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

The course begins with a brief review of core concepts from high school chemistry and then moves into nuclear chemistry. The focus remains on materials at the atomic level while studying atomic spectroscopy and periodic trends. Models of bonding atoms move the course to a focus on ionic, covalent, and metallic compounds. At the molecular level, the shape and structure of compounds is studied next, followed by an examination of solutions, UV/Vis spectroscopy and calibration. A study of organic materials, such as hydrocarbons, biological molecules and polymers, comprises the middle section of the course. Solids, semiconductors, and nanoparticles are covered in the final section of the course, which focuses on inorganic materials.

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 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.

There are 2 lecture sections of CHM 11500 taught by Professors Claridge and Ramachandran. There are about 15 graduate teaching assistants who teach laboratory and recitation sections.

The Chemistry 11500 team—the professors, course coordinator, teaching assistants, administrative assistants, and general chemistry preparations lab—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 lab schedule, recommended ways to study, lab policies, grading, and other course policies and procedures.

**BRWN 1144, The General Chemistry Office, 765-494-5250** The General Chemistry office handles all the administrative details associated with the course. All non-chemistry questions about the course should 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 (weeks 2 and 3), and to get signatures on university forms such as add/drop forms. Marybeth Miller and assistants Susan Linn and 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:** Henry Hamann is the lecture coordinator, BRWN 1144, phone: 49-45250; hjhamann@purdue.edu. Adam Zabih is the lab coordinator, BRWN 1144, phone: 49-45250; azabih@purdue.edu. The General Chemistry Office is in Brown 1144 and the staff in that office can also answer questions for you or direct them to Drs. Claridge or Ramachandran. They can address concerns or questions you may have about course policies and procedures or issues you might have with your TA.

**Course Information** Blackboard
Lecture outlines, reading assignments, announcements, and other course information are available on the course Blackboard page. It is recommended you visit it often.
Required Materials

Textbook and Online Homework: In CHM 11500, you are required to complete homework assignments online using the McGraw-Hill Connect program. Connect includes an electronic version (ebook) of the textbook, *The Molecular Nature of Matter and Change*, 7th Edition, Silberberg. There are several options available for purchasing Connect access and a loose-leaf copy of the textbook. See the course Blackboard page for instructions. Materials may also be purchased in the bookstores, but the costs will likely be higher than those available through Blackboard.

Lab Manual: For lab, you are required to purchase the *CHM 11500 Laboratory Manual*, Purdue University, 2016-2017 Edition, ISBN 978-1-68036-310-4, Fountainhead Press, Inc., which is available in local bookstores. The lab manual includes lab notebook pages, so there is no need to purchase a separate laboratory notebook.

Calculator: A simple battery-operated scientific calculator with exponential, logarithm and square root functions is needed for exams. Two-line non-programmable calculators are allowed. Alpha-numeric and programmable calculators are NOT allowed for exams. Solar calculators do not function well in some areas of the Hall of Music. Exam approved calculators are available for purchase outside WTHR 200 during the first two weeks of class.

Lab materials: In addition to a lab manual, the following items are required for lab: a padlock for your assigned lab drawer (by Week 4, Jan. 30 -- Feb. 3), 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.

Week #1 Assignments:

- Purchase required materials (see above).
- Purchase access to CONNECT.
- Begin/complete the first CONNECT homework assignment.
- Read all the information in this course packet.
- Read the relevant 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 by Sunday, January 22 at 11:59 PM. **You must complete your safety certification before you can work in lab. See p. 5.**
- Attend recitation and lecture.

▶ Late Registration  If you register late, notify the course coordinator, Henry Hamann no later than Fri., February 3 to see about the possibility of making up missed assignments.
**Weekly Assignments:**

- Attend lecture, recitation, and lab.
- Do the reading assignment for lecture (see your lecture notes or Blackboard).
- Complete your Connect homework assignment (usually due each Tuesday at 11:59 pm).
- Prepare for lab: read the relevant lab manual chapter, do the textbook reading assignment for lab (see lab/lecture schedule, pp. 13-14), and complete the pre-lab exercises including the lab procedure outline.

**Overview of CHM 11500 Activities and Policies**

**Studying Chemistry**
Expect to spend 8-12 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. For more advice, see the “Resources” folder on the course Blackboard page.

**Sources of Help**
There are several free sources of help for CHM 11500 students, including professor office hours, TA office hours, *Supplemental Instruction, private tutors, and the Chemistry Resource Room. Find more information in the “Resources” folder on Blackboard.

*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 the course material and understand the material better. Attendance at these sessions is voluntary, but extremely beneficial for those who attend regularly. Times and locations for the help sessions can be found here: [www.purdue.edu/si](http://www.purdue.edu/si) or at the app: [www.purdue.edu/boilerguide](http://www.purdue.edu/boilerguide). 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 are asked to arrive with their student ID card, lecture notes and questions to these informal, peer-led study sessions.*

**Review Packet**
Chapters 1-5 will be covered very briefly during the first three lectures, so it is important that you review on your own. A review packet of the topics that you are expected to remember from high school chemistry will be distributed on the first day of lecture. Your teaching assistant will be available to answer your questions about these problems and you will also have time in recitation to work on them with your classmates.

**Reading**
Reading assignments will be provided in lecture. *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. Reading assignments and learning objectives (RA LO) will also be posted on Blackboard.
Lectures
- Student versions of the lecture notes may be posted on Blackboard prior to the lecture. These are outlines of the lectures and are not meant to substitute for lecture attendance.

- Audio recordings and video capture of lecture slides can be viewed from the Boilercast link on Blackboard.

- i>clickers or cell phone or tablet class participation apps (e.g. Hotseat) may be used in lecture to gauge your comprehension of the material presented in lecture. A maximum of 20 points of extra credit may be earned by answering certain questions correctly.

- Cell phones, computers, iPods 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 lecture, but please respect your classmates by not using Facebook, texting, surfing the internet, etc. during class. Talking out loud 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.

Recitation
Weekly recitation provides the opportunity for you to ask questions, work problems in groups, and prepare for the upcoming laboratory experiment. Bring your textbook, lab manual and homework and/or lecture questions with you to recitation.

You must attend recitation to receive credit for your pre-lab assignment for that week. (If you are absent from recitation, the prelab portion of your lab score for that week will be a zero.) Email your TA in advance if you must miss recitation.

Homework (Connect)
- Each week you will have 1 homework assignments on the online Connect system (see Blackboard for the link). Homework will usually be due on Tuesdays at 11:59 pm, at least 9 days after it is assigned. Due dates will be listed on Blackboard and on the Connect assignment page.

- You will have 2 assignment submission attempts for each Connect homework assignment. Each assignment attempt will contain 3 question attempts. Your score will be the best score of the 2 assignment submissions.

- For help with technical issues, contact Connect customer service at 1-800-331-5094 or use the online form at http://mpss.mhhe.com/. Firefox is the recommended browser for Connect.

- Each homework assignment is worth 10 points. The lowest homework score will be dropped at the end of the semester.

- No time extensions are possible for homework assignments. 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.
Laboratory exercises are an integral part of CHM 11500 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 11500 is a laboratory course. There are no make-up labs or excused absences, except those covered by the GAPS and MAPS policies (see p. 10).

- You are required to complete 9 of the 11 scheduled lab projects to pass the course. If you fail to complete or miss more than two labs, an automatic grade of “F” will be assigned for the course at the end of the semester.
  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 safety violations, including improper dress and goggle infractions
  - arriving more than 10 minutes late
  - inadequate preparation that hinders lab participation
  - not contributing constructively to the group’s work in lab
  - failure to submit a lab report
  - not participating in preparation of the lab report

- Completion of the online safety certification on Blackboard with a score of 20/25 or better is due by 11:59 PM on Sunday, January 22. You must confirm your score in the Blackboard grade center (My Grades link). If you have less than 20/25 at the due date, you will not be allowed to work in lab and will receive a zero. You will receive a zero for each lab you miss due to an incomplete safety certification.

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

- Answer the pre-lab questions found on Blackboard and prepare an experimental procedure in your lab notebook before coming to lab. Pre-lab assignments are due at the beginning of the lab period.

- Arrive on time, properly dressed, and prepared for lab work. If you arrive at lab more than 10 minutes late or improperly dressed, you will be asked to leave the lab and will receive a score of zero (failure to complete).

- Follow all lab safety regulations (see below).

- Endeavor to work as an effective member of your team.

- Complete the lab report appropriately:
  - Use ink and write neatly.
  - Label graphs and tables.
  - Use the data your group 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.
Most lab reports are due before leaving lab on the day lab work is completed and before the lab is closed, that is 10:20 AM, 2:20 PM or 5:40 PM. Lab reports submitted up to 24 hours late are worth 50%. You will be required to complete one formal group lab report this semester. Details will be provided by your lab instructor.

Graded lab reports will be returned by your lab instructor **one week after** they are submitted. If you have questions about your grade, speak with your lab instructor or the course coordinator (Henry Hamann) within one week of the report being returned to you.

To request a lab report regrade, a **written** request, which provides clear justification for the regrade, must be submitted to the Course Coordinator, Henry Hamann, **within one week** of the report being returned to you. Lab reports must be written in non-erasable ink to be eligible for regrades. Note that the entire lab report will be regraded and the adjusted grade will stand as the final grade for the report, even if it is lower than the original grade.

If you do not attend lab check-out (at your scheduled lab time) at the end of the semester, you will be charged $45 plus the cost of any replacement equipment.

**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.*

- Dress appropriately (see below).
- 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.
- 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 not 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. 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 (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
- 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
- short skirts
- 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 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.
Exams
Exams are a chance for you to demonstrate your comprehension of the course material and are worth approximately 60% of your final grade. Your lowest exam score or \( \frac{1}{2} \) your final exam score will be dropped at the end of the semester.

Spring 2017 hour exam schedule:

<table>
<thead>
<tr>
<th>Exam</th>
<th>Date</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam I</td>
<td>Tuesday Feb 7</td>
<td>8:00–9:00 pm</td>
<td>Elliott Hall of Music</td>
</tr>
<tr>
<td>Exam II</td>
<td>Tuesday Mar 7</td>
<td>8:00–9:00 pm</td>
<td>STEW 183</td>
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<td></td>
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<td></td>
<td>FRNY G140</td>
</tr>
<tr>
<td>Exam III</td>
<td>Monday Apr 3</td>
<td>6:30–7:30 pm</td>
<td>Elliott Hall of Music</td>
</tr>
</tbody>
</table>

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 except those covered by the GAPS or MAPS policy (see p. 10). 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 a score of zero for additional missed exams.

- 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 to discuss your options. You will be asked to provide written verification of the conflict. If an emergency occurs, contact the General Chemistry office (BRWN 1144) as soon as possible.

- Exams I, II and III are each one hour in length. You should arrive at least 15 minutes before the exam start time. If you are more than 15 minutes late for an exam, you will not be allowed to take the exam and will receive a score of zero.

- Exams I and III will be given in the Elliott Hall of Music. Exam II will be given in FRNY G140 and STEW 183. Before each exam you will receive an exam seat assignment (location, level, aisle, row, and seat) which will be posted in Blackboard. Make sure you check Blackboard before each exam. Take your PU ID, your seat assignment, an appropriate calculator (see p. 2), and #2 lead pencils with you to the exam. You may not share a calculator with another student.

Final Exam

- The final exam is a 2-hour comprehensive exam. The time and place will be announced 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 2017

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 lowest homework score
- your lowest lab score (provided you have completed at least 9 of 11 labs). The 10 pt Course Policy Review and Excel exercises cannot be dropped; see p. 11, “Late Registration,” for instructions to make up these two assignments.
- your lowest exam score or ½ your final exam score, whichever is lower (see below)

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)
Labs.....................270 pts........(best 10 of 11 at 25 pts each plus 2-10 pt. exercises)
Exams...................450 pts.........(3 at 150 pts each)
Final Exam............300 pts........(comprehensive)
Sub-total............1150 pts
Drop.....................150 pts........(drop lowest exam score or ½ final exam score, whichever is less)
Total...................1000 pts

Extra credit points (number to be determined) will be available for completing certain LearnSmart modules assigned on Connect (see the Extra Credit folder on Blackboard.), and for correctly answering certain in-class clicker questions.

►If you miss more than 2 labs, your course grade will automatically be an F. Except for approved GAPS or MAPS leaves, there are no excused absences in CHM 11500.

At the end of the semester, the total scores for all students will be arranged in numerical order, the score that corresponds to the 99th percentile ($S_{99}$) will be determined, and then letter grades will be assigned based on this percentile score as follows:

A: Total Score $\geq 0.90 \times S_{99}$
B: $0.80 \times S_{99} \leq$ Total Score $< 0.90 \times S_{99}$
C: $0.70 \times S_{99} \leq$ Total Score $< 0.80 \times S_{99}$
D: $0.60 \times S_{99} \leq$ Total Score $< 0.70 \times S_{99}$
F: Total Score $< 0.60 \times S_{99}$ or if you fail to complete 9 of the 11 lab projects

At various times during the semester, this approach will be used to create tentative grading scales which you can use to estimate your letter grade.

This system has several advantages:
- It lets you know several times during the semester how you are doing in the course.
- Unlike a curved scale, it encourages cooperation among students because no student is penalized when another is successful.
- Unlike an absolute scale, it tends to neutralize the effects of differences from one semester to another and thereby ensures that the same criteria are used to assign grades from one semester to another.
This approach to grading means that the grade you get in this course depends primarily on your own effort and performance. It also ensures that all students who do well in the course will get good grades.

- Check all your grades on Blackboard after each exam. If there are any errors or discrepancies, notify the Course Coordinator, Henry Hamann, within 2 weeks of the exam.

- Save all returned graded papers and your exams until after you have received your course letter grade for CHM 11500. To resolve any discrepancies, your paper(s) will need to be reviewed.

- The point total available for exams is 600 (4 x 150). Your dropped exam score 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. These scores will be compared with your scores on Exams I-III (T1, T2, and T3) and the lowest of these 5 scores will be dropped (i.e. not counted into your total points).

UNIVERSITY AND COURSE POLICIES

Absences

- Verified grief and military absences are the only excused absences in CHM 11500. Students who experience the death of a family member or close friend and students who are called into military service should contact the Office of the Dean of Students at 765-494-1747. (See below.)

- The lowest score in each category (lab, HW, exam) is dropped at the end of the semester to account for other types of absence, such as those due to illnesses, trips or conflicts. If you have concerns about how an absence will affect your course grade, contact your instructor or Course Coordinator Henry Hamann at the time of the absence.

- 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 11500.

- 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 covered under a verified GAPS absence will be pro-rated (assigned a score based on your average grade for that type of assignment). See the Course Coordinator (Henry Hamann) for more information.

- Military Absence Policy for Students (MAPS)
  If you are required to complete mandatory military training, notify the Office of the Dean of Students (ODOS) at 765-494-1747 to request that a notice of the leave be sent to instructors. See the Course Coordinator (Henry Hamann) for more information.
**Academic Integrity**
All students are expected to be familiar with Purdue’s policies on academic integrity ([https://www.purdue.edu/odos/osrr/academic-integrity/index.html/](https://www.purdue.edu/odos/osrr/academic-integrity/index.html/)).

“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.

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. All 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.

### Adding/ Dropping/Changing Sections

<table>
<thead>
<tr>
<th>CHEMISTRY DEPARTMENT DEADLINES FOR ADDING OR SWITCHING SECTIONS – SPRING 2017</th>
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</thead>
<tbody>
<tr>
<td><strong>Mon., Jan 16:</strong> last day to switch lab sections without instructor approval</td>
</tr>
<tr>
<td><strong>Fri., Jan 27:</strong> last day to switch lab sections with instructor approval*; last day to add CHM 11500 with instructor approval* <em>if not already enrolled in another CHM course</em></td>
</tr>
<tr>
<td><strong>Fri., Feb 3:</strong> last day to switch from another CHM course to CHM 11500 with instructor approval*</td>
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</tbody>
</table>

*Add/Drop forms (Form 023) must be signed by your advisor and delivered to the General Chemistry office, BRWN 1144, to obtain a signature for the instructor.

► Late Registration  If you register late, notify the course coordinator no later than Fri., Feb., 3 to see about the possibility of making up missed assignments.

<table>
<thead>
<tr>
<th>UNIVERSITY DROP DEADLINES - Spring 2017</th>
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<tbody>
<tr>
<td><strong>Mon., Jan 23:</strong> Last day to drop (cancel) a course without it appearing on your record.</td>
</tr>
<tr>
<td><strong>Mon., Feb 6:</strong> Last day to drop (cancel) a course with a grade of “W.”</td>
</tr>
<tr>
<td><strong>Fri., Mar 10:</strong> Last day to drop (cancel) a course (with a passing or failing grade).</td>
</tr>
</tbody>
</table>

**Course Drop and Lab Drawer Check-Out**  If you drop CHM 11500 after having checked into a lab drawer, it is your responsibility to check-out of your assigned drawer during your scheduled lab period. Failure to check-out of lab will result in your padlock being cut, a $45 fee, and forfeiture of the right to determine the acceptability of all locker drawer equipment. If you change sections after you check into a locker drawer, you must check out of your old locker drawer before checking into a drawer in your new section.
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 in the letter provided 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. Timely notification of the General Chemistry office is critical for timely implementation.

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 the course Blackboard site or can be obtained by contacting the instructors or TAs via email or the General Chemistry office via phone at 765-494-5250.

You are expected to read your @purdue.edu email on a frequent basis.

- “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 police, fire, or other emergency response personnel provide additional guidance or tell you it is safe to leave. There is no “all safe siren;” the notification will come via text, internet, or email announcement.

- 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.
<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture</th>
<th>Date</th>
<th>Lecture Topics for Spring 2016</th>
<th>Chapter or Section(s)</th>
<th>Lab (lab manual chapter)</th>
<th>Lab Reading Assignment</th>
<th>Exams</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1/10</td>
<td>Introduction to course and policies</td>
<td>Course Packet</td>
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<tr>
<td></td>
<td>2</td>
<td>1/12</td>
<td>Review</td>
<td>1.1, 1.4, 1.5, 2.2, 2.3, 2.5, significant figures; conservation laws; atomic structure and elements; ionic and covalent compounds</td>
<td>Check in, Safety Procedures, Course Policy Review, Basics of Excel exercise (Appendix A), Safety Certification</td>
<td>Course Packet</td>
<td></td>
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<td>2</td>
<td>3</td>
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<td>Review</td>
<td>3.1, 3.2, 3.3, 3.4</td>
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<td>Review</td>
<td>4.1, 4.2, 4.3, 4.4, 5.3, 5.4 reactions and solubility rules; acid-base reactions; gas laws</td>
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<td>3</td>
<td>5</td>
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<td>1/31</td>
<td>Nuclear Chemistry</td>
<td>CH 24</td>
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<td>textbook 1.5</td>
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<td>8</td>
<td>2/2</td>
<td>The Atom and Spectroscopy</td>
<td>7.1, 7.2, 7.4 (part, pp. 306-307, 311-314)</td>
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<td><em><strong>You must have your own lock for your lab drawer this week.</strong></em></td>
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<td>The Atom and Spectroscopy</td>
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<td>10</td>
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<td>The Atom and Spectroscopy</td>
<td>13.1, 13.4, 13.5 and UV/Vis spectroscopy, calibration pp. 300-301</td>
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<td>11</td>
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<td>Trends in Chemical Reactivity</td>
<td>8.3, 8.4, 2.7, 2.8</td>
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<td>textbook 4.1 and pp. 300-301 (Spectrophotometry in Chemical Analysis)</td>
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<td>Trends in Chemical Reactivity</td>
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<td>7</td>
<td>15</td>
<td>2/28</td>
<td>Review</td>
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<td>no lab (compensation for evening exams) work on your formal lab report</td>
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<td>16</td>
<td>3/2</td>
<td>Molecular Structure: Lewis structures, electronegativity, polarity, formal charge</td>
<td>10.1, 9.5</td>
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<td>Week</td>
<td>Lecture</td>
<td>Date</td>
<td>Lecture Topics for Fall 2015</td>
<td>Textbook Chapter(s)</td>
<td>Lab (lab manual chapter)</td>
<td>Lab Reading Assignment</td>
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<td>9</td>
<td>17</td>
<td>3/7</td>
<td>Molecular Structure</td>
<td>10.2, 10.3</td>
<td>L6: Chemical Synthesis</td>
<td>textbook 3.4 and p. 79</td>
<td>Exam II</td>
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<td>Resonance, shapes of molecules, molecular polarity</td>
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<td>(Basic Separation</td>
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<td>Techniques)</td>
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<td>No Classes -- Spring Break</td>
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<td>Hybridization (Valence Bond Theory)</td>
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<td>Organic Chemistry</td>
<td>15.1, 15.2, 15.4</td>
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<td>Organic compounds, functional groups</td>
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<td>12</td>
<td>21</td>
<td>3/28</td>
<td>Organic Chemistry</td>
<td>15.5, pp. 500-504</td>
<td>L8: Do You See the Light?</td>
<td>p. 639 (Table 15.5)</td>
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<td>Organic Chemistry</td>
<td>Infrared spectroscopy,</td>
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<td></td>
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<td>IR Spectroscopy, bond energies</td>
<td>pp. 374-375</td>
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<td>Biological molecules (sugars, carbohydrates)</td>
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<td>14</td>
<td>24</td>
<td>4/6</td>
<td>Biochemistry</td>
<td>13.2, 15.6, and pp. 420-421</td>
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<td>Biological molecules (lipids, DNA)</td>
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<td>Solution Properties</td>
<td>12.2, 13.3</td>
<td>L10: Biologically</td>
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<td>Phase Changes, Solution Process</td>
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<td>29</td>
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<td>Inorganic Chemistry</td>
<td>12.7 and The Future of Energy Use,</td>
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<td>pp. 273-277</td>
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