



Chemistry 280, Environmental & Chemical Analysis

Lecture and Discussion

Fall 2024 Syllabus

Chem 280-001, Environmental & Chemical Analysis Lecture (3 credit hours)
Chem 280-002 and 280-003 Discussion
August 26th – December 7th, 2024

Welcome to Chem 280. I look forward to working with you and sharing valuable knowledge pertaining to chemical analysis. Check Loyola email & log-in to Sakai often. Read entire syllabus to understand expectations. All dates and times in this syllabus are Central Standard Time (CST) Zone.

Prerequisite: Chem 240 & 260. **Pre or Co-requisite:** Chem 272

Lecture Day, Time, & Location: Tuesdays & Thursdays 8:30-9:45am, *Cuneo Hall 210*

Discussion Day, Time, & Location: Wednesdays 9:20-10:10am (sec. 002) and 10:25-11:15am (sec. 003)
Flanner Hall 007 (basement level)

Course Meeting Times: Chem 280 lecture and discussion course is in-person. Attendance is necessary to learn the material, participate in graded group work or other activities in lecture and/or discussion, earn points, take exams, complete practice problems, etc. No online supplemental work is given for absent students. As a student enrolled in the course, you agree to abide by and follow all course guidelines including rules, requirements, lecture & discussion attendance expectations, due dates, as well as complete all course work including assignments, practice problems, tests/exams, group work, and other. This course requires a full commitment.

Lecturer: Dr. Katrina Binaku

Office Hours* simultaneously in person & ZOOM: Mondays and Thursdays 3:40-4:15pm, Tuesdays 10-11am, or by a scheduled appointment*. *If you can't make office hours, email to schedule another time [M-F] to meet in person at my office or in ZOOM, when we are both available. Evening/weekend appointments not available.

Office: Flanner Hall 304 | **Email:** kbinaku@luc.edu | **Phone:** (773) 508-8715

Email Etiquette: When sending emails to Dr. Binaku please put Chem 280 in the subject line or there will be a delay in response time. I teach multiple courses [I'm also teaching sections of Chem 261 and 272] and must know which course a student is in before replying to email. Weekday emails to Dr. Binaku will get a response in less than an hour if I am not teaching or within a couple hours if I am teaching when you send the email. Emails after 7:00pm may not be replied to until the following morning. Do not wait until the last minute to email questions. Dr. Binaku checks email on weekends, but response time might be longer [up to 24-hours].

Statement of Intent:

By enrolling in this course, you agree to read every page of the syllabus, abide by all syllabus and course requirements, and turn in all course work. Students agree to the consequences of no credit on course work not turned in and/or when absent. Students also agree to log-in to Sakai several times a week and to check their Loyola email daily.

Course Description:

The course focuses on fundamental aspects of essential chemistry concepts and skills. Topics include the chemical analytical process, sample preparation, quantitative analysis, and data evaluation & validation. These topics will expand and enhance the ability to use chemical principles to analyze various types of samples. Theory of techniques and applications used in biomedical, forensic, environmental, cosmetic, chemistry, and more will also be highlighted when they can be. Understanding *where* and *why* certain techniques are used is just as important than knowing the ‘textbook’ information of what a topic or technique is. Both general aspects of the analytical process and specific examples will be discussed throughout the semester. Examples will be drawn from fields where quantitative analysis is commonly applied such as environmental monitoring, food & beverage safety, forensic science, chemical process control, personal care products, and cultural heritage. After completing the course, you will be able to apply the most suitable analytical process for a variety of analytes and samples. **A list of topics covered in the course is listed in the course topics section.**

Course Goals & Outcomes for Students:

Goals:

- 1) Acquaint students with some of the most popular classical and modern techniques in chemical analysis
- 2) Teach the chemical analytical process, sample preparation methods, quantitative analysis using classical and modern techniques, data evaluation & validation
- 3) Connect course topics to real-world applications and first-hand experiences
- 4) Review appropriate applications of chemical analysis topics to real-world scenarios related to STEM

Outcomes:

- 1) List the steps in the chemical analytical process and provide a summary of details for all the steps
- 2) Explain how to complete sample preparation and isolate an analyte as well as choose the appropriate analytical technique for sample analysis
- 3) Differentiate between the calibration methods of external, internal, and standard addition and identify 1 practical application for each of the calibration methods
- 4) Evaluate 1 classical and modern analytical technique/method that can quantify the same analyte, briefly explain the analytical technique as well as list its pros & cons

Course Topics:

The following nine (9) main topics will be covered this semester in the numerical order displayed. Each main topic contains multiple sub-topics that will be discussed in the lectures.

1	Intro Terminology, Analytical Process	4	Chemical Measurement Process	7	Molecular Spectroscopy
2	Figures of Merit	5	Chromatography	8	Mass Spectrometry
3	Complexometry	6	Atomic Spectroscopy	9	Post Analytical Tasks (if time)

Academic Calendar: Students are responsible for knowing the course schedule and official [University Academic Calendar](#) and important dates in the calendar.

Mask Requirement:

Masks are optional. It is a student’s choice to wear a mask or not. Just because a student wears a mask, they cannot expect those around them to wear one.

Pass/Fail Conversion Deadlines and Audit Policy:

A student may request to convert a course into or out of the “Pass/No-Pass” or “Audit” status only within the first two weeks of the semester. For the current semester, students can convert a class to “Pass/No-Pass” or “Audit” through September 9th. Students must submit a request for Pass/No-Pass or Audit to their Academic Advisor.

Norms of Course Proceedings:

Class sessions begin/end on time. Students should attend all class sessions and actively participate. Missing class puts a student significantly behind in terms of knowledge. If an absence is anticipated, discuss this with the Lecturer as soon as possible. Lectures are not recorded; it is in students' best interest to attend class.

LECTURE (CHEM 280- 001) will meet in-person in *CUNEO 210*. Classes will start promptly at 8:30am and will feature PowerPoint presentations and examples worked on the whiteboard or tablet/projector device. Course presentations will be posted in Sakai *Resources* after the lecture is concluded, typically right after class.

DISCUSSIONS (CHEM 280 – 002/003) will meet in person in *Flanner Hall 007*. Discussions will start promptly on time. Participation in discussion sections is mandatory and will make up 20% of the final grade. Discussions are designed to facilitate learning and gain extra practice and there will be time to ask questions about course content too. Students absent from discussion will get a blank copy of practice problems [when applicable] but cannot earn credit for the missed work.

Lectures and discussion will NOT meet on the following dates:

Tuesday, October 8th – Fall Break, No Class

Wednesday, October 9th – Asynchronous day for discussion, activity or recording will be posted in Sakai

Wednesday, November 27th – Thanksgiving Break, No Class

Thursday, November 28th – Thanksgiving Break, No Class

Envision the following for lectures: class will promptly begin at 8:30 am, starting with a ~40-minute lecture, followed by a 5–10-minute break, then either more lecturing or problem solving for the remaining time in class. This plan is not guaranteed because as we all know, sometimes things in life do not always go according to plan; the timing may fluctuate depending on topic or pace of the class. If more examples or additional questions are asked that need to be addressed, know that the Lecturer will adjust schedule and accommodate when able to. The classroom is a safe place to question and explore ideas involving chemistry! Student and Lecturer voices are important. Feel comfortable asking questions during 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.

Health, Safety, and Well-Being on Campus: Adhere to all guidelines posted on Loyola Webpages.

Course Materials:

Please note that a textbook is *not mandatory* for this course as there are many free resources available online or that will be posted in Sakai. Do not feel like you must buy a textbook for the course; I typically teach with PowerPoint slides that pull essential information from various sources.

- 1) *Optional, provided for FREE. PDF textbook:* David Harvey – [Analytical Chemistry 2.1 pdf](#)
I also put a downloaded PDF copy of the textbook in Sakai Resources.
- 2) *Optional paper Textbook:* Daniel .C. Harris – *Quantitative Chemical Analysis*, any edition.
- 3) Scientific calculator. Suggested model: CALC TI30XA SCIENTIF/STAT FRAC. Calculator should be able to do logarithmic (base 10 and base e), exponential, trigonometric functions. A graphing calculator is not allowed. Cell phones/tablets are not calculators and cannot be used for calculations. Only scientific calculators (non-graphing) will be allowed to use on exams.
- 4) Desktop or Laptop computer and internet to access Sakai course site.
- 5) [Sakai access](#) to review/complete course content, resources, review grades, etc.
- 6) Non-erasable pen. Pencil, white out, and erasable pens are not allowed.
- 7) *Optional:* Composition style notebook for note taking or working practice problems.

Course Repeat Rule:

Effective with 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 print it from the [Department of Chemistry & Biochemistry website](#) and obtain a signature from 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.

Previous Course Work Does Not Count When Repeating the Course:

If you were enrolled in a Chem 212 or 280 course in a previous semester and are re-taking it for any reason [withdraw, drop, unfavorable grade, etc.], note that any and all coursework from a previous term does NOT count in the current semester the course is being taken. Students must complete all coursework within the same semester of the enrolled course. Coursework taken in prior semesters does not count in the current semester.

Recording Policy and Course Content Policy:

- Panopto may or may not be used to record lectures and content information for the course. This content is posted to the Sakai site. If any content is recorded by Lecturer, it is done outside of class time and no students are included. The use of all video recordings will be in keeping with the University Privacy Statement: 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 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.
- 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 Lecturer.
- **Chegg, Course Hero, Reddit, among other webpages, are monitored by the Lecturer.** If any Chem 280 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 is a form of cheating and will not be tolerated. These websites readily give up student information to Universities as evidence of cheating/posting content that does not belong to the student.

Blanket Statement About “technical difficulties” with Technology and/or Software:

It is *strongly encouraged* that all required submissions to Sakai as well as opening files, be completed on a reliable wired or wireless 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 not accepted as this syllabus is stating all students should ensure their internet connection is reliable [not prone to outages]. If an internet outage arises, the Lecturer does reserve the right to ask for proof. The best advice the Lecturer can give is to NOT complete assignments at the last minute, so 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]. Do not submit items in Sakai using a cell phone or a tablet device as these devices do not count as reliable internet connection tools [and the Sakai website display on these mobile devices isn’t reliable]. This syllabus is stating all students should use a reliable internet to submit work in Sakai. This list is not exhaustive. Any activities this course may require a computer or internet connection for should be completed using University computers with wired internet.

Loyola University Absence Policy for Students in Co-Curricular Activities (including ROTC):

Students participating in co-curricular activities must make information concerning time conflicts with University sponsored events available to the Lecturer no later than 10 calendar days after the start of the semester. The Lecturer reserves the right to contact the [Athletics Department confirming time conflicts, absence](#), and regarding concerns. Students missing classes while representing Loyola University Chicago in an official capacity (e.g. intercollegiate athletics, debate team, model government organization) will need to discuss their needs with the Lecturer. Sakai work cannot be made up in any circumstances, no exceptions. Lecture and discussion work generally cannot be made up, but this will be decided case by case when appropriate. Students must still watch Panopto, PowerPoints for content missed on same schedule as rest of the course. Students must discuss with faculty the potential consequences of missing class and the ways in which they can be remedied. Students must provide Lecturer with proper documentation describing the reason for and date of the absence. This documentation must be signed by an appropriate Faculty/Staff member in the Athletics Department, and it must be provided as far in advance of the absence as possible. It is the responsibility of the student to make up any assignments under the timeline the Lecturer decides upon. Advanced notice must be sent to Lecturer through Loyola email.

Loyola University Absence/Accommodations Policy for Religious Reasons:

Students missing lecture due to observing religious holidays must alert the Lecturer no later than Friday in Week 2 of the semester to request a special accommodation. This is handled on a case-by-case basis. The Lecturer reserves the right to contact Campus Ministry, which keeps information on a plethora of religions. Students must plan ahead for Sakai deadlines; work ahead if a due date is on a religious holiday as students know their religious holidays well in advance. Students must discuss with the Lecturer the consequences of missing class and the ways [if any] it can be remedied, while also providing the Lecturer with proper documentation describing the reason and date of the absence. It is a student's responsibility to proactively ask what will be missed due to religious holiday absence. It is the responsibility of the student to make up any assignments under the timeline the Lecturer decides upon.

Accommodations via Student Accessibility Center (SAC) Policy:

If a student has a documented disability and wishes to discuss academic accommodations, discuss with the Lecturer as soon as possible, ideally the first week of the semester. The Coordinator of Student Accessibility Center (SAC) is in the Sullivan Center and must be contacted independently by you, the student. Necessary accommodations are 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 SAC documentation. Furthermore, accommodations are not retro-active and begin only once appropriate SAC documentation is received by the Lecturer in a timely manner. Only those accommodations specifically listed in the formal SAC letter will be provided. If a SAC letter suggests the Testing Center be utilized, it does not apply for this course as there are no written exams. Read up on [SAC Policies and Procedures](#).

Notice of Reporting Obligations for Responsible Campus Partners:

As a faculty member, I am a Responsible Campus Partner ("RCP") under Loyola's [Comprehensive Policy and Procedures for Addressing Discrimination, Sexual Misconduct, and Retaliation](#). While my goal is for you to be able to engage fully and authentically with our course material through class discussions and written work, I also want to be transparent that as a RCP I am required to report certain disclosures of sexual misconduct (including sexual assault, sexual harassment, intimate partner and/or domestic violence, and/or stalking) to the [Office for Equity & Compliance](#) ("OEC"). As the University's [Title IX](#) office, the OEC coordinates the University's response to reports and complaints of sexual misconduct (as well as discrimination of any kind) to ensure students' rights are protected. I also have an obligation under Illinois law to report [disclosures of or suspected instances of child abuse or neglect](#). The University maintains such reporting requirements to ensure that any student who experiences sexual/gender-based violence receives accurate information about available resources and support. Such reports **will not generate a report to law enforcement** (no student will ever be

forced to file a report with the police). Additionally, the University's resources and supports are available to all students even if a student chooses that they do not want any other action taken. If you have any questions about this policy, you are encouraged to contact the OEC at equity@luc.edu or 773-508-7766. If you ever wish to speak with a **confidential** resource regarding gender-based violence, I encourage you to call [The Line](#) at 773-494-3810. The Line is staffed by confidential advocates from 8:30am-5pm M-F and 24 hours on the weekend when school is in session. Advocates can provide support, talk through your options (medical, legal, LUC reporting, safety planning, etc.), and connect you with resources as needed -- *without* generating a report or record with the OEC. More info: [The Line](#).

Use of Appropriate Names and Pronouns:

Always addressing one another by using one's chosen modes of address (preferred names and pronouns) honors and affirms individuals of all gender identities and expressions. Misgendering and heteronormative language excludes the experiences of individuals whose identities may not fit within a gender binary, and/or who may not identify with the sex they were assigned at birth. If you wish to, share your gender pronouns with me and the class when introducing yourself. If you do not wish to be called by the name that appears on the class roster/attendance sheet, please let me know privately and I honor your wishes. My goal is to create an affirming environment for all students so that everyone can learn and engage as our full and true selves.

Academic Integrity:

All students in this course are expected to read and abide by the standard of academic integrity and personal honesty in the [College of Arts & Sciences Statement on Academic Integrity](#). Integrity is expected. Cheating can take many forms in a course, but the most common forms are copying another student's work [past or present], sharing files, plagiarism of information, submitting false documents, deliberately disrupting performance of classmates, completing Sakai or other electronic content with another person. Findings of dishonest academic behavior are reported to the Chair of the Chemistry Department and to the Dean's Office; it is also entered into an individual's record. Copied answers to course work will result in penalty [score of 0] for all students involved. Turn It In is utilized for final paper to identify plagiarism and other. AI detection software is also used. Students can converse, brainstorm, and work through strategies together but copying other students' (current or previously in Chem 212 or Chem 280) work and presenting it as one's own is unacceptable. There is a difference between sharing knowledge and cheating. If any course materials in this course are plagiarized or have been shared between students (current or past), no credit will be given for the work in question. Cases of suspect academic dishonesty will be handled according to university guidelines.

Artificial Intelligence (AI) Statement:

Regarding the use of Artificial Intelligence (AI): our Provost has expressed to "Let us all make sure we are learning and sharing best practices and not allowing AI to do the learning for us." In this course, any work you submit for credit must represent your own ideas and understanding of the assigned material. If you are uncertain about any case where your use of AI may conflict with university or this course, please talk to the Lecturer.

Generative AI (gen AI) is all around us, every day. It's the predictive text in our messages and Google search bar, or spell check in Word. But gen AI is also in newer avenues such as Chat GPT, Claude, Gemini, Leap AI, Grammarly, and more (there are too many to list). I'll list where you can use generative AI to assist you in the course and where you cannot.

Gen AI can do, list:

- to generate an outline for course content and studying, generate practice problems for course topics
- to help assist students to understand topics by re-explaining work in different way

Gen AI cannot be used for, list:

- final paper assignment text
- all other graded course work

Grading Policy:

The established grading policy is subject to change at Lecturer discretion. The University uses the +/- grading scale system and it is implemented in this course. Grades are weighted. 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 integer. There are no extra credit assignments because, frankly, there is nothing of the sort in the “real world.”

If you miss one (1) of the in-class 1-hour exams or do not turn in the final paper assignment you cannot pass the course [I must report a student to the Dean’s Office, Wellness Center, and their academic advisor about the lack of coursework completion]. Course grades will be entered in LOCUS on Friday, December 13th by 5pm Central Time Zone. Grade inquiries or grading questions will not be entertained after that time.

The final exam period for this course is Saturday, December 14, 9:30am-11:30am. There will be no cumulative final exam in this course. That means you do not have to come to campus on Saturday, December 14! In place of a written cumulative final exam, there is a mandatory final paper assignment due on Monday, December 9th by 11:55pm. Details about the paper will be presented during lecture mid-semester. The final paper assignment will count towards 15% of the course grade.

Breakdown of Course Grade Calculation:

Grading Category	% of Course Grade
In-class participation in lecture	5
Discussion (attendance, participation in problem sets, activities)	20
Exams (top 2 scores of 3 total exams)	60
Final paper assignment	15

Grading Scale* (%): *subject to change at Lecturer discretion.

Course Grade %	Letter Grade
94 – 100	A
88 – 93	A-
85 – 87	B+
79 – 84	B
75 – 78	B-
71 – 74	C+
64 – 70	C
60 – 63	C-
50 – 59	D
< 50	F

Exams:

Three (3) one-hour in-class exams are given in the course. Exams #1, 2, and 3 are each worth 100 points. They are scheduled on the following dates and these dates will not be altered: *Thursday, September 26, Thursday October 24, and Tuesday, November 26*. Students must complete the exams in-person on the assigned dates noted in the syllabus. Participation in the three (3) in-class exams is mandatory and **no make-up exams will be given** under any circumstances. If a student misses for **any** reason one of the in-class exams, the missed exam will be counted as the lowest scoring exam [a zero (0) out of 100]. For all students, the one (1) lowest score out of the three in-class exams will be dropped and the average of the top two scoring in-class exams counts towards 60% of the final course grade. If a second in-class exam is missed, the student earns another zero (0) and cannot pass the course. Students in this situation will be reported to the university through BCT Report and to the student's academic advisor.

The in-class exams will be distributed in a predetermined pattern and students should only sit at a seat where an exam sheet is laying; then wait for instructions. All exams must be signed by the student, indicating a statement of honesty and independent work. Exams must be physically handed in to the Lecturer when finished; if Lecturer deems it necessary to ask a student for their school ID to verify enrollment in the course via ID number, students must grant that request. Exams will be taken at the start of the class period; late students lose time and will not be able to regain any lost time due to showing up late. Students with SAC extended test time must use the Testing Center and schedule their exams in advance. Extended exam time cannot be granted if the exam is taken in the classroom, because once the exam time is over a short break ensues and then lecture will commence. If an SAC student takes the exam in the classroom, they acknowledge that extended time beyond an hour on the exam will not be granted.

All exams are open note unless otherwise specified. Notes must be printed out or on paper; notes cannot be electronic. Students can only use their own notes on the exams [cannot use other students' notes nor previous semester student notes]. Lecturer has the authority to review student notes if there is an issue with note validity. Exams 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, unanswered questions earn zero (0) points. Do not waste time relying on notes; make sure you know the material you are being tested on. Scientific calculators [non-graphing] *are* allowed for use on exams. Phone/tablet/computer use is not allowed during exams. It is the student's responsibility that their calculator is in working order. Lecturer does not have extra calculators. A student who forgets their calculator must take the exam without it.

A periodic table will be provided on an exam if needed.

Exams will be graded and returned to students as soon as possible, usually the next class period. Graded exams are scanned so Lecturer knows exactly what was written on the exam materials when exams are handed back to students. Any discrepancies or questions about grading/grades on exams must be discussed with the Lecturer no later than one week after the graded exam feedback has been returned to the student. After that time frame, grading discrepancies will not be discussed, nor changes made due to grading error on exams. No exceptions.

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.

Syllabus Disclaimer about Revisions:

The Lecturer reserve the right to revise this syllabus to correct any unintentional mistakes and/or to change the topics of the class if necessary. Students will be notified if any changes have been made and sent the revised PDF syllabus.

Smart Evals:

Feedback on the course is important so that a 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. Towards the end of the semester, students will receive an email from the Office of Institutional Effectiveness with a reminder to provide feedback on the Chem 280 course the student is enrolled in. This office will send you reminders during the open period of feedback until the evaluation has been completed. I do read the Smart Evals and thank you in advance for completing it! The evaluation is completely anonymous. When the results are released after the semester is over, no one will be able to tell which student provided the individual feedback. The feedback is not released until after the semester is over, therefore any feedback given will not impact student grades.

Additional Student Resources:

A considerable amount of technology is utilized at the university. Here are links of information guides if students need more structured guidance on using the tools in the course to be successful. A link to the University Help Desk is also provided for technology questions. Students can email the Lecturer about various University information, but the links below may reveal the answer more quickly when a student reads them on their own. These guides are written by the pros. Use links any time additional University info is needed.

[Career Services](#) | [First and Second Year Advising](#) | [Information Technology Service Desk](#) (Help Desk)

[Laptop Rental](#) | [Library](#) | [Loyola Bookstore](#) | [Panopto Information](#) | [Resource for Online Learning](#)

[SAKAI student guide](#) | [Success Coaching](#) | [Student Accessibility Center](#) | [Tutoring Center](#)

[Writing Center](#) | [ZOOM Information](#) and [Contacting ZOOM Support](#)

Copyright Disclaimer:

All portions of the Chem 280 syllabus, course materials in Sakai (PowerPoints, all handouts (Word or PDF), rubrics, directions, videos) are NOT allowed for distribution outside of class nor outside of the University. Uploading, posting, copying, or sharing electronic/non-electronic Chem 280 materials outside of class [i.e., share sites] is NOT allowed. If it is discovered a student completes such action, the University will be notified immediately as that is breaking copyright law.

If there is anything that I can do to support your learning, please reach out to me. I care a lot about students and their success! I am so happy you joined my course and look forward to a productive and enriching semester!