Chem10400 (General Chemistry 2): Spring 2020

Friday 9:10 – 11:00 am, Assembly Hall (118HN)

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Office Hours: **Wed 2-4 pm**, 1323HN

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 will come to class to participate in peer-learning activities: iClicker sessions (during 9:10-11am 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 class on Fridays (9:10-11am) 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 you don't use your video notes during our clicker sessions – instead you should practice remembering the content*. Note that if you do not have notes from 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 Sapling subscription (see below) but you should feel free to use ***any*** college level General Chemistry textbook. We will not be working through a textbook in a chapter-by-chapter fashion; rather we will cover 17 Chemistry topics and use a 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: *It is very important that you use **the same email address and the same spelling of your name** to register both **your Sapling account** and **your iClicker/REEF*** (see below). This email address must be one that you check regularly as we may use it to communicate with you. Note that this email will be used to upload your grades to Sapling, so if you are going to use multiple email address you will be missing points.

Web Site = Sapling Learning: As part of this course we will be using the Sapling site. The site will be used to host our course materials and as your online homework system. The Sapling platform will be ready for account registration ***after 5 pm on Saturday January 25st***. You should log on to Sapling 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 imperative that when we meet on Friday January 31st, you are **already registered** on the Sapling website*. To register for Sapling you will need to buy an access code from the Sapling Website.

***To register for Sapling**:*

1. Go to www.saplinglearning.com/login to create an account. If you already have a Macmillan Learning account you can log in with your existing credentials and skip to step 3. Put in your email address – you should use the same email address when you register your iclicker!
   a. Create your password and set all three security questions.
   b. Start typing in your institution to select from the options that appears in the Primary Institution or School name field. Select **CUNY, Hunter College** as your school (in *US Higher Ed*)
   c. Accept the terms of use and click "Sign Up".
   d. Check your email for the confirmation link to complete your registration and return to the login page.
2. Set your institution by searching using your institution's full name and selecting the appropriate option from the menu that appears.
3. Under Enroll in a new course, you should see Courses at Hunter College. Click to expand this list and see courses arranged by subject and term.
4. Once the menus are fully expanded, you'll see links to all courses. Click on the link **CUNY, Hunter College - CHEM 104 – Spring20 - KOBKO** to select the course.
5. When asked for a Key Code enter the following combination: **3hpg97**
6. Review the system requirements and confirm that Flash is updated and enabled in your browser.
7. **Need Help?** The Sapling technical support team can be reached by phone, chat, or by email via the Student Support Community. To contact support please open a service request by filling out the webform: https://macmillan.force.com/macmillanlearning/s/

You can buy one semester of access or use the credit from the two semester access you purchased in Chem102. The following link includes more detailed instructions on how to register for our course: https://macmillan.force.com/macmillanlearning/s/article/Sapling-Learning-Registering-for-courses course

The Sapling platform will be used in lieu of CUNY Blackboard and has been designed specifically for our course. On this site you will find ***all course documents*** including (but not limited to) Online homework assignments, Workshop assignments, Learning Goal Analysis (LGA) surveys, Videos, Video PDF files, iClicker session PDF files, old General Chemistry exams, and our contact info. This syllabus will be available on Sapling in the COURSE_DOCUMENTS folder. You will monitor your course progress using Sapling Gradebook. *Important **class announcements** will be posted on the front page of our Sapling site*.

iClicker: As part of this course we will be using a personal response device called an iClicker. You will use the iClicker to respond to in-class questions during lecture every Friday. This 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.

iClickers (iClicker+ or iClicker2) can be purchased online at: http://www.iclicker.com/ or any other website that sells new or used iClickers. If you already own an iClicker from a previous course it can be used again for this course. Once you have your iClicker you will need to register it. Please note that there is a fee for registering a used clicker that was previously registered in a different name. However, if you plan to use the clicker that you used for Chem102 for our course, you do not need to register it again.

To register your iClicker:

1. Log on to https://www1.iclicker.com/register-a-remote
2. Choose "**iClicker Classic**" and "**My institution does not use an LMS**" to get to the registration page.
3. Complete the registration questions. **Note:** You must register using *your full first and last name* and *the same email address that you used to register for the Sapling site*. *You should also enter* ***your email address*** *in the* ***"Student ID" field*** *in the online registration form when you register your iClicker*. Your email address will be used to link your iClicker responses to our online student roster.

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. The final exam is the American Chemical Society (ACS) standard test. *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 a #2 pencil and a 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 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 but attend the final exam you will receive a grade of ZERO for all but one missed exam.

***Exam schedule (tentative)*:**

- EXAM 1: **Friday, 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: **Friday, April 3rd**
  If you failed exam 1 and you also fail this exam you should consider withdrawing from the course. The *last day to withdraw from the course with the grade of "W" is* ***Wednesday, April 01st***.
- EXAM 3: **Friday, May 8th**
- FINAL EXAM: ***tentatively*** scheduled for **Friday, May 22th: 9:00-11:00 am in 118N**
  The final is the American Chemical Society (ACS) standard 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

On Sapling site in the COURSE_DOCUMENTS folder you will find *the **Pacing Guide** that includes all assignment deadlines as well as the exam dates*. In addition, you will find in the same folder the Video Table of Contents – please use it to you organize your time more effectively.

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 Sapling 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 Sapling score. If you have a trouble opening assignments or submitting answers on Sapling, *please update your browser and Flash player and enable Flash for Sapling in your browser*.

To earn full credit in our course you must accumulate 1400 points. 400 points come from your Sapling Topic grade and 1000 points come from your EXAM grades. Here is the ***Grading Scheme*** for our course:

TOPIC	LGA[1]	Videos[1]	Workshops	i-Clickers	Homework[2]	TOPIC TOTAL[3]	In-Class Exams[4]	Final Exam[4]
Topic 1	1	1	10	-	10	**22**		
Topic 2	1	1	10	11	10	**33**		
Topic 3	1	1	-	-	10	**12**	**Exam 1 (200 pts)**	
Topic 4	1	1	10	11	10	**33**		
Topic 5	1	1	-	-	10	**12**		
Topic 6	1	1	10	11	10	**33**		
Topic 7	1	1	10	11	10	**33**		
Topic 8	1	1	10	-	10	**22**		
Topic 9	1	1	10	11	10	**33**	**Exam 2 (200 pts)**	**400 pts**
Topic 10	1	1	-	-	10	**12**		
Topic 11	1	1	10	11	10	**33**		
Topic 12	1	1	10	11	10	**33**		
Topic 13	1	1	10	-	10	**22**		
Topic 14	1	1	10	11	10	**33**	**Exam 3 (200 pts)**	
Topic 15	1	1	-	-	10	**12**		
Topic 16	1	1	10	11	10	**33**		
Topic 17	1	1	5	11	10	**28**		
TOTALS	**17**	**17**	**125**	**110**	**170**	439 => **400**	**600**	**400**
Total Topic Grade Required = 400 out of a total of 439 possible points							**Total Exam Grade = 1000**	
Total number of points to be earned in the course: 400 + 1000 = 1400								

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 for an assignment completed after the deadline.
2. ***The points for each homework assignment*** are scaled to the totals indicated (see below).
3. ***The total score for each topic*** is computed by summing the topic components. There are 439 total Topic points that you can earn if you complete every assignment on Sapling 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 excess 39 points as the points that you can "waste" if you miss a few assignments or a few points here and there. You cannot earn more than 400 Topic points. *The **39 excess Topic points** cannot be applied to your exam scores*.
4. If you miss an in-class exam, the final exam will count out of 600 points instead of 400 points (see below). *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 Sapling. 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 Sapling – *use the LGA file to review the learning goals when you study for our exams*.

Required Recitation Workshops: In addition to completing the videos and LGA assignments, 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 (see Workshop Grading Policy in the COURSE_DOCUMENTS folder on Sapling). 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 and the instructor of the recitation that you plan to attend*. Also remember that there are 39 "excess" points built into your Sapling topic grade - so if you miss a workshop, you waste 5 or 10 of these "excess" points.

Required iClicker sessions: There will be 10 required 2 hour iClicker sessions, each worth a total of 11 points. You earn 1 point for attending a session and then 1 point for every question that you answer correctly during the session. Some sessions will have only 10 questions and some will have more than 10 questions. The maximum number of points you can earn per session is 11 so only 10 correct responses will be counted for each session.

If your iClicker malfunctions or when you forget it at home ***you will not earn the points for that session****. Please do NOT ask for points if you fail to have a functioning iClicker*. Once again, remember that there are 39 "excess" points built into your Sapling topic grade so if you do not earn the points for a clicker session, you waste 11 of these excess points.

Required Homework: You will access your homework assignments on Sapling. *To get points you need to complete the homework assignments* ***before the deadline***. Assignments completed after the deadline will not be graded. *Please do not ask me to reopen an assignment just for you after the deadline is passed – our* ***Sapling platform does not allow doing this***.

Please note that

(1) The homework points for a Topic come from both the Sapling Skill practice assignments and the Sapling Synthesis assignments. The total points for a Topic's homework set are ***scaled*** *to 10 pts (see the Grading Scheme table above). You will see on Sapling your true homework grade after the last deadline for the set.*

(2) The points that you accumulate by completing the Sapling extra credit assignments will only be applied to cover points lost in the Sapling Skill Practice and Synthesis parts of the homework ***for the current topic****. These homework extra-credit points cannot be used to cover points lost in other topics, in other assignments or in exams.*

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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.

Students who are caught cheating during a workshop or a clicker session will automatically obtain a grade of ZERO for that workshop or clicker set and will be reported for Academic Dishonesty.

ADA Statement: In compliance with the ADA and with Section 504 of the Rehabilitation Act, Hunter College is committed to ensuring educational access and accommodations for all its registered students. Hunter College's students with disabilities and medical conditions are encouraged to register with the Office of AccessABILITY for assistance and accommodation. For information and appointment contact the Office of AccessABILITY (located in room E1214) or call 212–772–4857 or VRS 646–755–3129.

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 CUNYsponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

1. 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).
2. All Other Forms of Sexual Misconduct: Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212–650–3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212–772–4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123. CUNY Policy on Sexual Misconduct Link: http://www.cuny.edu/about/administration/offices/la/Policy-on-Sexual-Misconduct-12-1-14-with-links.pdf

S20 Chem 104 (Dr. Kobko): Pacing Guide

Week	Mon Date	TOPIC	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
1	27-Jan		Review Solution stoiciometry, Molarity & Dilutions (102-T18)				C00: Intro; W00		T1 LGA & Videos
			W00 (5 pts): 102-T18 - Solution Stoichiometry (due to your instructor during your 1 hour recitation period)						
2	3-Feb	TT1&2		T2 LGA & Videos		T1&2 Skills	C01: T1 & T2		T1&2 Synthesis
			W01 (5 pts): T1 (due to your instructor during your 1 hour recitation period)						
3	10-Feb	T3&T4		T3&T4 LGA & Videos	**No Class**	T3&4 Skills	C02: T3 & T4		T3&4 Synthesis
			W02: T2 (due to your instructoru during your 1 hour recitation period)						
4	17-Feb	T5&T6	**No Class**	T5&T6 LGA & Videos		T5&6 Skills	C03: T5 & T6		T5&6 Synthesis
			W03: T3&T4 (due to your instructoru during your 1 hour recitation period)						
5	24-Feb	T7		T7 LGA & videos		T7 Skills	C04: T7		T7 Synthesis
			W04: T5&T6 (due to your instructoru during your 1 hour recitation period)						
6	2-Mar	Exam 1					**Exam 1** (T1-T7)		T8 LGA & Videos
			M-Th: W05(T7, due during your recitation) & E1 reviews (attend as many sections as you like); Exam 1 (T1-T7) - Friday March 6th						
7	9-Mar	T8&T9		T9 LGA & Videos		T8 & T9 Skills	C05: T8 & T9		T8 & T9 Synthesis
			W06: T8 (due to your instructor during your 1 hour recitation period)						
8	16-Mar	T10&T11		T10&T11 LGA &		T10&11 Skills	C06: T10 & T11		T10&11 Synthesis
			W07: T9 (due to your instructor during your 1 hour recitation period)						
9	23-Mar	T12		T12 LGA & Videos		T12 Skills	C07: T12		T12 Synthesis
			W08: T10&T11 (due to your instructor during your 1 hour class period)						
10	30-Mar	Exam 2					**Exam 2** (T8-T12)		T13 LGA & Videos
			M-Th: W09:T12 (due during your recitation) & E2 reviews (attend as many sections as you like); Exam 2 (T8-12) - Friday April 3rd						
11	6-Apr	T13&T14		**Wed schedule**	**No Class**	**No Class**	**No Class**	**No Class**	**No Class**
			W10: T13 (due to your instructor during your 1 hour recitation period)						
12	13-Apr	T13&T14	**No Class**	**No Class**	**No Class**	**No Class**	C08: T13 & T14		T13&14 Synthesis
				T14 LGA & Videos		T13&14 Skills			
			W10: T13 (due to your instructor during your 1 hour recitation period)						
13	20-Apr	T15&T16		T15&T16 LGA &		T15&16 Skills	C09: T15 & T16		T15&16 Synthesis
			W11: T14 (due to your instructor during your 1 hour recitation period)						
14	27-Apr	T17		T17 LGA & videos		T17 VB&C Skills	C10: T16 & T17		
			W12: T15&T16 (due to your instructor during your 1 hour recitation period)						
15	4-May	Exam 3					**Exam 3 (T13-T17)**		
			M-Th: W13: T7 (due during your recitation) & E3 reviews (attend as many sections as you like); Exam 3 (T13-T17) - Friday May 8th						
16	11-May	-	No recitations or office hours are scheduled this week						
17	18-May	FE					Final Exam (T1-T17)		
			Final Exam reviews - TBA; no recitations or office hours; **FE (T1-T17) - Fr May 22nd**				05/22/19 9-11am		

SPRING 2020

Dates	Days	Description
01/26/2020	Sunday	Last day to drop for 100% tuition refund
01/27/2020	Monday	Start of Spring Term Classes Begin
02/02/2020	Sunday	Last day to add a course Last day to drop for 75% tuition refund
02/09/2020	Sunday	Last day to drop for 50% tuition refund
02/12/2020	Wednesday	College Closed
02/16/2020	Sunday	Last day to drop for 25% tuition refund Last day to Change or Declare a Major/Minor to be effective Spring Census date
02/17/2020	Monday	College Closed Grade of W is assigned to students who officially withdraw from a course
04/01/2020	Wednesday	Last day to withdraw from course with a grade of W
04/07/2020	**Tuesday**	**Classes follow Wednesday schedule**
04/08/2020 – 04/16/2020	Wednesday-Thursday	Spring Recess
05/15/2020	Friday	Reading Day
05/16/2020 – 05/22/2020	Saturday-Friday	Final Examinations
05/22/2020	Friday	End of Spring Term