Chemistry 11200 is a foundational general chemistry course for agriculture, health and human science, and other majors. The minimum prerequisite for CHM 11200 is credit for CHM 11100. The course is oriented around helping you learn some of the fundamental chemistry concepts, calculations, and laboratory skills you need in your major.

In CHM 11200, General Chemistry II, the following topics will be covered:

- Intermolecular forces (IMF) with an emphasis on understanding IMF at the molecular level and connections between the molecular level and macroscopic properties.
- Acids, bases, and buffers. Many disciplines use these concepts and chemists have developed different kinds of models to describe acids and bases. You will learn and use three different models. We will focus on acid-base reactions, equilibria, and the application of quantitative equilibrium concepts to such reactions. Buffers have important applications in agriculture and in health sciences that will be explored in lecture and laboratory.
- Rates of chemical reactions, known as kinetics, and the quantitative application of zero-order, first-order, and second-order kinetics concepts to understand the factors that control rates of reaction and rates of chemical change.
- Oxidation-reduction reactions, strengths of oxidizing and reducing agents.
- A brief overview of organic compounds and biologically important molecules.

Detailed learning objectives are provided for each chapter/topic of the course. Broad course learning outcomes for this course are:

1. Explain basic chemical concepts including intermolecular forces and their effect on physical properties, chemical kinetics and factors affecting rates of reactions, acid-base chemistry and pH, oxidation-reduction reactions and oxidizing and reducing agent strengths, and the nomenclature and properties of hydrocarbons.
2. Apply problem-solving skills to calculate unknown information related to chemical concepts such as kinetics, acid-base, and redox chemistry.
3. Analyze tabulated data, graphs, raw data from laboratory experiments, observations, and molecular-level models to answer scientific questions and construct evidence-based arguments supporting a scientific claim.
4. Demonstrate competence in collecting, analyzing, and interpreting data in the laboratory, using computers in data acquisition and processing, using available software in data analysis, and applying safe laboratory practices.

There are two lecture sections of CHM 11200 taught by Professors Towns and Harwood. There are approximately 20 graduate teaching assistants who teach laboratory and recitation sections. Laboratories and recitations are scheduled weekly and offer an opportunity to reinforce and extend what is discussed in lecture, explore new topics, and to develop your hands-on laboratory skills. We strongly encourage you to attend recitation!
The Chemistry 11200 team—the professors, lecture and laboratory coordinators, graduate teaching assistants, administrative assistants, general chemistry preparations lab, and SI leaders—are committed to 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 lab schedule, recommended ways to study, lab policies, grading, and other course policies and procedures.

BRWN 1144, The General Chemistry Office, 49-45250 The General Chemistry office handles all the administrative details associated with the course. Any non-chemistry questions about the course can be directed to this office. For example, go to BRWN 1144 to get grade checks, to discuss exam conflicts, to get clarification on course policies, to resolve grade issues, to change your schedule (during weeks 2 and 3 only), and to obtain signatures on university forms such as add/drop forms. Instructional specialist Ms. Marybeth Miller and assistants Ms. Marlene Miller and Ms. Melissa Roadruck are able to help you with a variety of requests so you can maximize your success in general chemistry.

Lecture and Lab Coordinators: Zihan (Eric) Qu is the lecture coordinator, BRWN 1144, phone: 49-45250; gu51@purdue.edu. Camille Love is the lab coordinator, BRWN 1144, phone: 49-45250; love43@purdue.edu. The General Chemistry Office is in BRWN 1144 and the staff in that office can also answer questions for you, or direct you to Dr. Towns or Dr. Harwood.

Supplemental Instruction: There are Supplemental Instruction (SI) study sessions available for this course. These study groups are open to anyone enrolled in this course who would like to stay current with and better understand the course material. Attendance at these sessions is voluntary, but extremely beneficial for those who attend regularly. Times and locations for the SI sessions can be found at www.purdue.edu/si or on the BoilerGuide app. A link to the SI website is available on Blackboard. Students who attend these interactive sessions will find themselves working with peers as they compare notes, demonstrate and discuss pertinent problems and concepts, and share study and test-taking strategies. Students should arrive at these informal, peer-led study sessions with their student ID card and lecture notes, if desired.

The SI leaders this semester are Amrita Kapat and Abby Myers. Amrita's SI sessions will be held on M and W, 4:30 pm - 5:20 pm, in WALC 3154, and Abby's sessions are M and Th, 6:30 pm - 7:20 pm, in WALC B074. Amrita's office hour is Tuesday, 1:00 pm – 2:00 pm, WILY C215, and Abby's office hour is Monday, 12:00 pm – 1:00 pm, WILY C215.

Course Information: Lecture outlines, links to homework assignments, reading assignments, announcements, and other course information are available on the course Blackboard page. http://www.mycourses.purdue.edu. We recommend you visit it often!

Surveys on General Chemistry Lab Environment
You may be asked to complete two or more surveys this semester for the development and improvement of the teaching and learning environment in General Chemistry laboratories. Taking part in these surveys will enable you and future students to have an optimal learning experience in lab. Your input is very valuable, so we encourage you to complete all of the surveys.

Participation in the surveys is optional (not required) and has no impact on your course grade. Instructors will not know which students participate in the surveys. Survey information will only be viewed after grades have been submitted at the end of the semester. Your identity will be coded and hidden during the analysis of survey results. Individuals not associated with your course will only use your identity to correlate your responses from the beginning and end of the semester. You can opt out of participation in the surveys at any time.
Required Materials

Textbook: The textbook we have chosen for you this semester is Chang, Chemistry, 13th edition (ISBN: 9781259911156). We have also chosen the McGraw-Hill Connect online homework program for our homework platform this year. When you purchase Connect, it includes an electronic copy of the textbook, Chang, Chemistry, 13th edition (ISBN: 9781260694420). You can purchase Connect from the University bookstores or directly through McGraw-Hill (it’s cheaper directly from McGraw-Hill because the bookstore adds a small markup to the McGraw-Hill price). If you would like a physical textbook (loose-leaf version) as well, you must purchase Connect directly through McGraw-Hill online (ISBN: 9781260694857). If you are using an old book (any edition) you will still need to purchase access to the Connect program and that will automatically include an electronic copy of the text. A link on the course Blackboard page will direct you to the McGraw-Hill site where you can make your purchases. Students who completed CHM 11100 in Fall 2019 already have the necessary Connect access – no additional textbook purchase is necessary.

Lab Manual: We have a digital laboratory manual this semester published by Bluedoor Labs. You can purchase access to the online lab manual from https://www.bluedoorlabs.com/register. A link on the course Blackboard page will direct you to the Bluedoor Labs site where you can make your purchases. Information about how to register for your lab manual can be found at https://bluedoor.zendesk.com/hc/en-us/articles/200283577-How-do-I-register-for-bluedoorlabs-com--.

You can purchase the required 50-page carbonless-copy laboratory notebook from the university bookstores (ISBN: 9781680362008). If you have pages remaining in your lab notebook from a previous semester, feel free use those instead of purchasing a new notebook.

i-Clicker: The i-Clicker response system will be used this semester. Clickers may be purchased outside WTHR 200 during the first two weeks of the semester between 9 am and 3 pm (no credit cards). They are cheaper there than in the bookstores. You may use the same iClicker for multiple courses.

Calculator: A simple battery operated scientific calculator with exponential, logarithm and square root functions will be needed for exams. Two-line non-programmable calculators are allowed. Alpha-numeric and programmable calculators will NOT be allowed for exams.

Lab Materials: The Chemistry 11200 Laboratory Manual, a Sharpie™ (black, permanent ink) for marking lab glassware and approved safety goggles, available at the bookstores, outside WTHR 200 during the first two weeks of classes, or from the storeroom on the 1st or 2nd floor in BRWN. You should bring your laptop to lab each week to access your digital lab manual and digital lab report.

Week #1 Assignments:

- Purchase required materials (see above) and register for the current semester Connect course.
- Read all the information in this course packet.
- Begin the first Connect weekly homework assignment.
- Read the Reading Assignments and Learning Objectives (on Blackboard).
- Complete the safety certification available on the course Blackboard page with a score of at least 20/25. You will complete your safety certification during lab check-in Week 1. You must complete your safety certification before you can work in lab. You must complete a safety certification every semester for chemistry laboratory.
- Attend recitation, lecture, and laboratory check-in.

Weekly Assignments: (Refer to the “Some Ways to Study Chemistry” on the course Blackboard page.)

- Attend lecture, recitation, and lab.
- Complete the reading assignment before lecture (see lab/lecture schedule, pp. 15-16).
- Complete your Connect homework assignment (due each Friday at 11:59 pm).
- Prepare for lab: read the relevant lab manual chapter, do the textbook reading assignment for lab (see lab/lecture schedule), and complete the pre-lab exercises including the lab procedure outline.

***For more information on the topics in this course summary, please see course Blackboard page. ***
Overview of CHM 11200 Activities and Policies
***For more detailed information, see the course Blackboard page. ***

Reading
See the lecture schedule for the reading assignments. Reading the assigned material prior to lecture and laboratory is recommended. Some of the material will be covered in lecture and some on your own.

Lectures
Student versions of the lecture notes are on Blackboard prior to each lecture. These are not verbatim copies of the lectures, but are outlines of the lectures. Audio recordings and video capture of lecture slides can be downloaded through the Boilercast link on the course Blackboard site.

Cell phones, computers, iPods or other electronic devices not being used for instruction purposes are distracting for everyone in a learning situation. Please respect your classmates and turn off your cell phones and iPods in lectures as well as in recitations and labs. Computers can be used to take notes and follow lecture, but you should not be using Facebook, twitter, SnapChat, Instagram, etc. during class. Talking out loud to classmates during lecture is distracting to other students and is disrespectful to the lecturer and your classmates. If you have a question please ask, but otherwise remain quiet and allow the students around you the opportunity to learn. Talking is encouraged, however, during active learning activities in the classroom.

Recitation
Your teaching assistant conducts a weekly recitation designed to help you understand the upcoming laboratory and to discuss any questions you may have from lecture or the homework. Worksheets containing relevant conceptual and numerical questions are provided each week. Your teaching assistant will facilitate group discussions over these problems. You will have time to ask questions and check your homework and pre-lab answers so take your homework questions and lab manual with you to recitation.

Homework (CONNECT)
Each week you will have an online homework assignment in CONNECT which will consist of required questions and possibly optional questions. Required questions will contribute to your homework point total, while optional questions will not. However, optional questions and tutorials can be used to help understand how to work problems or to practice and review for exams. A few homework problems often appear as questions on exams.

Deadlines for completing the on-line assignments will be listed on the online CONNECT Assignment page. Homework will usually be available on Monday mornings and due the following week on Friday at 11:59 pm, 11 days after it is assigned. You will have a maximum of three attempts to complete each homework question before the listed due date. Homework will be scored and recorded on-line and there is no hand grading or regrading of homework. No time extensions are possible for homework or LearnSmart assignments unless there is a class-wide technical problem.
Laboratory

Laboratory exercises are an integral part of CHM 11200 and are an opportunity for you to experience, in a hands-on way, the chemical concepts discussed in lecture.

- **Lab attendance is required** since CHM 11200 is a laboratory course. There are no make-up labs or excused absences. Scores for approved GAPS or MAPS absences will be prorated at the end of the semester. Contact the lecture coordinator for more information.

- You are required to complete 10 of the 12 scheduled lab projects to pass the course. If you fail to complete three or more lab projects, an automatic grade of "F" will be assigned for the course at the end of the semester. **The bottom line is that if you miss three or more labs for any reason you'll earn an F in the course.**

- A failure to complete (zero score) will be assigned in the following cases:
  - being absent for any reason (except GAPS or MAPS approved absences)
  - being dismissed from lab for an incomplete Safety Certification (score <20/25)
  - being dismissed from lab for safety violations, including improper dress and goggle infractions
  - arriving more than 10 minutes late
  - leaving lab early or otherwise not completing the lab project and/or report
  - inadequate preparation that hinders lab participation
  - not contributing constructively to the group's work in lab
  - not participating in preparation of the lab report or failure to submit a lab report

- **You must complete the online safety certification found on Blackboard with a score of 20/25 or better by 11:59 pm on Monday, January 20, 2020.** Please confirm your score in the Blackboard grade center (My Grades link). If you have less than a 20/25, or do not complete the required safety certification you will not be allowed to work in lab. You will receive a zero for each lab missed until the certification is completed. If you fail to complete three or more labs, you will fail the course. *(NOTE: Completion of the safety certification is not necessary for your participation in lab on Week 1.)*

- Before lab, read the experiment and attend recitation to help you prepare.

- Complete the pre-lab exercises and prepare an experimental procedure in your lab notebook before coming to lab. Pre-labs are due online one (1) hour before the start of the lab period.

- Arrive on time, properly dressed, and prepared for lab work.

Laboratory policies

- The Chemistry Department will be using a shared drawer system with your course. You will be sharing an assigned laboratory drawer of equipment with the students in your row. Your lab partners will depend upon your commitment to keeping the equipment clean and in good working condition.

  - You and your lab partners will have the opportunity to assess the equipment during check-in day. Any equipment that is un-useable (i.e., dirty, chipped, cracked, stained, broken, etc.) is replaced **for 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 pieces of equipment after use. You should wash glassware with hot water, soap, and a brush, rinse with tap water, then rinse with deionized water (it's a 3-step process to get the glassware clean and you will have better experimental results with clean glassware).

- If you are responsible for a piece of equipment becoming un-useable (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 the lost and found box. 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.

− Oftentimes 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 and the storeroom staff can split the cost of a replacement among the lab partners.

− Finally, you will be using the supplied university lock all semester on the drawer (you don’t need an individual lock). Your TA will open the drawer before lab each week. You may store personal items in the drawer, such as goggles, but you should label everything with your name.

• Everyone must check-out of the assigned drawer by the last scheduled laboratory or they will be charged a fee of $45 plus the cost of any equipment that is un-useable or missing. If you change sections, drop the course or withdraw from the University, you must check-out of your lab drawer. After week four of the semester, you can only check-out during your scheduled laboratory time.

• If you arrive at lab more than 10 minutes late or improperly dressed, will be asked to leave the lab and will receive a score of zero. This counts as one of your “fail to complete” labs.

• Endeavor to work as an effective member of the team.

• Complete the online lab report appropriately:
  − Use pen and write neatly in your laboratory notebook.
  − Label graphs and tables.
  − Use the data you collected for the calculations and analysis.
  − Use correct units of measurement and significant figures.
  − Use chemical terms and concepts correctly.
  − Ensure results and conclusions are consistent with your data and observations.

• Individual lab reports are due 48 hours after the end of your regularly assigned lab period, that is 10:20 am, 2:20 pm or 5:40 pm. Submitting a completed lab report is required for you to receive a lab grade.

• Online lab reports will be graded within 10 days of the submission date. If you have questions about your grade, please speak with your lab instructor or the lab coordinator.

• Academic integrity is a key issue in lab and we support and affirm the academic integrity policies of Purdue in accordance with the policies and definitions outlined at the link below. If you are suspected of an integrity issue you will be asked to meet with the course professors and graduate teaching assistant in charge of laboratory. Either during or after the meeting the consequences will be communicated to you. These consequences may include receiving a zero on the pre-lab or laboratory, contacting your advisor or program coordinator, and/or being reported to the Office of the Dean of Students for further discussions about academic integrity at Purdue. We strongly encourage you to be careful in guarding your own academic integrity and protecting your work! Sharing your work or stealing work of any student, past or present, by taking pictures of it and sharing it through a website or app (texting, groupme, etc.) is not appropriate and will result in disciplinary action. http://www.purdue.edu/odos/osrr/academic-integrity/index.html
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. These are departmental policies required because of federal regulations.

- Follow all lab safety regulations (see below).
- Dress appropriately (see below). Refer to the detailed information on the course Blackboard page or on the previous page for what constitutes proper dress for the laboratory.
- Goggles are required at all times in the laboratory, including during 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).
- Wear gloves when specified. Nitrile (non-latex) gloves are provided in the laboratory.
- 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 are never allowed in the labs. (This includes water bottles.)
- 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. Chemistry Department regulations state that 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.
If you attend lab in unacceptable attire, you will be sent home and will receive a zero for the lab. (This counts as a failure to complete the lab.)

**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
- see-through, transparent or sheer clothing (including lace)
- pants that are ripped or have holes in the fabric of any size
- tights or thin (translucent or transparent) leggings
- Capri or cropped pants
- shorts
- skirts (unless they extend to the floor)
- 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*, with or without socks

If you come to lab wearing anything in the list above, you will be sent home and you will receive 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.

**Exams**
Exams are a chance for you to demonstrate your comprehension of the course material and are worth approximately 56% of your final grade. Your lowest exam score or ½ your final exam score will be dropped at the end of the semester.

**Spring 2020 hourly exam schedule:**

| Exam I: Monday, February 10, 2020 | 8:00-9:00 p.m. | WTHR 200, EE 129, LILY 1105, PHYS 114 |
| Exam II: Wednesday, March 11, 2020 | 8:00-9:00 p.m. | WTHR 200, EE 129, LILY 1105, PHYS 114 |
| Exam III: Monday, April 6, 2020 | 8:00-9:00 p.m. | WTHR 200, EE 129, LILY 1105, PHYS 114 |

**Final Exam: time and place to be announced – see below**

- Attendance at exams is required. There are NO make-up exams and absences are not excused. If you are absent for one exam, your score will appear as a zero until the end of the semester, at which time one zero score can be dropped. You will receive zero points for additional missed exams.

- Scores for approved GAPS/MAPS/DRC absences and absences for university-sponsored activities will be handled individually. Contact the lecture coordinator or your professor for more information.

- If you have a direct conflict with another exam, class, or required university activity, contact the General Chemistry Office (BRWN 1144) *at least one week before the conflict*. You will be asked to provide written verification of the conflict. According to University regulations a student is entitled to reschedule one of two conflicting exams and instructors shall not penalize a student who chooses to reschedule an exam under these conditions. In the event the student is unable to reach an agreement with the course instructors to reschedule one of the exams, the student will contact the Office of the Registrar; the Registrar will make the final decision as to which exam is to be rescheduled and offered at an alternate time; the Registrar will communicate this decision to the course instructor and relevant department head. If an emergency occurs, contact the General Chemistry Office (BRWN 1144) as soon as possible.

- Hour exams are one hour (60 minutes) in length. You should arrive at least 15-20 minutes before the exam start time. If you arrive more than 15 minutes after the exam begins, you will not be allowed to take the exam.
• Exams will be given in WTHR 200, EE 129, LILY 1105, and PHYS 114. Before Exam I, you will receive an exam seat assignment for the entire semester. Take your PUID, seat assignment, an appropriate calculator (see details on the front page), and #2 lead pencils with you to the exam and plan to arrive 20 minutes before the exam begins. You may not share a calculator with another student.

• All exams have a free response portion to assess your ability to reason with concepts and create evidence-based arguments. We will practice this in class so you have a sense of the types of questions and level of response we are seeking. This will also be part of our laboratory activities.

• Regrade policy for exams with free response items:
  − Deadline: If the exam is handed back in lab, then you must turn in your regrade request accompanied by a regrade request form available in the General Chemistry Office (Brown 1144) by the end of your lab period. Staple the regrade request form to the front cover of your exam and hand it in to Brown 1144. Note that the regrade procedure is intended to correct for serious errors in grading. If there was an arithmetic error in adding up points, simply note the error on the front of the exam and turn it in to Brown 1144 – this is not a regrade request, it is a score adjustment.
  − Any indication that a regrade has been requested for a modified exam (meaning the exam was modified after it was graded and has been turned in for a regrade) will be considered a breach of academic integrity and will be reported to the Office of the Dean of Students. The student will automatically fail the course. Note that a random sample of the examinations have been scanned or photocopied before they have been returned.
  − What merits a regrade
    ▪ Your answer is the same as the one on the key, but the grader didn’t realize it. Your explanation should make it clear why you believe your answer is the same!
    ▪ Your answer is different from the one provided on the answer key, but your answer is also correct. Your explanation should make it clear that you have read the answer key and why you think your answer is also correct.

Final Exam
• The final exam is a 2-hour comprehensive exam. The time and place for the final exam will be announced by the University mid-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, Spring 2020
Each of the assigned course activities for CHM 11200 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 lowest homework score
- your lowest lab score
- your lowest quiz score
- your lowest exam score or ½ your final exam score, whichever is lower

The total number of points for CHM 11200 will be distributed as follows:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>105 pts</td>
<td>(best 14 of 15 @ 7.50 pts)</td>
</tr>
<tr>
<td>Labs</td>
<td>300 pts</td>
<td>(best 9 of 10 @ 25 pts each + 3 CER sessions @ 25 pts each)</td>
</tr>
<tr>
<td>Badges</td>
<td>15 pts</td>
<td>(3 @ 5 pts each)</td>
</tr>
<tr>
<td>CER activities</td>
<td>20 pts</td>
<td>(2-4 activities for 20 points total)</td>
</tr>
<tr>
<td>Exams</td>
<td>420 pts</td>
<td>(3 @ 140 pts each)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>280 pts</td>
<td>(comprehensive)</td>
</tr>
<tr>
<td>Sub-total</td>
<td>1,140 pts</td>
<td></td>
</tr>
<tr>
<td>Drop</td>
<td>-140 pts</td>
<td>(drop lowest exam score or ½ final exam score, whichever is less)</td>
</tr>
<tr>
<td>Total</td>
<td>1,000 pts</td>
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After the Final Exam your course grade will be based on the following scale:

- A: 875 pts and above
- B: 775 – 874 pts
- C: 675 – 774 pts
- D: 575 – 674 pts
- F: 0 – 574 pts OR if you have fail-to-complete scores for 3 or more of the 12 scheduled lab projects (If you miss 3 or more labs, your course grade is automatically an F.)

Save all returned graded papers and your exams until after you have received your course letter grade for CHM 11200. To resolve any discrepancies, your paper(s) will need to be reviewed.

Extra Credit: Up to 20 points of extra credit is available by answering iClicker questions during class.

Course Activities, Policies and Procedures

Studying Chemistry
Expect to spend at least 6-9 hours per week on chemistry outside of the normal class time. This time includes preparing for lecture, paying attention and taking notes during lecture, reviewing your notes after lecture, and completing homework, reading, and lab assignments.

Sources of Help
There are several free sources of help for CHM 11200 students, including professor office hours, TA office hours, SI sessions with Amrita Kapat and Abby Myers, and the Chemistry Resource Room, WTHR 117. Further sources of help can be found on the “Important Purdue Resources Handout” on the Purdue University Foundations of Excellence page at [http://www.purdue.edu/foundationsofexcellence/](http://www.purdue.edu/foundationsofexcellence/).

Changing Sections/Dropping

<table>
<thead>
<tr>
<th>CHEMISTRY DEPARTMENT DEADLINES – SPRING 2020</th>
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<tbody>
<tr>
<td>Mon. Jan 20: LAST day to add chemistry or switch lab sections without instructor approval</td>
</tr>
<tr>
<td>Fri. Jan 31: LAST day to switch lab sections/LAST day to add CHM 11200 (if not enrolled in another CHM course)</td>
</tr>
<tr>
<td>Fri. Feb 7: LAST day to switch from another CHM course to CHM 11200 (subject to instructor approval)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UNIVERSITY DEADLINES - Spring 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon. Jan 27: Last day to cancel (drop) a course in myPurdue, without it appearing on your record.</td>
</tr>
<tr>
<td>Mon. Feb 10: Last day to cancel (drop) a course without a grade.</td>
</tr>
<tr>
<td>Fri. Mar 13: Last day to cancel (drop) a course (with a passing or failing grade).</td>
</tr>
</tbody>
</table>
Adding the Course/Late Registration: Students are usually not permitted to add CHM 11200 after week 3 of the semester (Friday, January 31). Notify the course coordinator no later than Friday, January 31, if you register late to see about making up missed assignments.

Course Drop, Section Change or Withdrawal and Lab Drawer Check-Out: Inform the storeroom staff immediately if you are changing lab sections, dropping a lab course or withdrawing from the University. Checkout involves a process where you and your TA or other staff member inspect the items in your drawer before you are released from responsibility for the items in the drawer.

- If you **change sections**, you are still required to properly checkout of your current locker drawer before checking into another section.
- If you **drop or withdraw** from this lab course before the end of the semester, you are still required to properly checkout of your locker drawer.
- If you have any questions about properly checking out of your locker drawer, go to the storeroom, BRWN 1155 or 2155, for assistance!
- **Failure to properly checkout** of your lab drawer will result in a **failure to checkout fee ($45)** assessed against you. In addition, you will be charged for missing and/or unacceptable equipment.

Campus Emergencies

In the event of a major campus emergency, course requirement, 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 11200 will be posted on the course Blackboard site or can be obtained by contacting the instructors via email or the General Chemistry Office at 765-494-5250.

- “Shelter in Place” means seeking immediate shelter inside a building or University residence. This course of action may need to be taken during a tornado, earthquake, release of hazardous materials in the outside air, active shooter, building intruder, or a civil disturbance. If you hear the All Hazards Outdoors Emergency Warning Sirens or are notified via text or other means, immediately go inside a building to a safe location and use all communication means available to find out more details about the emergency. **Remain in place** until emergency response personnel provide additional guidance or tell you it is safe to leave. There is no “all safe siren;” notification will come via text, internet, or email.
- In the case of a major campus emergency involving a shelter-in-place, all laboratory experiments will be halted while students shelter in lab. Students’ lab grades will **not** be penalized in this situation.

Disability Accommodations

If you require accommodations to access course activities or materials, the accommodations must be described and approved by Disability Resource Center, Young Hall, Room 830, 302 Wood Street, 494-1247, www.purdue.edu/drc. To implement accommodations, you must follow the instructions listed as “Responsibilities of the Student” in the letter prepared by the Disability Resource Center. **Take a copy of this letter to the General Chemistry Office (BRWN 1144) within the first three (3) weeks of the semester or within one week of the date of the letter to discuss your accommodations.** Letters must be received in BRWN 1144 at least one week before an exam to be eligible for accommodations (unless your letter is dated within a week of the exam).

Academic Integrity Statement and Consequences.

Academic integrity is one of the highest values that Purdue University holds. Individuals are encouraged to alert University officials to potential breaches of this value by either emailing integrity@purdue.edu or by calling 765-494-8778. While information may be submitted anonymously, the more information that is submitted provides the greatest opportunity for the university to investigate the concern.” Please read http://www.purdue.edu/odos/osrr/academic-integrity/index.html
Purdue Honors Pledge
We support and affirm the academic integrity of Purdue in accordance with the Purdue Honors 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

Mental Health
Purdue University is committed to advancing the mental health and well-being of its students.
- If you find yourself beginning to feel some stress, anxiety and/or feeling slightly overwhelmed, try WellTrack, https://purdue.welltrack.com/. Sign in and find information and tools at your fingertips, available to you at any time.
- If you need support and information about options and resources, please see the Office of the Dean of Students, http://www.purdue.edu/odos, for drop-in hours (M-F, 8 am- 5 pm).
- 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 and http://www.purdue.edu/caps/ during and after hours, on weekends and holidays, or by going to the CAPS office of the second floor of the Purdue University Student Health Center (PUSH) during business hours.

Diversity Welcome
Purdue University is committed to maintaining a community which recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her own potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life. Purdue’s nondiscrimination policy can be found at: http://www.purdue.edu/purdue/ea_eou_statement.html.

Grief Absence Policy for Students (GAPS)
If you experience the death of a family member or close friend, notify the Office of the Dean of Students at (765) 494-1747. Scores for any missed assignments under a verified GAPS absence will be pro-rated (based on your average and the class average). See a Course Coordinator for more information.

MAPS Absence Policy for Students (MAPS)
A student should contact the Office of the Dean of Students (ODOS) to request that a notice of the leave be sent to instructors as soon as the student is informed of the dates of mandatory military training. Given proper documentation, the instructor will excuse the student from class and provide the opportunity to earn equivalent credit and to demonstrate evidence of meeting the learning outcomes for missed course work.

Absences Due to University Sponsored Activities
A student should bring his or her letter stating the reason for the absence to the instructor as far in advance as possible. The student and instructor will meet to discuss the absence and how, if possible, the learning outcomes associated with any missed class activities may be addressed.

Other Absences
If you experience an absence that is expected to be for an extended period of time (normally a week or more), you should contact the Office of the Dean of Students at (765) 494-1747. As a courtesy to the student, a member of the Dean of Students staff will notify your instructor(s) of the circumstances. This intervention does not change in any way the outcome of the instructor’s decision regarding your academic work and performance in CHM 11200.

For details about other Purdue University policies, including academic integrity, class attendance and absence reporting, emergency, nondiscrimination, and disability services, see the course Blackboard site.
# Proposed Lecture Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Lecture Topic</th>
<th>Reading (textbook)</th>
<th>Laboratory (T, W) (Bluedoor laboratory manual)</th>
<th>Exams</th>
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</thead>
</table>
| 1    | 14-Jan     | Introduction; Intermolecular Forces    | 11.1-11.2: pp 462-469                  | Check-In; Safety Certification (Blackboard)  
L1: IMFs and Wettability of Leaves (Ch. 1)  
*(Lab notebook, splash goggles, and proper clothes for lab work are required.)* |                              |
|      | 16-Jan     | Intermolecular Forces                   | 11.2: pp 463-469                       |                                                                                                               |                              |
| 2    | 21-Jan     | Intermolecular Forces; Properties of Liquids | 11.2-11.3: pp 463-474                  | L2: TLC of Plants (Ch. 2)                                                                                     |                              |
|      | 23-Jan     | Intermolecular Forces; Properties of Solutions | 12.1-12.3: pp 514-522                  |                                                                                                               |                              |
| 4    | 04-Feb     | Acids and Bases                         | 15.1-15.2: pp 661-664                  | L3: Antacid Analysis (Ch. 3)                                                                                 | Exam I  
Monday, 2/10/20  
8:00 pm  
(see Blackboard) |
|      | 06-Feb     | Acids and Bases – pH                    | 15.3: pp 664-669                       |                                                                                                               |                              |
| 5    | 11-Feb     | Weak Acids and Bases                    | 15.4-15.5: pp 670-680                  | L4: Synthesis and Chemiluminescence of Luminol (Ch. 4)                                                       |                              |
|      | 13-Feb     | Weak Acids and Bases                    | 15.6-15.7: pp 681-684                  |                                                                                                               |                              |
| 6    | 18-Feb     | Polyprotic Acids; Acid Strength; Salt Solutions; Common Ion Effect | 15.8-15.9: pp 684-691  
15.10: pp 692-697; 16.1-16.2: pp 715-719 | L5: Describing Acids (Ch. 5)                                                                                    |                              |
|      | 20-Feb     |                                          |                                        |                                                                                                               |                              |
| 7    | 25-Feb     | Buffers                                | 16.3: pp 719-723                       | NO LAB *(Time compensation for evening exams.)*                                                                |                              |
|      | 27-Feb     | Buffers                                | 16.3: pp 723-724                       |                                                                                                               |                              |
| 8    | 03-Mar     | Buffers; Lewis Acids/Bases             | 15.12: pp 699-701  
16.4: 724-728 | L6: Preparation of Buffers and Determination of Buffer Capacity (Ch. 6)                                      |                              |
<p>|      | 05-Mar     | Lewis Acids/Bases; Titrations          |                                        |                                                                                                               |                              |</p>
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<tr>
<th>Week</th>
<th>Date</th>
<th>Lecture Topic</th>
<th>Reading (textbook)</th>
<th>Laboratory (M, T, W) (laboratory manual)</th>
<th>Exams &amp; Quizzes</th>
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<tbody>
<tr>
<td>9</td>
<td>10-Mar</td>
<td>Review Exam 2</td>
<td></td>
<td>L7: Acid-Base Titrations (Ch. 7)</td>
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<td></td>
<td>12-Mar</td>
<td>Titrations</td>
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<td>16.4: 728-733</td>
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<td>26-Mar</td>
<td>Kinetics</td>
<td>13.2: pp 565-568</td>
<td></td>
<td>Wednesday, 3/11/20 8:00 pm (see Blackboard)</td>
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<td>11</td>
<td>31-Mar</td>
<td>Kinetics</td>
<td>13.3: pp 569-576</td>
<td>L8: Factors Which Influence the Rates of Reactions (Ch. 8)</td>
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<td>02-Apr</td>
<td>Kinetics</td>
<td>13.3: pp 576-581</td>
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<td>12</td>
<td>07-Apr</td>
<td>Kinetics</td>
<td>13.4: 582-583</td>
<td>L9: Chemical Kinetics (Ch. 9)</td>
<td>Exam III</td>
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<td>09-Apr</td>
<td>Kinetics</td>
<td>13.5: pp 588-599</td>
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<td>Monday, 4/6/20 8:00 pm (see Blackboard)</td>
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<td>16-Apr</td>
<td>Redox</td>
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<td>14</td>
<td>21-Apr</td>
<td>Redox</td>
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<td>L10: Redox of Metals and the Activity Series (Ch. 10)</td>
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<td>15</td>
<td>28-Apr</td>
<td>Organic Chemistry</td>
<td>24.4: 1037-1041</td>
<td>---CHECK OUT---</td>
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<td></td>
<td>30-Apr</td>
<td>Review</td>
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<td>Proper lab dress and splash goggles are required.</td>
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<tr>
<td>16</td>
<td>04-May</td>
<td>Final Exams Begin</td>
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<td>Final Exam</td>
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<td>09-May</td>
<td>Final Exams End Saturday Evening</td>
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