



Chemistry 212, Quantitative Analysis Lecture

Summer 2020 Syllabus

Chem 212-001, Quantitative Analysis Lecture (3 credit hours)

Summer Session I: May 18th – June 26th, 2020

Lab Location: ONLINE

Prerequisite: Chem 106 or Chem 102 & 112

Lecture Location: ONLINE; all due dates, meeting times, exam times are Central Time Zone. Be mindful of this. Due dates/times are not adjusted for students in different time zones.

Course Meeting Times: This course has both synchronous (real-time, virtual in ZOOM) and asynchronous (pre-recorded lectures, independent videos, Sapling Homework, other activities) components. It is the student's responsibility to pay attention to all information regarding the course. As a student enrolled in the course, you agree to abide by, follow, and complete all course aspects including rules, requirements, class attendance, discussions, assignments, homework, quizzes/tests/exams, due dates, and other. This course requires your full commitment. This course is a combined lecture and discussion; the length of the meeting times reflects this.

- **Synchronous sessions in ZOOM: Tuesdays & Thursdays 8:30-11:10am (Central Time Zone)**
The [ZOOM link](#) is accessed from the ZOOM tool in Sakai. You must log in to Sakai to join. Make sure your ZOOM name is first Full Name and initial of Last Name. Odd usernames will not be allowed into ZOOM to combat any unauthorized access. Be mindful of this!
- **Asynchronous session (not meeting in real-time): Wednesdays 8:30-11:10am (Central Time Zone)**

Lecturer: Dr. Katrina Binaku

Office Hours: [Mondays 4-5pm](#), [Thursdays 12-1pm](#), and by a scheduled ZOOM appointment.

Office Hours Location: ZOOM

Email: kbinaku@luc.edu

Email Etiquette: When sending emails please put Chem 212-001 in the subject line or there will be a delay in response time. The Lecturer teaches multiple courses and must know which course a student is in before replying to email. Weekday emails to Dr. Binaku will get a response within a couple hours. Emails after 8:00pm may not be replied to until the following morning. Do not wait until the last minute to email with questions. Dr. Binaku checks email on weekends, but email response time might be longer [up to 24-hours].

Welcome to Chem 212. I look forward to working with you this summer session I and share valuable knowledge pertaining to Analytical Chemistry. These 6-weeks are going to fly by! Many topics of Chem 212 will be seen again in the Chem 214 Quant Lab course. Check Loyola email & log-in to Sakai often. Read the entire syllabus to understand the course expectations.

Course Description:

The course focuses on fundamental aspects of Analytical Chemistry from experiment design, calculations, statistics, acid-base chemistry, redox chemistry, EDTA chemistry, and ionic equilibria, etc. Theory of techniques and applications used in biomedical, forensic, environmental chemistry, etc. will also be highlighted.

Course Goals & Outcomes for Students:

- Acquaint students with some of the classical and modern techniques in Analytical Chemistry.
- Teach chemical equilibrium, acid/base chemistry, buffers, titrations, redox chemistry, and other chemical theory and connect it to real-world applications.
- Review conventional data collection methods, interpretation, evaluation of experimental data.

By completing Chem 212, students will be able to:

- List 3 classical and 3 modern analytical techniques and distinctly explain them.
- Demonstrate proficiency in chemical equilibrium, acid/base chemistry, redox chemistry, and other chemical topics [covered this term] through completion of Sapling homework problems.
- Demonstrate proficiency in evaluation of accuracy/precision of sample data using basic statistics

Required Materials:

- 1) Desktop or Laptop computer. Computer must have a microphone and speakers to participate in synchronous sessions and office hours. If you do not have a desktop or laptop computer, you need to contact the Information Commons [extended loan equipment program](#) within the first day of summer session I and arrange this resource. Lecturer is not responsible for coordinating resource for students nor responsible for the loaned device. Everything in this course requires a computer for access.
- 2) High-speed Internet access: Wired (ethernet cable) preferred but WI-FI is ok. Make sure WI-FI connection is reliable. Lecturer is not responsible if internet goes out when you are working on course items. Contact the Information Commons [extended loan equipment program](#) within the first day of summer session I and arrange this resource if you do not have internet at home. Lecturer is not responsible for coordinating this resource for students nor responsible for the loaned device.
- 3) Scientific OR graphing calculator. Suggested model: CALC TI30XA SCIENTIF/STAT FRAC. A graphing calculator is o.k. too. Calculator should be able to do logarithmic (base 10 and base e), exponential, trigonometric functions. Cell phone/tablet/laptop or other electronic devices are NOT calculators; do not use them for calculations.
- 4) *Sapling Exploring Chemical Analysis 6 months Access Card* (LUC bookstore or Sapling webpage) ISBN-13: 9781319084257 this is for the required homework only (if you do not want a textbook at all) and must be purchased. **OR** for e-textbook plus homework *Access Card and eBook* option is ISBN-13: 9781319088859. The eBook is cheaper than the hardcopy textbook. **OR** if you like hardcopy books get bundle of *Exploring Chemical Analysis, 5th Edition* by Daniel C. Harris with *Sapling Exploring Chemical Analysis 6 months Access Card*. ISBN-13: 9781319090180
Note that I typically teach with PowerPoint slides that pull essential information from the textbook.
- 5) [Sakai access](#) via the internet to review/complete course content, resources, review grades, etc. The course site is CHEM 212 001 SU20.
- 6) [ZOOM video & web conferencing software](#) (free for LUC/summer students). UVID username and password may be required to access and download ZOOM, enter synchronous course meetings, office hours, etc. See [ZOOM participation instructions](#) supplied by the University for more info. Links to ZOOM for synchronous sessions and office hours will be provided in Sakai.
- 7) Panopto (free for LUC/summer students). One format of recorded course content is Panopto videos. You may be prompted to log in with UVID username and password to view the videos. Links to videos will be provided in Sakai and via email.

A Composition style notebook is optional and can be utilized for note taking or working practice problems. If the textbook is purchased, one can read the textbook as supplement to what is covered in lectures. Major points are discussed in lecture via PowerPoints. The textbook just enhances the material. Emphasis of this course is understanding the material, not memorization. Practicing concepts and calculations is shown to enhance retainment of knowledge; that is why the Sapling homework is a required part of the course. A variety of avenues are offered to explore and master content: synchronous and asynchronous lectures, Sapling Homework, students' outside independent review/studying, and course exams.

Attendance/Instructional Format:

- This course is 100% online. Online courses often require a different mindset when compared to classroom led courses face-to-face; they also offer students more independence for learning. We are all humans and this [online] is a new learning experience for many. Let's get through this together!
- It is the Lecturer's hope that there is 100% attendance in synchronous sessions (Tuesdays/Thursdays). As a student who signed up [and paid] for this course, make sure to get the most out of it. The lecturing portion of synchronous sessions will be recorded and can be re-watched if you do have to miss a session due to unforeseen circumstances. That way, students do not miss out on information presented. Other than office hours, the synchronous sessions are the only other "real-time" opportunity to ask questions and communicate with Dr. Binaku in ZOOM. Emails work great, but they are not "real-time." There is a delay with an email reply. Keep that in mind.
- The asynchronous sessions on Wednesdays are designed as time set aside to review the previous day's work, complete Sapling Homework, and watch Panopto lecture(s) for the day's new content. This is instead of meeting in ZOOM. Of course, you have access to Sapling Homework and recorded Panopto 24/7 when they are opened so you can choose when to work on these items. Use time wisely to complete the necessary work as a considerable amount of course work is asynchronous and has specific due dates that will not be adjusted. Due dates are put in place so the required work is spread out over the summer session and does not build up at the very end.
- Do note that I have "whiteboard/chalkboard" capabilities in ZOOM for lecture and office hours. This is super cool because I can work on calculations with you in "real-time" or pre-record calculation work for specific types of problems. Recording calculations in synchronous sessions will give students the ability to re-watch them all at any time and emphasize the thought process.
- See the course schedule on the last page of the syllabus. Note the chapters covered on synchronous and asynchronous days. Understand the demands of an accelerated summer course. Also, note the exam days; exams will be given online on specific dates during a portion of the synchronous session time. Do not miss an exam. Lecturer may not give a make-up exam if a student misses an exam; if at the Lecturer's discretion a make-up exam is warranted for a proven unforeseen circumstance it will be an entirely different version of the exam and must be completed within 24 hours of the start time of the scheduled exam to avoid a failing exam grade of zero (0). If a student misses more than one exam or misses multiple Sapling Homework items, the Lecturer may file a BCT Report for wellness check and contact the student's academic advisor with concern for student performance and well-being. No make-up exams are offered for the final exam. A student who misses the scheduled final exam fails the course.
- Discussion sessions in the synchronous class time will be flexible in content. Lecturer welcomes students to ask questions about topics, calculations, theory. Lecturer may provide practice problems and split students into groups in the ZOOM Breakout Rooms to work together and solve problems. Lecturer may also demonstrate practice problems using ZOOM whiteboard/chalkboard feature. Discussions will not be held on exam dates; they will be held on most synchronous sessions.
- Discussions may involve a short quiz either in the ZOOM pool during class or asynchronously in Sakai after the day's synchronous lecture is over. These short quizzes will be checkpoints for the Lecturer to see how well the concepts are being understood. They are meant to be low stress, short questions.

Recording Policy & Course Content Policy:

- ZOOM will be used to record/hold live synchronous sessions. Lecturer intends to only record the lecture portion(s), but as a student in this class, it is possible your participation in live class discussions may be recorded. The synchronous recordings will be made available only to students enrolled in the course, via Panopto, to assist those who cannot attend the live session or to serve as a resource for those who would like to review content that was presented. All recordings will become unavailable to students in the class when the Sakai course is unpublished (i.e. shortly after the course ends, per the [Sakai administrative schedule](#)). Students who prefer to participate via audio only will be allowed to disable their video camera so only audio will be captured during recording. Lecturer will announce when recording starts so that students can turn their cameras off.
- The use of all video recordings will be in keeping with the University Privacy Statement shown below: Assuring privacy among faculty and students engaged in online and face-to-face instructional activities helps promote open and robust conversations and mitigates concerns that comments made within the context of the class will be shared beyond the classroom. As such, recordings of instructional activities occurring in online or face-to-face classes may be used solely for internal class purposes by the faculty member and students registered for the course, and only during the period in which the course is offered. Recordings are not shared outside of this course. The above bullet point states when live recordings will occur in this course (synchronous sessions). Recordings including student activity that have been initiated by the Lecturer may be retained by the Lecturer only for individual use.
- ZOOM chats are not private. Be mindful of what you type in the chat box when messaging other students and the Lecturer. Breakout Rooms are sometimes utilized too & are monitored by Lecturer.
- All activities pertaining to the course should be completed as an INDIVIDUAL. Any collaboration on course material and/or graded materials can constitute cheating. Failure of the course may result if an instance of copying or sharing answers to graded content is discovered by the Lecturer.
- **Course content is designed for use ONLY by students in this course. All materials are subject to privacy and copyright laws. Students are NOT allowed to share any course resources, Panopto, PowerPoints, homework/quiz/test/exam questions, documents, etc. with anyone nor post to any outside media. The Chem 212 syllabus and all course materials are NOT allowed for distribution outside of class nor outside of the University. Uploading, posting, copying, or sharing electronic or non-electronic Chem 212 materials outside of class [i.e. share sites] is NOT allowed. If discovered that a student completes such action, the Dean and University get notified immediately.**
- **Chegg, Course Hero, Reddit, among other webpages, are monitored by the Lecturer.** If any Chem 212 course content is posted on these sites or other, the Dean and University will be notified. Student(s) involved may fail the content the posted material pertains too and/or fail the course. Posting any course content online to facilitate getting answers from others is a form of cheating and will not be tolerated.

Course Repeat Rule:

Effective as of the Fall 2017 semester, students are allowed only THREE attempts to pass Chemistry courses with a C- or better grade. The three attempts include withdrawals (W). After the second attempt, the student must secure approval for a third attempt. Students must come to the Chemistry Department, fill out a permission to [register form](#) or access it from the Department of Chemistry & Biochemistry website, and personally meet and obtain a signature from either the Undergraduate Program Director, Assistant Chairperson, or Chairperson in Chemistry. A copy of this form is then taken to your Academic Advisor in Sullivan to secure final permission for the attempt.

Blanket Statement About “Technical Difficulties:”

It is *strongly encouraged* that all required submissions to Sakai, completion of Sapling Homework, use of electronic resources, opening course files, etc. be done on a reliable wired (ethernet) internet connection. WI-FI is perfectly o.k. if the connection is reliable. The internet user must determine the reliability of their WI-FI. Excuses of “technical difficulties” are generally not accepted as this syllabus is stating all students should use wired (ethernet) internet connection and/or ensure their WI-FI connection is reliable [not prone to outages]. Lecturer realizes that campus is closed, and University computer labs are not accessible. Even so, students should ensure their internet connection is reliable enough to complete an online course without interruption. If an outage arises, the Lecturer may ask for proof of the outage. The best advice the Lecturer can give is to NOT complete assignments at the last minute, to avoid glitches with internet, since every part of the course work needs reliable internet to submit. Lecturer is not responsible for technical difficulties of personal devices [phone, tablet, home/work/public wireless internet, or computer]; it is also understood that sometimes unforeseen things happen. It is best to always contact the Lecturer if there are legitimate difficulties. Do not submit items in Sakai using a cell phone or a tablet device.

Academic Integrity:

The standard of academic integrity and personal honesty delineated in the [College of Arts & Sciences Statement on Academic Integrity](#) is expected of every student and will be enforced. Cheating can take many forms in a course, but the most common forms are copying data and answers to homework or exam questions, sharing files for homework, completing Sakai or Sapling Homework with others, etc. Findings of dishonest academic behavior are reported to the Chair of the Chemistry Department and to the Dean’s Office; it is also noted on an individual’s record. Copied answers to any graded course work will result in penalty for all students involved.

Dr. Binaku encourages students to converse with each other about chemistry outside of the classroom. Virtual group study sessions and practicing end of chapter questions in the textbook with others is appropriate. There is a difference between sharing knowledge and cheating. Sapling (online) Homework must be completed individually; it is not group work. Exams will be online and are to be completed as individuals. There are ways to detect cheating in online exams. Copying others work and presenting that work as one’s own is an example of academic dishonesty. Cheating and plagiarism take many forms. Academic dishonesty during an exam can take many forms, including but not limited to, sharing materials with another student during the exam, etc. This list is not exhaustive but highlights several dishonest situations. If course materials are plagiarized or shared by students (current or past), no credit will be given for the work.

Student Accessibility Center (SAC) Policy:

If you have a documented disability and wish to discuss academic accommodations, discuss this with the Lecturer via ZOOM via Breakout Room as soon as possible, ideally the first week of summer session I. The Coordinator of Student Accessibility Center (SAC) is in the Sullivan Center and must be contacted independently by a student. Necessary accommodations will be made for students with disabilities who procure a SAC letter. However, to receive any accommodations self-disclosure, proper documentation, and registration with the SAC office at Loyola University Chicago is required. Accommodations cannot be made until the Lecturer receives proper documentation, in a timely manner. Furthermore, accommodations are not retro-active and begin only once appropriate documentation has been received by the Lecturer in a timely manner. Only those accommodations that are specifically listed in the SAC letter will be provided. If an accommodation letter suggests the Testing Center be utilized to take an exam, remember the University is not open so that cannot be facilitated. Read [SAC Policies and Procedures](#).

Smart Evals:

Feedback on the course is important so that Lecturer can gain insight into how to improve the course, the teaching style, and so the department can learn how best to shape the curriculum for future semesters. Students are welcome to email the Lecturer at any point in summer session to voice feedback. Towards the end of the summer session, students will receive an email from the Office of Institutional Effectiveness with a reminder to provide feedback on the Chem 212 course. This office will send constant reminders during the open period of feedback until the evaluation has been completed. The evaluation is completely anonymous. When the results are released, no one will be able to tell which student provided individual feedback. Feedback is not released until after the semester is over, therefore any feedback given will not impact student grades.

Exams:

There will be a total of three (3) one-hour exams given and one (1) cumulative final exam. Exams #1, 2, and 3 are each worth 125 points. The class will meet in ZOOM for instructions promptly at 8:30 am on the day of the exams; then the exam will open in Sakai and is timed for one hour. **Students must take all exams on the assigned dates noted in the syllabus. Plan ahead and make sure exam dates are noted.** If a student misses one of the three one-hour exams, the student earns 0 out of 125 points. The Lecturer has the discretion on whether to offer a make-up exam or not. If a make-up exam is granted, it will be a different exam version and must be completed within 24-hours of the original exam day/time. If a second exam is missed, the student cannot pass the course and will be reported to the University through BCT Report and the student's academic advisor. **The final exam is cumulative. No make-up exams are granted for the final exam under any circumstances!** Students are not allowed to take the final exam early. If a student does not show up in ZOOM on final exam day at 8:30am [Thursday, June 25, 2020] to take the final exam in Sakai, the student receives a zero (0) for the final exam. There is *no* make-up final exam. **All exams are open book and open note unless otherwise specified.** They are timed to ensure that students are studying the material; if the exam is not finished in the hour, it is graded as is. If a student relies too much on notes and does not finish the exam, it is graded as is and unanswered questions earn zeros (0). Do not waste time relying on notes; make sure you know the material you are being tested on. Graphing and/or scientific calculators *are* allowed for use on exams. Phone use is not allowed. It is the student's responsibility that their calculator is in working order. A periodic table will be provided on an exam if needed.

Exams have a timer in Sakai; once the time is up, the exam closes and is no longer accessible. Unanswered questions earn a zero (0). Exams are graded as soon as reasonably possible. Students' exams and/or answer sheets are downloaded. Sakai records when a student opens an exam, how long a student takes on the exam, and the time the exam is submitted [if done faster than max. time]. Any discrepancies or questions about grading on any exams (#1, 2, and 3) must be discussed with the Lecturer no later than two business days after the graded exam & feedback has been returned to the student in Sakai. After two business days, no grading discrepancies or changes will be made on exams. No exceptions. The final exam will be graded by Sunday, June 28, 2020 and scores/feedback released. Students will have 24-hours to review & ask questions about the final exam score. After said time/date graded final exams are sealed and can no longer be viewed and the Sakai site will be unpublished. Grades will go in LOCUS on the evening of Monday, June 29, 2020. All dates and times in this syllabus are Central Standard Time Zone.

Exam Dates: Thursday, May 28, 2020
Tuesday, June 9, 2020
Thursday, June 18, 2020
Thursday, June 25, 2020

Exam #1, Chapt. 0,1,3-6 (one hour, 8:35 – 9:35 am)
Exam #2, Chapt. 8-11,13 (one hour, 8:35 – 9:35 am)
Exam #3, Chapt. 12,14,16,18-20 (one hour, 8:35 – 9:35 am)
Cumulative Final Exam (2 hours, 8:35 – 10:35 am)

Sapling Learning (Online) Homework:

There are REQUIRED Sapling Learning (online) Homework problems assigned for each chapter covered. *They ARE graded* and meant for practice to master the material [there are end of chapter textbook problems, optional, for practice too]. LATE Sapling Homework submissions are not accepted; if homework is incomplete and the due date passes, the points earned are zero (0). Students cannot get credit for items not completed on time. Due dates are below; due dates are assigned to keep students on track to complete homework problems little by little over the course's duration. This helps with content retention & grade feedback.

Chapters	Due Date (by 11:55 pm / 23:55, Central Time Zone)
Practice, 0,1	Tuesday, May 26 th , 2020
3,4,5	Wednesday, May 27 th , 2020
6,8	Monday, June 1 st , 2020
9, 10,11,13	Wednesday, June 10 th , 2020
12,14,16,18	Tuesday, June 23 rd , 2020
19–23	Thursday, June 25 th , 2020

The “Practice Assignment” in Sapling is 5 points extra credit. It opens Tuesday, May 19, 2020 at 11:10am and closes Tuesday, May 26, 2020 at 8:30am, Central Time Zone. After the close time, stated here in the syllabus & Sapling Homework, the extra credit is no longer available. If a student neglects to complete the extra credit within the defined period, no extra credit points (e.c.) are earned nor other e.c. given. No exceptions.

Directions to access Sapling Learning (online) Homework, Sapling provided these to the Lecturer:

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.

Create your password and set all three security questions. Start typing in your institution to select from the options that appears in the Primary Institution or School name field. If your institution does not appear you can add it by typing in the full name. Accept the terms of use and click “Sign Up”. Check your email for the confirmation link to complete registration and return to login page.

2. Set your institution by searching using your institution's full name and selecting the appropriate option.
3. Under Enroll in a new course, you should see Courses at [Your College]. Click to expand this list and see courses arranged by subject. Click on a subject to see the terms that courses are available.
4. Click on the term to expand the menu further (note that Semester 1 refers to the first course in a sequence and not necessarily the first term of the school year).
5. Once the menus are fully expanded, you will see a link to a specific course. If this is indeed the course you would like to register for, click the link.
6. *If applicable*, to access your eBook click on the image of the cover on the right sidebar of your course site.

Need Help? The technical support team can be reached by phone, chat, or by email via the Student Support Community. To contact support fill out the webform: <https://macmillan.force.com/macmillanlearning/s/> **Sapling Learning support team is faster and usually better able to resolve technical issues than the Lecturr.**

This link includes detailed instructions on how to register for your course:

<https://macmillan.force.com/macmillanlearning/s/article/Sapling-Learning-Registering-for-courses>

Tutoring:

To find more information visit the [Tutoring Center webpage](#). Chemistry is fascinating but a challenge. Daily studying must be done to master principles taught in this course. Contact me if persistent troubles arise. Use office hours to help clarify subject matter/other questions. Complete (optional) end of chapter textbook problems for extra practice! Lecturer cannot provide copies of end of chapter questions due to copyright; students must have the eBook or hard copy textbook to see/complete the end of chapter questions.

Additional Student Resources:

A considerable amount of technology is utilized in this course. Below are links of information guides to Sakai, Panopto, ZOOM, and the University Help Desk, if students need more structured guidance on using the tools in the course to be successful. Students can always email the Lecturer, but the guides provided below likely reveal the answer more quickly when a student reads them on their own. These guides are written by the pros.

[SAKAI student guide](#)

[Panopto Information](#)

[ZOOM Information](#) and [Contacting ZOOM Support](#)

[Information Technology Service Desk](#) (ITS Help Desk)

Grading Policy:

The established grading policy is subject to change at Lecturer discretion. Please note the University uses a +/- grading scale system and it will be implemented in this course. Grade rounding only applies to the final course grade percentage. Sakai reports course grades to TWO digits past the decimal (XX.XX%); this percentage is rounded to the closest integer. For example, an 89.50% or 89.90% (B+) rounds up to a 90% (A-), BUT an 89.30% or 89.45% (B+) round to the integer 89% (B+), as it is the closest. There is no extra credit in Chem 212 (other than the 5 points in Sapling Homework). Course grades will be entered in LOCUS on Monday, June 29th by 10pm Central Time Zone, after the Sakai viewing period of graded finals ends.

Grading Category	Points
Sapling (online) Homework	106
Discussion Quizzes (ZOOM or Sakai)	39
Exam #1 (one hour)	125
Exam #2 (one hour)	125
Exam #3 (one hour)	125
Cumulative Final Exam (two hours)	150
Total	670

The scale to determine the letter grade earned in the course is as follows:

A 100–93%, **A-** 92–89%, **B+** 88–85%, **B** 84–81%, **B-** 80–77%, **C+** 76–73%, **C** 72–69%, **C-** 68–66%, **D+** 65–63, **D** 62–59%, **F** ≤ 58%

Norms of Course Proceedings:

The ZOOM classroom is a safe place to question and explore ideas involving Chemistry! Student and Lecturer voices are important to this work. Feel comfortable asking questions during ZOOM lecture/discussion, office hours, etc. If disagreements arise with respect to an exercise answer or a topic, remember to respect fellow peers when proceeding to offer explanations or points of view. Students should attend synchronous sessions and actively participate. Envision the following for lectures: class will promptly begin at 8:30 am, starting with a ~40-50 minute lecture, followed by a ~10 minute break, then a ~35 minute discussion/group work (sample problems, students questions, group practice work, etc.), a 5 minute break, and finally a ~55 minute lecture. This plan is fluid. Sometimes things in life do not always go according to plan; the timing of lecturing and discussion may fluctuate depending on topic or pace of the class. And, that is completely ok!

Chem 212-001 Tentative Lecture Schedule (subject to change*)

WEEK & Class Dates	Meeting Type (Sync / Async)	Lecture Topic(s), Chapters Discussed
WEEK 1		
Tuesday, May 19	Synchronous in ZOOM	Introductions, Syllabus Lecture, & Sakai Demo CHAPTERS 0, 1 → Chemical Analysis; Terms; Stoichiometry; Units & Conversions
Wednesday, May 20	Asynchronous	CHAPTERS 3, 4 → Math Tools; Sig Figs; Errors; Statistics
Thursday, May 21	Synchronous in ZOOM	CHAPTERS 5, 6 → Quality Assurance & Calibration Methods; Titrations
WEEK 2		
Tuesday, May 26	Synchronous in ZOOM	CHAPTERS 6, 8 → Finish Titrations; Acids & Bases
Wednesday, May 27	Asynchronous	CHAPTER 8 → Finish Acids & Bases
Thursday, May 28	Synchronous in ZOOM	EXAM #1 (Ch. 0,1,3-6) Join ZOOM at 8:30am for directions Lecture after exam on CHAPTER 9 → Buffers
WEEK 3		
Tuesday, June 2	Synchronous in ZOOM	CHAPTERS 9, 10 → Finish Buffers; Acid & Base Titrations
Wednesday, June 3	Asynchronous	CHAPTERS 10, 11 → Finish Acid & Base Titrations; Polyprotic Acids & Bases
Thursday, June 4	Synchronous in ZOOM	CHAPTER 13 → EDTA Titrations
WEEK 4		
Tuesday, June 9	Synchronous in ZOOM	EXAM #2 (Ch. 8-11, 13). Join ZOOM at 8:30am for directions Lecture after exam on CHAPTER 12 → Chem Eq.; Ionic Strength
Wednesday, June 10	Asynchronous	CHAPTER 14 → Electrode Potential
Thursday, June 11	Synchronous in ZOOM	CHAPTER 16 → Redox Titrations
WEEK 5		
Tuesday, June 16	Synchronous in ZOOM	CHAPTERS 18, 19 → Light; Beer's Law; Spectrophotometry
Wednesday, June 17	Asynchronous	CHAPTER 20 → Atomic Spectroscopy
Thursday, June 18	Synchronous in ZOOM	EXAM #3 (Ch. 12, 14, 16, 18, 19, 20). Join ZOOM at 8:30am for directions Lecture after exam on CHAPTER 21 → Chromatography; MS
WEEK 6		
Tuesday, June 23	Synchronous in ZOOM	CHAPTER 21, 22 → Chromatography: Gas Chromatography
Wednesday, June 24	Asynchronous	CHAPTER 23 → Chromatographic Methods; Liquid and Ion Potentially a review session in ZOOM
Thursday, June 25	Synchronous in ZOOM	CUMULATIVE FINAL EXAM. Join ZOOM at 8:30am for directions.

*This guideline is based on previous experience of Lecturer teaching the course. The schedule is subject to change at the Lecturer's discretion based on pace of the class. Six weeks will fly by and we have a lot of Chemistry to cover; but I also want to make sure we master the content before moving forward! NOTE: I will not change exam dates under any circumstances; students tend to plan their time out and I will not alter those plans. I respect that some students are working or have other obligations. Just make sure to keep exam dates/times open to access the exams during noted class times.

Syllabus Disclaimer:

The Lecturer (Dr. Binaku) reserves the right to revise this syllabus to correct any unintentional mistakes found at any point of the summer I session. Students will be notified if any changes have been made.

Let us have some fun and learn different Analytical Chemistry topics, techniques, and instrumentation! 😊