information or assistance, please call: (212) 772-4857 or accessab@hunter.cuny.edu

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Hunter College Policy on Sexual Misconduct:

In compliance with the CUNY Policy on Sexual Misconduct, Hunter College reaffirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationships. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

a. Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, or contacting the College's Public Safety Office (212-772-4444).

b. All Other Forms of Sexual Misconduct: Students are also encouraged to contact the Director of the Office of Student Conduct (https://hunter.cuny.edu/students/student-affairs/office-of-student-conduct/contact/)

CUNY Policy on Sexual Misconduct Link:
(https://www.cuny.edu/wp-content/uploads/sites/4/page-assets/about/administration/offices/ovsa/policies/Sexual-misconduct-8.30.18-PSM-2018-005.pdf)

Academic Calendar - Spring 2026

1/26/2026	**Monday**	Spring 2026 semester begins - First day of classes
2/1/2026	**Sunday**	Last day to add or swap a course
2/2/2026	**Monday**	**WD** is assigned to students who drop a course
2/12/2026	**Thursday**	College Closed
2/15/2026	**Sunday**	Last day to declare a Major/Minor for Spring 2026 semester
2/16/2026	**Monday**	Withdrawal period begins
2/16/2026	**Monday**	College Closed
2/17/2026	**Tuesday**	No classes schedued
2/25/2026	**Wednesday**	**WA** grades assigned for MMR immunization non-compliance
3/16/2026	**Monday**	P/NC grade request period opens
3/20/2026	**Friday**	No classes schedued
4/1/2026	**Wednesday**	P/NC grade request period ends
4/1/26 - 4/9/26	**Wednesday - Thursday**	Spring Recess - No classes scheduled
4/13/2026	**Monday**	Last day to withdraw from course with a grade of **W**
4/21/2026	**Tuesday**	Classes follow Thursday schedule
5/15/2026	**Friday**	Last day of classes except Tuesday classes
5/19/2026	**Tuesday**	Last day of Tuesday's class meetings
5/16/26 - 5/22/26	**Saturday - Thursday**	Final Examinations
5/25/2026	**Monday**	College closed
5/26/2026	**Tuesday**	Spring 2026 semester ends

Contact information

Dr. Nadya Kobko	hc.nkobko@gmail.com
Alan Mercado	Alan.mercado97@myhunter.cuny.edu
Andrew Szafran	andrew.szafran26@myhunter.cuny.edu
Brooks Girman	BROOKS.GIRMAN88@myhunter.cuny.edu
Eduardo Rodriguez	Edhunterchem@gmail.com
Ola Elezaj	olaelezaj@gmail.com
Jae Lee	jaeslee316@gmail.com
Jangho Lee	JANGHO.LEE53@myhunter.cuny.edu
Nestor Paulino	NESTOR.PAULINO26@myhunter.cuny.edu
Sean Belenky	SEAN.BELENKY63@myhunter.cuny.edu
Sun Burnett	SUNGUN.BURNETT11@myhunter.cuny.edu
Zev Prus	zev.prus64@myhunter.cuny.edu

Chem 104 S26 with Dr. Kobko: Tentative Pacing Guide (updated on 1/2/26)

Week	Mon Date	TOPIC	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
1	26-Jan	Intro	First Day of classes				C00: Intro, 102T18		T1 LGA & Videos
			W00 (5 pts): 102T18 (due to your instructor during your recitation) **Review 102: T13, T14, T17, and T18**						
2	2-Feb	TT1&2		T2 LGA & Videos		T1 & T2 Skills	C01: T1 & T2		T1&2 Synthesis
			W01 (5 pts): T1 (due to your instructor during your recitation)						
3	9-Feb	T3		T3&4 LGA & Videos		College closed T3&4 Skills	C02: T3 & T4(I)		T3 Synthesis
			W02: T2 (due to your instructor during your recitation, **make-up W02 if your recitations meet on Thu**)						
4	16-Feb	T4&T5	College closed	No classes T5 LGA & Videos		T5 Skills	C03: T4(II) & T5		T4&5 Synthesis
			W03: T3&T4 (due to your instructor at 5 pm on Thu, 2/19, **online**)						
5	23-Feb	T6&T7		T6&T7 LGA & Videos		T6 & T7 Skills	C04: T6 & T7		T6&7 Synthesis
			W04: T5&T6 (due to your instructoru during your recitation)						
6	2-Mar	Exam 1					**Exam 1 (T1-T7)**		T8 LGA & Videos
			W05: T7 (due during your recitation) & E1 QnAs (TBA); **Exam 1 - Friday March 6th**						
7	9-Mar	T8&T9		T9 LGA & Videos		T8 & T9 Skills	C05: T8 & T9		T8 Synthesis
			W06: T8 (due to your instructor during your recitation)						
8	16-Mar	T10&T11		T10 LGA & Videos		T10 Skills	**No classes**		T9 Synthesis
			W07a (5 pts): T9 (due to your instructor during your recitation)						
9	23-Mar	T12		T11 LGA & Videos		T11 Skills	C06: T10 & T11		T10&11 Synthesis
			W07b (5 pts): T10 (due to your instructor during your recitation)						
10	30-Mar	T13&T14			**Spring Recess**	**Spring Recess**	**Spring Recess**	**Spring Recess**	**Spring Recess**
			W08: T11 (due to your instructor at 5 pm on Thu, 4/2, **online**) **Review T1-T7 for the final exam**						
11	6-Apr	T4&T5	**Spring Recess**	**Spring Recess** T12 LGA & Videos	**Spring Recess**	**Spring Recess** T12 Skills	C07: T12		T12 Synthesis
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12	13-Apr	Exam 2					**Exam 2 (T8-T12)**		T13 LGA & Videos
			W09: T12 (due during your recitation, **make-up W09 if your recitations meet on Mon**) & E2 QnAs (TBA); **Exam 2 - Friday April 17th**						
13	20-Apr	T4&T5		**Thursday schedule** T14 LGA & Videos		T13&14 Skills	C08: T13 & T14		T13 Synthesis
			W10: T13 (due during your recitation, **make-up W10 if your recitations meet on Tue**)						
14	27-Apr	T15		T15 LGA & videos		T15 Skills	C09: T14 & T15		T14&15 Synthesis
			W11: T14 (due to your instructor during your recitation)						
15	4-May	T16&T17		T16&T17 LGA & videos		T16&T17(VB&C) Skills	C10: T16 & T17		16 Synthesis
			W12: T15 (due to your instructor during your recitation)						
16	11-May	Exam 3					**Exam 3 (T13-T17)**		
			W13: T16 (due during your recitation) & E3 QnAs (TBA); **Exam 3 - Friday May 15th**						
17	18-May	FE					**Final Exam (T1-T17)** **TBA**		
			Final Exam QnAs (TBA); no recitations, no office hours						