
CHM 11500 Course Packet Fall 2024

Instructors:

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Lectures: In person (WTHR 200) and recorded via Boilercast.
Lectures meet two times per week, according to your class schedule.

CRNs: 14183, 14184, 32932, 19394, 26982, 26977

Labs: In-person, Chaney-Hale Hall of Science (CHAS)
Labs meet Tues-Fri. for 2 hours, 50 minutes, according to your class schedule.

Recitation: In-person, various locations in WTHR and BRWN.
Recitations meet Monday-Thursday for 50 minutes, according to your class schedule.

► **Late Registration:** If you register late or experience dropped enrollment, notify Marybeth Miller no later than **Fri. Sept. 6** to request make-up assignments or deadline extensions.

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Course Personnel and Communication

Lab supervisors: Mikolaj Balawender, Myah Webb, Rich Godsel, Lance Hatch, and Gavin Wolfmule. Lab supervisors work in CHAS 2065 during lab periods. They will visit your lab periodically throughout the lab period to answer questions, enforce safety regulations, etc. Your TA can contact them for technical and procedural questions during lab. They will also handle makeup lab assignments and/or due date extensions for students who with excused absences, as well as assist with other tasks as assigned by the Course Coordinator.

General Chemistry Office, BRWN 1144, genchem@purdue.edu

Marybeth Miller, Course Coordinator, BRWN 1144D, mille201@purdue.edu

Melissa Roadruck, Administrative Assistant, BRWN 1144, 765-494-5252, melissa@purdue.edu

Marlene Miller, Administrative Assistant, working remotely, marlenem@purdue.edu

The General Chemistry Office handles all the administrative details associated with the course. Direct all non-chemistry questions about the course to this office. Course Coordinator Marybeth Miller (mille201@purdue.edu) supervises the teaching assistants, manages administrative aspects of the course, and maintains all the grade records for the course.

Email Communication: To avoid wasted time and duplicated effort, please do not email multiple course or university personnel *individually* about the same issue, rather send *one* email to CHM11500help@purdue.edu. Allow up to two business days (M-F, 8 AM - 5 PM) for a response from your instructor, course coordinator, head TA or TA. In general, we will *not* answer emails after business hours (M-F, 8 AM - 5 PM). Please be patient in awaiting a response.

Course Description

Chemistry 11500 is the foundational general chemistry course for engineering, science, and some agricultural majors. The stated minimum prerequisite for CHM 11500 is one year of algebra and one year of chemistry. We—the professors, course coordinator, teaching assistants, administrative assistants, and preparations lab staff—are committed and focused on helping you learn chemistry. We know that this is a foundational course for your major and in order to achieve your goals and dreams you need to do well in the course! Please read on to learn about the required materials, lecture and recitation schedule, recommended ways to study, lab policies, grading, and other course policies and procedures.

At the beginning of the course, you will use several resources to review most of your high school chemistry, including units, problem solving and significant figures; components of matter; stoichiometry; solution concentration; classes of chemical reactions; and gases and kinetic-molecular theory. Topics covered during the semester will include nuclear chemistry, quantum theory and atomic structure, periodic trends, thermochemistry, models in bonding, shapes of molecules, intermolecular forces, organic chemistry, synthetic and biological polymers, infrared spectroscopy, and liquids, solids, and phase changes. Detailed learning objectives for each unit will be posted on the course Brightspace page.

Learning Outcomes

By the end of the course, you will be able to:

1. Demonstrate an understanding of the fundamental principles of chemistry, including atomic and molecular structure, quantum chemistry, chemical bonding, stoichiometry, thermochemistry, molecular structure and function, and the periodic chemical properties of the elements.
2. Apply the fundamental principles of chemistry to life sciences, the environment, materials, engineering, and emerging technological fields of chemistry, as well as to everyday situations.
3. Use chemistry theory to predict and explain experimental observations.
4. Record scientific information and experimental data both in written and graphical formats.

5. Think and function as a scientist by using critical thinking and analytical inquiry.
6. Apply basic scientific, quantitative, and technological methods and knowledge of nature to the solution of chemistry problems.
7. Use the scientific method and theories to analyze chemistry questions
8. Provide scientific explanations of the nature of chemical systems.

The course has been designed and structured so that in addition to the treatment of the concepts and topics listed above, there is a simultaneous emphasis on development of problem-solving skills. Laboratories offer an opportunity to reinforce and extend what is discussed in lecture, explore new topics, and to develop your knowledge of chemistry laboratory skills.

Foundational Core

CHM 11500 meets the science requirement of the university's foundational core.

Learning Management System

Brightspace (<https://purdue.brightspace.com/d2l/login>) is the primary course management site for the course. Assignments, links to lectures and labs, announcements, learning objectives, grades, and other course information will be posted on Brightspace. It will be important for you to learn which site to use for which type of assignment.

Weekly Assignments

During *most* weeks, you will have the following assignments:

Item	Platform	Day	Time
Homework	Achieve	Tuesdays	due 11:59 PM
Prelab Quizzes	Brightspace	day before your lab	due 11:59 PM
Lab Procedure	Labflow	day before your lab	due 11:59 PM
Lab Reports	Labflow	the day of your lab	due 11:59 PM

All assignments will be listed on the course Brightspace page. Refer to details in the relevant sections that follow. Changes will be announced on Brightspace.

Required Materials

Textbook: The textbook used in CHM 11500 is *Chemistry: The Molecular Nature of Matter and Change*, 10th edition, by Silberberg and Amateis. There are several options available for purchasing a paper and/or electronic version of the book, including purchasing a loose-leaf version with eBook directly from McGraw-Hill for \$59.13 plus tax. See Brightspace for further information.

Achieve: In CHM 11500, you are required to complete homework online using the Macmillan Achieve program. You can purchase instant access via the link on Brightspace (\$41.99 for 1 term access or \$63.99 for 2 term access) or you can purchase a code from a local bookstore that you can then redeem via the link on Brightspace. **You must register for Achieve using your purdue.edu email address.** Macmillan Customer Service can be reached at 1-800-936-6899 or <https://mhe.my.site.com/macmillanlearning/s/chat-with-us>.

Labflow: You are required to purchase the Labflow program to access the lab manual and to submit prelab quizzes and lab reports. See the links and instructions on Brightspace for details.

Office 365 You can download the Teams/OneNote programs for free. Go to <https://www.itap.purdue.edu/shopping/software/product/office365.html> and log in using your Purdue account.

Goggles: You are required to obtain and wear approved indirectly vented safety (splash) goggles in lab.

Calculator: You may only use a simple, scientific calculator on exams. Calculators that can graph or solve or store equations are *not* allowed. See Brightspace ([Exam Information](#)) for details.

How to Study for CHM 11500

It will take you at least two hours on your own for every hour we spend in class to study and learn the material. This means you will spend about 8-12 hours of distraction-free studying and working with chemistry each week. You may spend this time reviewing and annotating your lecture notes, reading the text, doing homework, working practice problems, studying for exams, or other things. You may find yourself spending *more than* 8-12 hours per week if your math skills need improvement or if it has been a few years since you took a chemistry course. If you are committed to your goals and dreams, then dedicate yourself to spending the necessary time to perform well.

Before Lecture

- Review your notes from the previous lecture.
- Review the assigned reading and read the sample problems within the assigned section of the textbook.

Use the textbook in ways that work best for you.

- Use the textbook as a reference when you study your lecture notes. Fill in any gaps and correct any information.
- Processing technical information will be more effective in the absence of Netflix, TVs, radios, earbuds, etc. Turn your phone on silent and set it aside/across the room.
- With technical material, the subheadings often carry important information. This is different from the chapter headings in a novel that usually contain no information.
- Read technical material (like your Chemistry textbook) differently than you would read a novel. Read in short "chunks" and give yourself time to reflect and interpret the information presented. With technical material, it is often difficult to pick up the "story" in the second paragraph if you did not process the first paragraph.
- Try the problems in the book *without* looking at the solutions! If you have understood what you have read, then you should be able to solve the problems. First, cover the solution and try the problem. Second, quickly look at the answer to see if you are correct. If your answer is incorrect, try re-reading the section to see if you missed anything. Third, look at your work again to find your mistake. Fourth, look at the solution of the problem presented in the book. **The key is to force yourself to recall and apply material.**

During Lecture

- Take notes!
- Write down each step of every problem or example even if you do not understand the step. You can always ask about it later.
- Try to answer all the questions and work on all the problems that the professor presents.
- Write a question mark next to things you do not understand so you can return to them after class.
- Use shorthand or abbreviations so that you can write quickly, but understandably.
- Periodically note the time in the margin so that you can quickly find a certain section of the lecture when you review the lecture recording.
- Turn off distractions (i.e., Netflix, HW, social media, etc.).

After Lecture

- Review your notes while things are still fresh in your mind.
- Listen to the lecture recording to fill in things you missed.
- Attend TA office hours or email your TA (allow 24 hours for a response) to ask questions and get help.
- Never miss lecture. Chemistry is cumulative. What is presented tomorrow depends upon your knowledge of what was covered today. If you miss class, then get a friend to take notes for you or take notes from the recording.

When Should I do the Homework?

- Do some work in chemistry every day. Work *at least* two chemistry problems each day. If you are drawing a blank about the problem after 5-10 minutes, go on to another a problem. After a day or so, work related problems in the textbook.
- Review your class notes and the assigned pages in the textbook *before* you attempt any of your homework problems.
- Seek help from a TA during recitation, office hours or via email (allow 24 hours for a response).

Practice, Practice, Practice

- Read the Sample Problems in the textbook, then work one or both Follow-Up Problems and check your work at the end of the chapter.
- Work additional problems at the end of each textbook chapter. You can check answers for the problems with colored numbers in Appendix E.
- Look for similarities and differences in problems (homework questions, lecture examples). Classify problems by the type of knowledge that is needed to solve the problem.

Resources (Sources of Help)

Course resources are linked in the **Resources** module on Brightspace and are listed below.

- Office hours: Instructors and TAs will hold office hours each week. You may attend the office hours of any TA in this course. Detailed schedules will be posted on Brightspace in the **Resources** module.
- Supplemental Instruction (SI, www.purdue.edu/SI) is offered for CHM 11500. Please visit Brightspace to access information about connecting with SI sessions and SI leader office hours.
- Chemistry Resource Room, WTHR 117B
- COSINE Tutoring Program (College of Science), see https://www.purdue.edu/science/Current_Students/cosine/index.html for schedule.
- Academic Success Center, <https://www.purdue.edu/asc/>.
- Private tutors (not free): see list on Brightspace (**Resources**).

Reading Assignments and Learning Objectives

- Reading assignments are listed at the end of this packet and will also be provided in lecture and on Brightspace. Reviewing the assigned material prior to lecture and laboratory is recommended. Some of the material will be covered in lecture and some on your own.
- Learning Objectives list the concepts you are expected to understand and the skills (calculations) you are expected to demonstrate for each topic covered in the course. They are posted in the **Learning Objectives** module on Brightspace. Exam questions will be based on the Learning Objectives.

Lectures

- Lecture attendance is essential to learning the material presented. However, do not come to lecture if you are sick, have COVID-19 symptoms, or are directed to isolate or quarantine. If you must miss lecture, you may view the lecture on Boileercast. Access instructions are provided in the **Lectures** module on Brightspace.
- If slides are used, then student versions of lecture slides may be posted on Brightspace in the **Lectures** module. These are outlines of the lectures and are not a substitute for taking notes in lecture.
- Cell phones, computers, or other electronic devices *not being used for instruction purposes* are distracting for everyone in a learning situation. Computers can be used to take notes and follow lectures, but please respect your classmates by not using social media, texting, searching the internet, watching Netflix, etc. during class.
- Talking aloud to classmates during lecture is distracting to other students and is disrespectful to the lecturer. If you have a question please ask, but otherwise remain quiet and allow the students around you the opportunity to pay attention.
- If you have questions, please attend TA or instructor office hours (see the **Resources** module on Brightspace for the schedule).

Recitation

- Weekly recitation provides the opportunity for you to ask questions and work problems with your fellow students and TA. Your questions are always the first agenda item, so come prepared.
- Attendance at recitation is required. However, do not come to recitation if you are sick, have COVID-19 symptoms, or are directed to isolate or quarantine. If you have an *excused absence*, follow the instructions listed in the **Absences** module of Brightspace to request a make-up assignment for recitation credit.
- Recitation participation is worth 2 points per week. The maximum number of points you can earn for recitation attendance is 20 (i.e., participation in 10 of the 16 recitations).
- Take your textbook, lab materials, homework, calculators, and/or any questions you have regarding the course to recitation.
- Copies of recitation worksheets and slides will be posted on Brightspace. You do not need to work on the problems prior to recitation. The worksheet is for practice and will not be collected or graded. The recitation worksheet answers will be posted on Fridays, after all recitation sections have met.
- Note that it is not your TA's responsibility to *provide you with answers* to homework, pre-lab, or lab report questions. Rather, they are expected to *guide you* to the correct solutions, help you identify mistakes, and add details to help you further understand concepts.

Homework (Achieve)

- You will have a weekly homework assignment on the Achieve platform, usually due on Tuesdays by 11:59 PM. All links and due dates will be in the **Homework** module on Brightspace.
- You will have five attempts for each question in an assignment. There is no penalty for failed attempts.
- Each homework assignment is worth 10 points. The one lowest homework score will be dropped at the end of the semester.
- No time extensions are possible for any homework assignments, except for excused absences. Allow plenty of time to do your homework and get the highest possible score. If you wait until

the last minute, you risk the possibility of technical difficulties, illness, or other situations interfering with your success. If you have an *excused absence*, follow the instructions listed in the **Absences** module of Brightspace to request a deadline extension.

- Exams are likely to include questions taken from homework assignments. Copies of all HW assignments with unlimited attempts will be available after the due dates for study purposes.
- HW grades do not synchronize instantaneously with Brightspace. Also, do not be concerned if your grade updates before you finish the assignment. Be patient.
- If you have difficulties accessing Achieve, then try the following: (1) only access Achieve through Brightspace; (2) use Chrome; and (3) allow pop-ups.
- Macmillan Customer Service can be reached at 1-800-936-6899 or <https://macmillan.force.com/macmillanlearning/s/chat-with-us>.

Extra Credit (Achieve)

You will have extra credit opportunities through adaptive learning assignments in Achieve. Links will be provided in the **Extra Credit** module on Brightspace. You may earn up to 10 total points of extra credit, which will be added to your total at the end of the semester.

Laboratory

Laboratory projects are an integral part of CHM 11500 and are an opportunity for you to experience the chemical concepts discussed in lecture in a practical way. You will access digital lab materials (instructions/manual) via the Labflow program. You will take pre-lab quizzes on Labflow. Instructions for Labflow purchase and registration are in the **Labs** module on Brightspace.

Laboratory Attendance and Participation

Lab attendance is required since CHM 11500 is a laboratory course. Students with *excused* absences are eligible to complete lab make-up assignments. Students with *unexcused* absences are eligible for **one lab make-up assignment, per student, per semester**, provided the student applies for a make-up assignment **before** the lab start time. Refer to the instructions listed in the **Absences** module of Brightspace to request a lab make-up assignment. Students can complete no more than four lab make-up assignments per semester for excused absences or disability accommodations. To account for *all other absences* (i.e., unexcused), the one lowest lab score is dropped at the end of the semester, i.e., 11 of 12 lab scores are included in your final grade.

In the cases below, a zero score (failure to complete) will be assigned:

- being absent for any reason (except excused grief, jury duty, medical, or military absences or NCAA travel or approved professional development)
- being dismissed from lab for an incomplete Safety Certification (score <20/25)
- being dismissed from lab for safety violations, including dress and goggle violations. *If you go home to change clothes, you must be back within the first 10 minutes of the lab period. If someone brings you clothes, it must be within the first 10 minutes of the lab period.*
- arriving more than 10 minutes after the lab start time (including if you go home to change clothes)
- leaving lab early or otherwise not completing the lab project
- inadequate preparation that hinders lab participation
- not contributing constructively to the group's work in lab, including leaving the laboratory for longer-than-necessary periods of time/personal breaks

- not recording appropriate data and/or observations during lab
- failure to submit a lab report, even if you attended the lab

Minimum lab completion: You are required to complete 10 of the 12 lab experiments and reports. If you complete 9 of the 12 lab experiments and reports, then your final letter grade will be reduced by one full letter grade. If you complete 8 or fewer of the 12 lab experiments and reports, then you will receive a failing grade for the course. Attending lab but not completing the lab report is considered a failure to complete.

Lab Safety

*Students' safety in the laboratory is a priority and everyone is required to comply with the following safety regulations. Failure to comply will result in being sent home from lab **with a score of zero**, which counts as a lab absence. **It is your responsibility to know the policies. You may or may not receive a warning before being dismissed from lab for safety violations.***

- All students must complete the online safety certification with a score of at least 20/25 by Mon. Aug. 26 at 11:59 PM to participate in the Lab 1 during Week 2. If you fail to complete the safety certification, it will reopen on Fri. Aug. 30 at 6 PM and will be due the following Monday at 11:59 PM.
- You will be sent home and will receive a zero for *each* lab you miss due to an incomplete safety certification.
- Goggles (indirectly vented) are **always required** in the laboratory, including during clean up, report-writing, and lab check-out. If you are in lab and your goggles are not covering your eyes, you will be sent home and will receive a zero for the lab and the lab report (failure to complete). When lab is over and you remove your goggles, you must walk out of the lab *immediately*. In other words, you must put everything away, pack-up, and chat with classmates *before* removing your goggles.
- Wear gloves when specified by the lab instructions or by your instructor.
- If your hair is longer than shoulder length, you must tie it behind your head.
- Contact lens wearers are encouraged to wear glasses in the laboratory.
- Food and beverages, **including water bottles**, are not allowed in the labs.
- Follow your instructor's guidance on appropriate handling of hazardous materials and disposal of chemical waste.
- Promptly clean up spills and tidy the laboratory before leaving.
- Proper dress (clothing and shoes) is required. Your clothing must **cover you from your neck (collarbone) to your ankles** when sitting, standing, or reaching. Your feet must be completely covered by your shoes (see image below). Your TA or lab supervisor might ask you to raise your arms or bend your knees to check if your attire violates the dress code.

If you attend lab in unacceptable attire, you will be sent home and will receive a zero for the lab (failure to complete).

Unacceptable clothing includes, *but is not limited to*:

- tops that are sleeveless, low-cut or V-neck (below the collar bone), bare midriff or tank-style
- loose-knit sweaters that expose your skin
- pants that are ripped or have **holes** in the fabric of *any* size
- tights or thin (translucent or transparent) **leggings**
- Capri or cropped pants
- skinny or ankle pants that reveal skin between the shoe and the bottom

- of the pant leg
- shorts
- short skirts (i.e. shorter than floor length)
- open-toed and/or open-heeled shoes (including Crocs, Birkenstocks or other clogs)
- sandals (with *or* without socks)
- boat shoes, ballet flats, slippers, moccasins, or any shoe that doesn't cover the **entire** top of your foot and ankle, with **or** without socks

► **If you come to lab wearing anything in the list above, you will be sent home and you will get a zero for that lab.**

Your best option for chemistry lab attire is a crew neck t-shirt, jeans without holes, and sneakers with socks that cover your ankles.

PURDUE UNIVERSITY DEPARTMENT OF CHEMISTRY

Proper Lab Attire



Pre-Lab Quizzes

- The purpose of the pre-lab quizzes on Brightspace is to ensure that you have adequately prepared for the lab by reviewing the procedure, concepts, and calculations.
- For the best chance of success, take the pre-lab quiz *after* reading the lab materials on Labflow.
- Prelab quizzes are *individual* assignments. Collaboration with other students or assistance from TAs *during the quiz* is not allowed. (However, you are allowed to access the lab materials.)
- Pre-lab quizzes are due each week in which lab meets on the day before your lab by 11:59 PM.
- If you do not attempt the quiz before the deadline, you will receive a zero for the quiz (out of 5 points). However, you ARE allowed to attend the lab and can still earn points for the lab report (20 points).

- There are no make-up quizzes or time extensions except for excused absences or approved accommodations. The lowest prelab quiz score is dropped at the end of the semester to account for illnesses, technical difficulties, and other absences that are not excused.

Lab Procedures

- For each lab, you must upload a brief procedure to Labflow by the day before your lab at 11:59 PM. Your procedure can be a list of steps, a flowchart, or an outline. Your procedure is meant to show that you read and understand what you will be doing in lab. Example procedures will be provided on Brightspace.

Lab Reports

- For each lab, you are eligible to earn 2 points for attendance. To earn these points, you must remain in lab until you have completed (submitted) your report or until the end of the lab period, whichever comes first. If you leave lab before your report is completed (submitted) or before the end of the lab period, you will get a zero for attendance (0/2 pts).
- For each lab project, you will complete an *individual* lab report in Labflow. You have 2 attempts for each lab report. To access your second attempt, click “Attempt Activity Again” at the bottom of the screen. All submissions will be analyzed by the Turnitin plagiarism checker. If your similarity score for any answer(s) is/are too high, then rewrite and resubmit.
- You are encouraged to refer to lab materials and notes while completing the reports. Also, you may discuss your report with peers and your TA, however **you must do your own work** (i.e., you should not copy or submit another student’s answers).
- Lab reports are due by 11:59 PM on the day that you have lab. Check all your work carefully before the deadline to make sure you answered all the questions. Late lab reports are not accepted.
- Complete the lab report appropriately:
 - **All text in your report, except for calculations, must be typed, not handwritten.**
 - Answer in full sentences for open-ended questions. Answer all parts of the questions.
 - Each student must prepare individual graphs and tables, *not* take screenshots or photograph other students’ work. Label graphs and tables clearly.
 - Show calculation steps clearly for mathematical questions. Make sure your handwriting is clear and legible. If your TA cannot read your work, then they cannot grade it.
 - Show the use of correct units and significant figures for your measurements and calculation results.
 - Ensure results and conclusions are consistent with *your* data and observations.
 - Answer questions using your own words, i.e., using distinct language.
 - Cite the lab manual if you are quoting directly from it or put information from the lab manual into your own words.
 - The use of ChatGPT or other AI agents is not banned in the class, however, it should not take the place of your own writing, and you need to ensure that you also confirm facts that are generated, because these tools do not check the accuracy of your claims. If you use an AI agent, you must specify the AI agent used, the time and date used, the prompts used to generate text, the sections containing AI-generated text, and the ideas resulting from AI use.

Lab Grades

- Graded lab reports will be available for viewing approximately one week after submission. You are encouraged to review the graded work as your TA may have left useful feedback for your future improvement. If you have questions about a lab grade, speak with your TA or Marybeth Miller *within one week* of the graded report being made available to you. After this point, grade adjustments or changes may not be possible.
- To have a lab report regraded, after you have already discussed the issue with your TA, and it is still unresolved:
 - Send a detailed and specific explanation of why you are requesting a regrade via email to your lab supervisor (see front cover for contact information). Refer to the specific question(s) with which you have an issue. "I deserve more points" alone is not an acceptable explanation.
 - The lab supervisors will conduct the regrade based on the original rubric. In some cases, your TA will be consulted.
 - If a grade is changed, we will update the score in Labflow and/or Brightspace.
 - Regrade requests will only be accepted *for one week* after the lab report has been graded.
 - The whole lab report will be regraded and it is possible to get a lower score upon regrade.
- Make sure you review lab content because exams will include lab-related questions.

Lab Equipment

You will share an assigned laboratory drawer of equipment with the student(s) in your row. Your lab partner(s) will depend upon your commitment to keeping the equipment clean and in good working condition.

- You and your lab partner(s) will have the opportunity to assess the equipment during check-in day. Any equipment that is unusable i.e., dirty, chipped, cracked, stained, broken, etc., is replaced free during check-in.

After check-in day:

- It is important that you do your part to maintain the drawer throughout the semester by cleaning all the glassware after use by (1) washing with hot water, soap, and a brush, (2) rinsing with tap water, (3) and then rinsing with deionized water. By using this for cleaning glassware, you will have better experimental results. Make sure to return clean glassware to your drawer.
- If you are responsible for a piece of equipment becoming unusable i.e. the piece becomes chipped, cracked, stained, broken, etc., you must go to the storeroom (immediately) and purchase a replacement.
- Should you discover that a piece of equipment is missing, first check with the other students in your row and in the lost and found box in the lab. If the piece is still missing, your group must replace it immediately. The storeroom staff can split the cost of a replacement among all or any number of lab partners.
- Often pieces of equipment are broken accidentally; for instance, a thermometer rolls off the bench and breaks. Replacing the thermometer is still the responsibility of the group; the storeroom staff can split the cost of a replacement among the lab partners.

Leaving the Course: If you drop your laboratory course after having checked into a lab drawer, it is your responsibility to check out of your assigned drawer during your scheduled lab period. Contact your TA and/or the storeroom on the 1st or 4th floor of CHAS for instructions. **Failure to check out of lab will result in a \$45 fee**, and forfeiture of the right to determine the acceptability of all drawer equipment.

Checkout day:

- On the last day of laboratory, you and your lab partners will checkout of your lab drawer. You must arrive on time, properly dressed and wear goggles. If you arrive more than 15 minutes late, you will be asked to leave the lab and will be assessed a fee of \$45, plus the cost of replacing any equipment that is broken, missing or dirty.
- You and your lab partners will clean and inventory the drawer for your TAs' inspection. All missing or unusable equipment must be replaced at that time.
- If you do not attend lab check-out, you will be assessed a fee of \$45, plus the cost of replacing any equipment that is broken, missing or dirty.

Exams

Exams are a chance for you to demonstrate your understanding by answering conceptual questions and to demonstrate your skills by answering calculation questions. We aim for exams to be about half conceptual questions and about half calculation questions. Exams are worth approximately 60% of your final grade. All exam questions relate to one or more of the Learning Objectives posted on Brightspace.

Exams:

- will be on paper,
- are worth 150 points each,
- consist of multiple-choice questions, and
- have a 60-minute time limit (unless you have extended time through the DRC),

Exam dates:

Exam	Date	Time	Location
1	Tues. Sept. 17	8:00 – 9:00 PM	Multiple; will be assigned on Brightspace
2	Tues. Oct. 15	8:00 – 9:00 PM	Multiple; will be assigned on Brightspace
3	Thurs. Nov. 14	8:00 – 9:00 PM	Multiple; will be assigned on Brightspace

► If you have a conflict with another course (either a class or an exam), you *must* contact Marybeth Miller or the General Chemistry office *at least one calendar week* before the exam date to discuss your options. You may be asked to provide written verification of the conflict.

- Useful information (formulas, conversion factors, periodic table, etc.) to be provided with the exam will be posted in advance on Brightspace.
- You may only use a simple, scientific calculator on exams. Calculators that can graph or solve or store equations are not allowed. See Brightspace ([Exam Information](#) module) for details.
- Exam questions will be based on the Learning Objectives and labs, in addition to other course materials.
- You will have an assigned seat for the exams. Your seat assignment will be posted on Brightspace prior to Exam 1.
- Your lowest exam score or ½ your final exam score will be dropped at the end of the semester.
- If you have an excused absence and miss an exam, email Marybeth Miller as quickly as possible to arrange a make-up exam. No makeup exams are possible for *unexcused* absences.

- After all eligible students have taken the exam, we will post the key and video solutions on Brightspace. It is important that you review your mistakes and correct misconceptions because chemistry is cumulative, and topics build on previous topics.
- You may ask questions about exam content in recitation or in TA office hours.
- If you would like to review your exam with the coordinator or your instructor, you must fill out the “Exam Debrief” form posted on Brightspace in the [Exam Information](#) module and email it to us before scheduling a meeting.

Final Exam

The final exam is comprehensive and is worth 300 points. The time, date and format of the final exam will be communicated to you during the semester.

Wait until you know the date of the final exam before you make travel plans that might conflict with the exam. Final exams will NOT be rescheduled to accommodate your travel plans.

University policy on Final Exams states: *“Students scheduled for **more than two** (final) examinations in one calendar day are entitled to reschedule any examination in excess of two. . . It is the responsibility of the student to make necessary arrangements **before the last week of regularly scheduled classes.**”*

Determining Your Course Grade

Each of the assigned course activities for CHM 11500 is worth the number of points listed below. Before course grades are finalized at the end of the semester, the following scores will be dropped:

- your *one* lowest homework score
- your *two* lowest recitation participation scores (at least)
- your *one* lowest pre-lab quiz score
- your *one* lowest lab report score
- your *one* lowest exam score or ½ final exam score

The total number of points for CHM 11500 will be distributed as follows:

Homework.....	130 pts.....	(best 13 of 14 assignments at 10 pts each)
Recitation Participation.....	20 pts.....	(best 10 at 2 pts each)
Week 1 Problem Solving.....	5 pts.....	(in lab; for completion)
First Day Quiz.....	5 pts.....	(for completion)
Lab Check-In Activity	10 pts.....	(Week 2, in lab)
Prelab Quizzes.....	50 pts.....	(best 10 of 11 at 5 pts each)
Lab Procedures.....	20 pts.....	(best 10 of 11 at 2 pts each)
Lab Reports.....	180 pts.....	(best 10 of 11 at 18 pts each)
Exams.....	450 pts.....	(3 at 150 pts each)
<u>Final Exam</u>	<u>300 pts</u>	(comprehensive)
Sub-total.....	1170 pts	
<u>Dropped exam</u>	<u>-150 pts</u>	(drop lowest exam score or ½ final exam score, whichever is less)
Total.....	1020 pts	
Extra Credit.....	10 pts	(Adaptive assignments and goal-setting and reflection surveys on Achieve)

The total points available for exams is 600. Your exam total will be determined as follows: Your points earned on the Final Exam will be divided in half and considered as separate scores, T4 and T5, both of which are equal. For example, if you score 170/300 on the final exam, then your scores

for T4 and T5 would each be 85/150. These scores will be compared with your scores on Exams 1-3 and the lowest of these scores will be dropped (i.e., not counted into your total points). The remaining 4 scores will comprise your exam total.

Up to 10 points of extra credit will be available for completing extra credit assignments on Achieve.

Minimum lab completion: You are required to complete 10 of the 12 lab experiments and reports. If you complete 9 of the 12 lab experiments and reports, then your final letter grade will be reduced by one full letter grade. If you complete 8 or fewer of the 12 lab experiments and reports, then you will receive a failing grade for the course. Attending lab but not completing the lab report is considered a failure to complete.

The guaranteed grade cutoffs based on a maximum possible 1020 pts are shown below. The instructors reserve the right to lower cutoffs as deemed appropriate.

A: 91% and above

A-: 88-90%

B+: 84-87%

B: 81-83%

B-: 78-80%

C+: 74-76%

C: 71-73%

C-: 68-70%

D+: 64-67%

D: 61-63%

D-: 59-60%

F: Less than 59% or failure to complete 8 of 12 lab experiments and reports

- Periodically during the semester, your total points will be calculated, and your tentative letter grade to date will be posted so that you can see how well you are doing in the course.
- You must check all your grades on Brightspace regularly. After each exam, we will announce a deadline for you to inform us of any grade errors or discrepancies. Grade issues that are brought forward after the deadlines may not be considered, depending on the timing and situation.

UNIVERSITY AND COURSE POLICIES

Details of the following policies are listed under the [University Policies and Statements](#) module on the CHM 11500 Brightspace page: Academic Integrity, Nondiscrimination, Class Absences, Attendance, Amorous Relationships, Emergency Preparedness, Violent Behavior, and Use of Copyrighted Materials. The [Student Support and Resources](#) module contains links and information about Mental Health, Wellness, and Basic Needs Security, Engaging in Your Learning, Web Accessibility, and Brightspace Accessibility Standards.

Adding/ Dropping/Changing Sections

CHEMISTRY DEPARTMENT DEADLINES FOR ADDING OR SWITCHING SECTIONS

Fri. Aug. 23: last day to add CHM 11500 or switch lab sections *without* instructor approval

Fri. Sept. 6: last day to switch lab sections *with* instructor approval*;
last day to add CHM 11500 *with* instructor approval*

Fri. Sept. 13: last day to switch from another CHM course to CHM 11500 *with* instructor approval*

UNIVERSITY DROP DEADLINES

Fri. Aug. 30: last day to drop (cancel) a course via MyPurdue without it appearing on your record.

Tues. Nov. 19: last day to drop (cancel) CHM 11500 with a 'W'*.

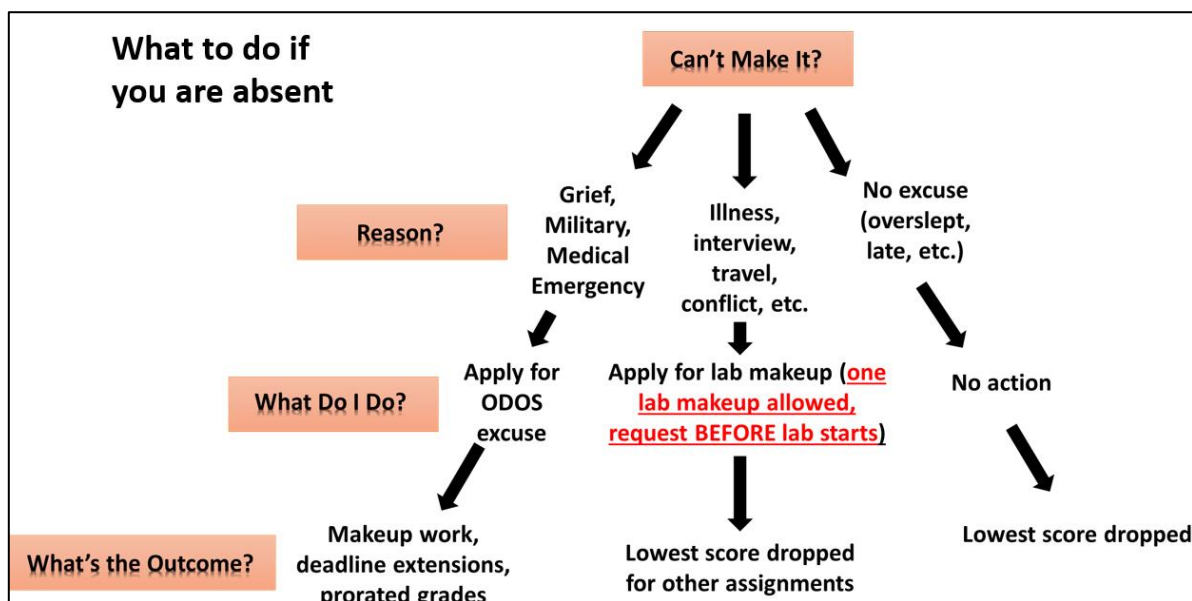
*Submit request using Scheduling Assistant.

► **Late Registration:** If you register late or experience dropped enrollment, notify Marybeth Miller no later than **Fri. Sept. 6** to request make-up assignments or deadline extensions.

Leaving the Course: If you drop your laboratory course after having checked into a lab drawer, it is your responsibility to check out of your assigned drawer during your scheduled lab period. Contact your TA and/or the storeroom on the 1st or 4th floor of CHAS for instructions. **Failure to check out of lab will result in a \$45 fee**, and forfeiture of the right to determine the acceptability of all drawer equipment.

Attendance and Absences

This course follows Purdue's academic regulations regarding attendance. Only the course instructors (professors) can excuse a student from a course requirement or responsibility. If you are absent, refer to the information below and the [Absences](#) module on Brightspace and act accordingly.



Excused Absences

Under academic regulations, excused absences may be granted by ODOS for cases of grief/bereavement, military service, jury duty, parenting leave, or emergent or urgent care medical care (details below). To request make-up work or deadline extensions (lab, HW, recitation, PARTÉ) for *excused* absences, use the forms called "*Excused Absence Lab Make-up Request*" and "*Excused Absence: Request Deadline Extensions*" in the [Absences](#) module on Brightspace.

Student athletes who miss class for NCAA travel should fill out the form called "*Excused Absence Lab Make-up Request*" in the [Absences](#) module on Brightspace to receive the lab make-up assignment. A student athlete must submit their NCAA travel letter to Marybeth Miller to be eligible for a lab make-up assignment.

For absences due to academic or professional development activities should contact Marybeth Miller at least one week prior to the absence for consideration and fill out the form called "*Excused*

Absence Lab Make-up Request" in the **Absences** module on Brightspace. Documentation of the activity must be provided. Make-up assignments or deadline extensions may or may not be provided, depending on the nature of the activity (according to the judgement of the instructors).

Unexcused Absences

To account for *unexcused* absences (illnesses, trips, conflicts, or other situations), the lowest score in each grade category (recitation, lab report, prelab quiz, HW, exam) is automatically dropped at the end of the semester. This includes internet or related technology issues that may have prevented you from completing a lab report, prelab quiz, or homework. **Students with unexcused absences are eligible for one lab make-up assignment, per student, per semester**, provided the student applies for a make-up assignment *before* the lab start time. Use the form called "*Unexcused Absence Lab Make-Up Request*" in the **Absences** module on Brightspace to request a make-up lab. No other make-up work or deadline extensions (i.e., for prelab, recitation, HW, or exams) are possible for *unexcused* absences.

Absence accommodations

Absence accommodations, such as modified attendance, approved by the **Disability Resource Center** will be handled individually. Contact the General Chemistry office (genchem@purdue.edu) for more information.

Grief Absence Policy for Students (GAPS)

If you experience the death of a family member or close friend, fill out the form at <https://www.purdue.edu/advocacy/students/absences.html>. Scores for any missed assignments covered under a verified GAPS absence can be pro-rated (assigned a score based on your average grade for that type of assignment at the end of the semester) or you can make up the work. Refer to the **Absences** module on Brightspace for more information or alternatives.

Military Absence Policy for Students (MAPS)

If you are required to complete mandatory military training, fill out the form at <https://www.purdue.edu/advocacy/students/absences.html>. Scores for any missed assignments covered under a verified MAPS absence can be pro-rated (assigned a score based on your average grade for that type of assignment at the end of the semester) or you can make up the work. Refer to the **Absences** module on Brightspace for more information or alternatives.

Medical Excused Absence Policy for Students (MEAPS)

Students may occasionally have to miss class and other academic obligations due to hospitalization or emergency department visits. This policy is intended for **emergent care only (note that urgent care visits are no longer included in this policy)**. **Emergent medical issues are those that pose a threat to loss of life or limb** (e.g., serious burns, seizures, severe cuts requiring stitches, broken/dislocated limbs or joints, head injuries). The Office of the Dean of Students will not provide notes to instructors for primary care medical appointments or routine care (e.g., overall wellness, dental care, general behavioral health care) nor occasional symptoms (e.g., pink eye, colds, flu).

A student who has experienced a medical emergency as described above should complete the Medical Excused Absence Request Form (<https://www.purdue.edu/advocacy/students/absences.html>) as soon as possible to request that an absence notification be sent to instructors. You will be given the opportunity to make up the work missed due to a medical excused absence. Refer to the **Absences** module on Brightspace for more information on requesting make-up work or deadline extensions.

If your illness is not a medical emergency, then your missed work will be handled either by the one make-up lab policy or the dropped score policy. For special consideration, contact Marybeth Miller, mille201@purdue.edu. For privacy reasons, we are prohibited from accepting medical documentation, so do not include it.

Mental Health

We care about your mental health. If you or someone you know is feeling overwhelmed, depressed, anxious, and/or in need of mental health support, please talk with your instructor, your TA, one of the head TAs, the course coordinator (Marybeth Miller), your advisor or other trusted person, or seek help from one of the resources below.

- If you find yourself struggling with stress, anxiety and/or starting to feel overwhelmed, try TAO (<https://us.taconnect.org/register>). Sign in with your Purdue login and find effective resources and tools at your fingertips, available to you at any time.
- If you need support and information about options and resources, please contact or see the Office of the Dean of Students. Call 765-494-1747. Hours of operation are M-F, 8 am- 5 pm.
- If you find yourself struggling to find a healthy balance between academics, social life, stress, etc., sign up for free one-on-one virtual or in-person sessions with a Purdue Wellness Coach at RecWell. Student coaches can help you navigate through barriers and challenges toward your goals throughout the semester. Sign up is free and can be done on BoilerConnect.
- If you're struggling and need mental health services: Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of mental health support, services are available. For help, such individuals should contact Counseling and Psychological Services (CAPS) at 765-494-6995 during and after hours, on weekends and holidays, or by going to the CAPS office on the second floor of the Purdue University Student Health Center (PUSH) during business hours.

Basic Needs Security

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. There is no appointment needed and Student Support Services is available to serve students 8 a.m.-5 p.m. Monday through Friday. Students may submit requests for emergency assistance from the Critical Needs Fund (<https://www.purdue.edu/odos/resources/critical-need-fund.html>).

Diversity Statement (<http://www.purdue.edu/diversity-inclusion/>)

We believe every student in this course has something of value to contribute. Please take care to respect the different experiences, beliefs and values expressed by students and staff involved in this course. We support Purdue's commitment to diversity, and welcome individuals of all ages, backgrounds, citizenships, countries of origin, disabilities, education, ethnicities, family status, genders, military experiences, political views, races, religions, sexual orientations, socioeconomic status, and work experiences. If you have concerns or feel you have been subject to discrimination, please contact one of the heads TAs or the course coordinator (Marybeth Miller) so we can direct you to appropriate resources.

Disability Accommodations

If you require accommodations to access course activities or materials, the accommodations must be described and approved by the Disability Resource Center, Young Hall Room 830, 302 Wood Street, 765-494-1247, www.purdue.edu/drc. To implement accommodations, you must follow the instructions provided by the Disability Resource Center, *in addition to* doing the following.

Share your "Notification of Course Accommodations" for ALL sections of the course with the CHM 11500 instructors via the AIM system *at least one week before* an exam or assessment for which accommodations are desired. We may require an in-person or virtual meeting to discuss certain accommodations. *Implementation of accommodations may not be possible if insufficient notification is given.* It is the student's responsibility to submit all exam requests through their Student Accommodation Portal. There is a 5 BUSINESS DAY (OR 1 CALENDAR WEEK) DEADLINE FOR ALL REGULAR EXAM REQUESTS.

Accommodated Testing

Due to the size of the class, students with testing accommodations are expected to schedule and take their examinations through Purdue Testing Services. Students are expected to respond in a timely manner and meet all communicated deadlines to schedule their examinations (including the final) with the Purdue Testing Services. Students with accommodations who fail to respond and fail to schedule their test with the testing center *may not be able to have all their accommodations met.* Thus, it is critically important that all students read their Purdue email daily and respond in a timely manner to requests or directives, especially if you have accommodations related to testing.

NOTE: Emails about accommodated testing in CHM 11500 will come from Melissa Roadruck, melissa@purdue.edu.

Emergencies

In the event of a major campus emergency, course requirements, deadlines, and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances beyond the instructor's control. Relevant changes to CHM 11500 will be posted on Brightspace and shared via announcements and email. You are expected to read your Purdue email on a frequent basis.

Purdue's Honor Pledge

"As a Boilermaker pursuing academic excellence, I pledge to be honest and true in all that I do. Accountable together - we are Purdue." <https://www.purdue.edu/provost/teachinglearning/honor-pledge.html>

Academic Integrity

All students are expected to be familiar with Purdue's policies on academic integrity (<https://www.purdue.edu/odos/academic-integrity/>).

"Dishonesty in connection with any University activity may result in informal action or disciplinary sanctions. Cheating, plagiarism, or knowingly furnishing false information to the University are examples of dishonesty. The commitment of acts of cheating, lying, stealing, and deceit in any of their diverse forms (such as the use of ghost-written papers, the use of substitutes for taking examinations, the use of illegal cribs, plagiarism, and copying during examinations) is dishonest and must not be tolerated. Moreover, knowingly to aid and abet, directly or indirectly, other parties in committing dishonest acts is in itself dishonest." *From University Senate Document 72-18.*

In CHM 11500, academic integrity means "doing your own work" at all times. Discussion of chemical concepts is encouraged but sharing your answers and work on social media for the *express purpose* of allowing other students to copy it is not acceptable. Such a use of technology does not help you learn the material and is considered academic dishonesty.

Working together is allowed on lab reports; however, your answers must be *in your own words*. All reports will be analyzed with Turnitin (a plagiarism checker), and students with closely matching reports will be investigated and grade penalties may be applied.

In lab reports, you must cite any sources (including the lab manual) used for your answers. Copying text word-for-word from the lab manual/instructions or any other source is prohibited and will receive no credit.

The use of ChatGPT or other AI agents is not banned in the class, however, it should not take the place of your own writing, and you need to ensure that you also confirm facts that are generated, because these tools do not check the accuracy of your claims. If you use an AI agent, you must specify the AI agent used, the time and date used, the prompts used to generate text, the sections containing AI-generated text, and the ideas resulting from AI use.

All collaboration with others (such as Group Me, Zoom, discussion boards, text, in-person, TA office hours, etc.) during prelab quizzes is prohibited.

Using online resources such as Course Hero or Chegg to gain answers to any graded assignment (including homework, labs, quizzes, and exams) is *not* allowed. Posting course materials to websites is a violation of copyright laws and is *not* allowed. The CHM 11500 instructors can obtain user information from Chegg and other sites when inappropriate course material is posted. This information will be investigated.

Consequences of academic dishonesty include receiving a lower or failing grade for an assignment, being required to repeat the assignment, receiving a lower or failing grade for the course and/or dismissal from the University. Incidents of academic integrity are referred to the Office of the Dean of Students. A student accused of academic dishonesty will be afforded due process as defined by Purdue University procedures.

This course packet is a contract between CHM 11500 students and instructors. If a student violates the contract by committing an act of academic dishonesty, the instructor reserves the right to alter the terms of the contract (including grading policies) at his/her discretion.

Students who observe an issue of academic integrity can report it to the Office of the Dean of Students (<https://www.purdue.edu/odos/> - use the General Incident Report to report anonymously), call 765-494-8778 or email integrity@purdue.edu.

Who to contact for what concern:

What?	Who?
lab grading concern	<ol style="list-style-type: none">1. Discuss with your TA2. If unresolved, email CHM11500help@purdue.edu.
missed lecture	<ol style="list-style-type: none">1. Lecture attendance is not recorded, so there is no need to inform anyone.2. Access lecture recording and slides on Brightspace (Kaltura Media Gallery).
will miss lab due to illness (non-emergency) or other reason	<ol style="list-style-type: none">1. Request one "free" make-up lab BEFORE your lab start time at https://forms.office.com/r/bthVJpLZeW.
missed lab with no excuse (overslept, late, etc.), didn't request "free" make-up lab before lab start time, or already used the one "free" make-up lab	<ol style="list-style-type: none">1. There is no need to inform anyone.2. Your one lowest lab score is dropped at the end of the semester to account for situations like these.
missed lab due to excused absence , e.g., emergency illness (MEAPS), death in the family (GAPS), or military leave (MAPS), or pre-approved professional development	<ol style="list-style-type: none">1. Fill out absence request with ODOS https://www.purdue.edu/advocacy/students/absences.html.2. Request make-up lab for excused absence at https://forms.office.com/r/2JmvN4vbfy.3. For professional development, make sure to upload your documentation when filling out the form in step 2.
missed HW, prelab, or other assignment due to excused absence , i.e., emergency illness (MEAPS), death in the family (GAPS), or military leave (MAPS)	<ol style="list-style-type: none">1. Fill out absence request with ODOS https://www.purdue.edu/advocacy/students/absences.html.2. Request deadline extensions or prorated scores at https://forms.office.com/r/3EXMvDWYUuH.
exam conflict	<ol style="list-style-type: none">1. Email CHM11500help@purdue.edu at least one calendar week before the exam to request a rescheduled exam.
missed an exam	<ol style="list-style-type: none">1. Email CHM11500help@purdue.edu to see if your absence is excused and if you can take a make-up exam.
homework issue	<ol style="list-style-type: none">1. If you have a content (chemistry) question, go to TA office hours (schedule on Brightspace) and ask for help.2. For other questions, email CHM11500help@purdue.edu.

Due Dates

Week #	Week of	Prelab Quiz		Lab Report		HW		Exams	
		#	due 11:59 PM	#	due 11:59 PM	#	due Tues. 11:59 PM	#	date
1	19-Aug								
2	26-Aug					HW01	27-Aug		
3	2-Sep	Prelab 1	day before your lab	Lab 1	day of your lab	HW02	3-Sep		
4	9-Sep	Prelab 2	day before your lab	Lab 2	day of your lab	HW03	10-Sep		
5	16-Sep	Prelab 3	day before your lab	Lab 3	day of your lab	HW04	17-Sep	1	Tues. 9/17 8:00 PM
6	23-Sep	Prelab 4	day before your lab	Lab 4	day of your lab	HW05	24-Sep		
7	30-Sep	Prelab 5	day before your lab	Lab 5	day of your lab	HW06	1-Oct		
8	7-Oct	FALL BREAK (10/7-10/8) NO LAB				HW07	9-Oct (Wed)		
9	14-Oct	Prelab 6	day before your lab	Lab 6	day of your lab	HW08	15-Oct	2	Tues. 10/15 8:00 PM
10	21-Oct	Prelab 7	day before your lab	Lab 7	day of your lab	HW09	22-Oct		
11	28-Oct	Prelab 8	day before your lab	Lab 8	day of your lab	HW10	29-Oct		
12	4-Nov	Prelab 9	day before your lab	Lab 9	day of your lab	HW11	5-Nov		
13	11-Nov	Prelab 10	day before your lab	Lab 10	day of your lab	HW12	12-Nov	3	Thurs. 11/14 8:00 PM
14	18-Nov	Prelab 11	day before your lab	Lab 11	day of your lab	HW13	19-Nov		
15	25-Nov	THANKSGIVING BREAK (11/27-11/29) NO LAB				HW14	26-Nov		
16	2-Dec	QUIET WEEK							
FINALS								Final Exam	TBA

Lecture, Lab and Exam Schedule

Week	Week of	Lecture #	Lecture Topic	Textbook	Labs	Exams
1	19-Aug	1	Introduction to CHM 11500; Review Topics	CH 1-5	MUST (math skills assessment on Achieve); Problem solving session (5 pts)	
		2	Review Topics			
2	26-Aug	3	Nuclear Chemistry 1	CH 24	Lab Check-in	
		4	Nuclear Chemistry 2	CH 24	Lab Safety; iPad orientation; Group Member Agreement; How Do We Observe, Record and Communicate Experimental Information? (10 pt exercise)	
3	2-Sep		Labor Day - no lecture M/T		Lab 1	
		5	Nuclear Chemistry 3	CH 24	What Measurement Techniques Are Used in the Laboratory?	
4	9-Sep	6	Thermochemistry 1	CH 6	Lab 2	
		7	Thermochemistry 2	CH 6	How Can We Use a Physical Property to Develop a Separation Method?	
5	16-Sep	8	Thermochemistry 3; Quantum Theory/Atomic Structure 1	CH 6, CH 7	Lab 3	Exam 1 Tues. 9/17 8:00 PM
		9	Quantum Theory/Atomic Structure 2	CH 7	What Variables Affect Heat of Reaction? (Calorimetry)	
6	23-Sep	10	Quantum Theory/Atomic Structure 3	CH 7	Lab 4	
		11	UV/Vis Spectroscopy/Beer-Lambert Law	pp. 304-5; 4.1	How Can We Produce a Salt from an Element? (alum)	
7	30-Sep	12	Periodic Trends/Trends in Chemical Reactivity 1	CH 8	Lab 5	
		13	Periodic Trends/Trends in Chemical Reactivity 2	CH 8	How Can Absorption of Light Be Used to Determine the Concentration of a Compound in Solution? (UV/Vis Spectroscopy)	
8	7-Oct		October Break - no classes M/T		NO LAB	
		14	Periodic Trends/Trends in Chemical Reactivity 3	CH 8		

Week	Week of	Lecture #	Lecture Topic	Textbook	Labs	Exams
9	14-Oct	15	Models of Bonding 1	CH 9	Lab 6	Exam 2 Tues. 10/15 8:00 PM
		16	Models of Bonding 2	CH 9	Which Cereal Contains the Most Iron? (UV/Vis Spectroscopy)	
10	21-Oct	17	Models of Bonding 3	CH 9	Lab 7	
		18	Shapes of Molecules 1	CH 10	How Does Molecular Shape Affect Polarity?	
11	28-Oct	19	Shapes of Molecules 2	CH 10	Lab 8	
		20	Shapes of Molecules 3	CH 10	Do You See the Light? (Luminol synthesis)	
12	4-Nov	21	Organic Chemistry 1	11.1-2; 15.1-2	Lab 9	
		22	Organic Chemistry 2	11.1-2; 15.1-2	How Can We Use Chromatography to Separate Plant Pigments?	
13	11-Nov	23	Polymers	pp. 513-7; 15.5-6;	Lab 10	Exam 3 Thurs. 11/14 8:00 PM
		24	IR Spectroscopy	pp. 378-9	What are Synthetic and Biological Polymers?	
14	18-Nov	25	Intermolecular Forces 1	12.1, 13.1	Lab 11	
		26	Intermolecular Forces 2	12.1, 13.1	What are the Molecular Interactions of Dyeing and Washing?	
15	25-Nov	27	Intermolecular Forces 3; Concentration Terms	13.4	NO LAB	
			Thanksgiving Break- no classes W, Th, F			
16	2-Dec	28	Phase Changes	12.2-3	Lab Check-out - <i>You must attend or you will be charged a \$45 failure-to-check-out fee plus the cost of replacement glassware.</i>	
		29	Colligative Properties	13.5		
Finals Week	9-Dec				Final Exam: Wait until you know the date of the final exam before you make travel plans that might conflict with the exam. Final exams will NOT be rescheduled to accommodate your travel plans.	Final Exam
						TBA