Instructor: Prof. Alexander Wei  
Lectures: Tuesdays & Thursdays, 10:30–11:20 am, WTHR 200

Email: alexwei@purdue.edu  
Office Hours: Tues. 11:30 am, BRWN 4103-D.

I am happy to answer questions related to lecture materials or homework during this time! But for all administrative issues, please first visit the General Chemistry Office.

About Chemistry 11100: This is a foundational general chemistry course for agriculture, health and human science, and other majors. The stated minimum prerequisite for Chemistry 11100 is two years of high school algebra. Our primary objective is to help you understand fundamental chemistry concepts, set up and solve calculations, balance chemical equations, and develop laboratory skills you will need in future classes. We have a diverse group of students and majors, all of whom will need to relate the principles encountered in CHM 11000 to topics in future courses.

In this course, we will first review measurements, related mathematics, and energy in different forms. We will then look at atoms and isotopes, ions, and compounds, and introduce the mole as a basic unit in chemistry. These will be applied to chemical formulas, and predicting the outcome of chemical reactions. Next, we will learn about the periodic table and how it is organized, and how atoms bond to form molecules of different shapes and sizes.

CHM 11100 emphasizes the development of both problem-solving skills and conceptual understanding. Weekly laboratories offer opportunities to reinforce and extend the topics discussed in lecture, and to develop essential hands-on skills at the laboratory bench.

The Chemistry 11100 team includes the instructor (Dr. Wei), 2 lecture and laboratory coordinators, 6 graduate teaching assistants, the General Chemistry Office staff, and the Chemistry Preparations Lab. All of us are committed and focused on helping you learn chemistry, and enabling you to achieve great things with your major!

Read on to learn about the required materials, lecture and lab schedules and policies, recommended ways to study for chemistry, grading, and other important procedures.

This course meets the Science requirement of Purdue University's Foundational Core.

Lecture and Lab Coordinators: The lecture coordinator is Casey Wright (wrigh401@purdue.edu); the lab coordinator is Kevin Wee (kwee@purdue.edu). Both will hold their office hours in WTHR 116B (schedule to be posted on Blackboard and Piazza).

General Chemistry Office, BRWN 1144 (49-45250) The General Chemistry Office handles all the administrative details for CHM 11100. All non-chemistry questions should be directed to the General Chemistry Office, including grade checks, exam conflicts, clarification on course policies, resolution of grade issues, schedule changes (Weeks 2 and 3), and signatures on University forms (e.g., add/drop forms). Instructional specialist Marybeth Miller and General Chemistry Office administrators Ms. Marlene Miller and Ms. Melissa Roadruck can help you to resolve a variety of issues related to course enrollment and attendance.
**Online Information** is available on Blackboard Learn at [http://www.itap.purdue.edu/tlt/blackboard](http://www.itap.purdue.edu/tlt/blackboard). Announcements, lecture outlines, in-class and pre-lab assignments, and other course information will be posted on the Blackboard page. **Very importantly, all online (CONNECT) homework must be submitted through Blackboard**, in order to receive credit for these assignments.

**Required Course Materials:** This semester’s textbook is *Chemistry, 13th edition*, by Chang (McGraw-Hill; ISBN: 978-1260694420). A link to the McGraw-Hill website is available through the CHM 11100 Blackboard portal. Graded homework assignments are coordinated with McGraw-Hill’s Connect online program. You can purchase Connect from University Bookstores or directly through McGraw-Hill; an electronic copy of the textbook is included. If you would like to use a physical (hardbound) textbook, including older versions, you must still purchase Connect through McGraw-Hill (ISBN: 978-1260694857).


**Lab Materials:** In addition to the digital laboratory manual (bring your laptop or tablet!), you will need a Sharpie™ (black, permanent ink marker) for writing on lab glassware, a carbonless-copy laboratory notebook (~50 pages), electronic (USB) storage device for sharing lab data, and approved lab safety goggles. The latter are available for purchase at bookstores, outside WTHR 200 during the first two weeks of classes, and from the storeroom on the 1st or 2nd floor in BRWN.

**Lab Equipment:** You will share 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 unusable (i.e., dirty, chipped, cracked, stained, broken, etc.) or missing may be 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 glassware after use by washing with hot water, soap, and a brush, rinse with tap water, then rinse with deionized water. Cleaning glassware is a 3-step process; you will have better experimental results with clean glassware.

- **YOU ARE RESPONSIBLE FOR ALL EQUIPMENT AFTER CHECK-IN.** If any piece of equipment becomes un-useable (chipped, cracked, badly stained, or broken), you must go to the storeroom (immediately) and **purchase a replacement**. In some cases, the storeroom can split the replacement cost among the lab partners.

- Should you discover that a piece of equipment has gone missing, first check with the other students in your row and also in the lost-and-found box at the back of the lab. If the piece is still missing, your group must replace it immediately.

- Sometimes pieces of equipment are broken by pure accident; for instance, a thermometer rolls off the bench and breaks. Replacing the thermometer is still the responsibility of the group!

- You will be using the university-supplied lock on the drawer throughout the semester, and will not need a personal lock. Your TA will open the drawer before lab each week. You may store personal items such as goggles in the drawer, but be sure to label them with your name!
**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. **Failure to check out of lab will result in a $45 fee and charges for any glassware or equipment that must be replaced if it is missing, damaged or dirty.** In addition, it will result in forfeiture of your right to determine the acceptability of all checked-in 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 and charges for any glassware or equipment that must be replaced if it is missing, damaged or dirty.
- You and your lab partners will clean and inventory the drawer for your TAs’ inspection. All missing or un-usable equipment must be replaced at that time.

**Supplemental Instruction (SI):** Dedicated study groups are available and open to anyone in CHM 11100 who wants to understand the course material in greater depth. Participation in SI sessions is voluntary, but can be extremely beneficial. Students who attend will work with peers as they compare notes, discuss various problems and concepts, and share study tips and test-taking strategies.

This year’s SI leader is Aatka Mobashir ([smobashi@purdue.edu](mailto:smobashi@purdue.edu)). Aatka’s SI sessions are Tues. and Thurs. 6:30 pm in WALC 3138; her office hour is Tues. 9:30 am in WILY C215. Students are asked to bring their student ID card, lecture notes, and questions to these informal, peer-led study sessions.

**i-Clicker:** We will use the i-Clicker response system which can be purchased at local bookstores. Register your i-Clicker ID (underneath barcode) through Blackboard, the frequency setting in WTHR 200 is “AA.” Bring your i-Clicker to every class, and earn up to 20 bonus points!

You are responsible for verifying that your i-Clicker is working properly. Running totals for i-Clicker will be updated on Blackboard every two weeks, or whenever new exam scores are posted (you have one week to report any corrections).

**Calculator Use:** For homework and exams, you are permitted to use simple, battery-operated scientific calculators with exponential, logarithm and square root functions. Two-line (non-programmable) calculators are also acceptable. **NO PROGRAMMABLE CALCULATORS OR SMARTPHONES will be allowed for exam use!!** Calculators are available for purchase outside WTHR 200 during the first two weeks of class.
Assignments for Week 1 (to-do list)

- Read all the information in this course packet.
- Purchase required materials (see above).
- Register for your CONNECT account, and begin your first assignment. You are strongly encouraged to complete your weekly HW assignment before next week’s lectures.
- Register for Piazza via the following link: https://piazza.com/purdue/spring2020/chm111 or via the invitation sent to you via your Purdue email address. You may use this platform to ask questions about the homework.
- Attend lab check-in, practice uploading images to bluedoorlabs (online lab resource), and complete Course Policies review (+5 bonus points).
- Attend recitation, and visit Chemistry’s Resource Room.
- Complete Reading Assignments and Learning Objectives (on Blackboard).
- Complete safety certification on Blackboard, and earn a score of at least 20 out of 25. You must complete your safety certification by Tues, Jan. 28, 11:59 PM, in order to perform experiments in lab (and receive credit for lab assignments).

Weekly Routine

- Check Blackboard regularly for announcements and new information.
- Complete reading assignments before lecture (see schedule at the end of this document).
- Attend lectures, recitation, and lab.
- Complete your Connect homework assignment by the end of the week (for maximum flexibility, hard deadline is the following Friday, 11:59 pm— but don’t put off the HW to the last minute!).
- Prepare for weekly lab by reading the relevant chapter in your lab manual, reading the textbook assignment for lab (see Lab, Lecture and Exam schedule), and completing pre-lab exercises including lab procedure outline by the beginning of every lab.
- Submit the post-lab reports on bluedoorlabs (due 48 hours after the end of each lab).

Need Help?
There are many free resources for CHM 11100 students. In addition to your instructor and TA office hours every day of the week, there is the Chemistry Resource Room in WTHR 117, with student volunteers who can help you understand and solve homework problems. We also encourage students to take advantage of our Supplemental Instructions (SI) sessions (see page 3).

For other resources, check out the “Important Purdue Resources Handout” on the Purdue University Foundations of Excellence page at: http://www.purdue.edu/foundationsofexcellence.

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.
Overview of CHM 11100 Activities and Policies
***For the most updated information, visit the CHM 11100 Blackboard page***

**Reading**
See the lecture schedule for the reading assignments. *We recommend reading all assigned materials at the beginning of each week, prior to lecture and laboratory.* Some material will be covered in lecture, but some must be reviewed on your own.

**Lectures**
Student versions of the lectures will be posted on Blackboard, to be made available at least 24 hours in advance. *These handouts are intended for you to print and bring to class, and for taking notes (by hand).* Keep in mind that they are outlines of the lectures, and may differ in content or page numbering. They are **not** substitutes for lecture attendance!

To review the most recent lecture materials online, audio recordings and video capture of lecture slides will also be made available from the BoilerCast website: [http://www.itap.purdue.edu/tlt/BoilerCast/](http://www.itap.purdue.edu/tlt/BoilerCast/)

PLEASE turn off cell phones and other audio-electronic devices! They are a distraction to everyone in a learning environment. Respect your instructor and classmates by leaving personal electronics off during lectures, as well as in recitations and labs. Personal laptops and tablets should only be used for note-taking or following lecture materials; do not engage in text messaging or social networking during class.

Talking during lecture is also distracting and disrespectful to the lecturer and other students. If you have a question, please ask by raising your hand, but otherwise remain quiet and allow everyone around you the opportunity to pay full attention to the lecture.

**Recitation**
Your TA conducts weekly recitations designed to help you understand laboratory that week, and to discuss any questions you might have from lecture or homework. Take advantage of this time to ask questions and check your approach to homework and pre-lab problems (so bring your HW questions to recitation!).

**Online homework (CONNECT)**
Your weekly online homework (HW) assignment will consist of required problems plus some optional questions to further test your understanding. Required questions will contribute toward your homework grade; extra questions and tutorials can also be useful to better understand how to approach homework problems, and also as practice and review for exams.

*We strongly recommend that you complete weekly online HW assignments before Monday of the following week.* However, as a courtesy to those with extramural activities, hard deadlines for online assignments (posted on the CONNECT Assignment page and Blackboard) are typically on Fridays of the following week.

For each HW question, you will have up to **three attempts** to obtain the correct answer (with feedback) before online submission. In addition, you will be permitted a second chance to re-submit answers for any questions you may have missed the first time. All HWs will be scored and recorded online; there is no hand grading or regrading. No time extensions are possible for online HW assignments, EXCEPT in the case of technical difficulties that affect the entire class (this is very rare).

Weekly HW assignments will be worth 10 or 20 points, depending on the week. The 15 assignments add up to 200 points; at the end of the semester, we will drop two 10-pt. assignments or one 20-pt. assignment, whichever is in your favor. **Your final HW grade will be based on a maximum of 180 points.**
PIAZZA
Piazza is a free online discussion forum where you can ask questions about the course. The instructors, TAs, and your fellow classmates can ask or address questions about the CONNECT homework and laboratory material, as well as concepts discussed in class. All questions about CONNECT should be posted on Piazza so that we may troubleshoot them and share solutions with everyone. For example, if you are having issues with certain homework problems, it is likely that others will run into the same issues. For questions or concerns about more specific topics, please direct these to the instructors or TAs by email. (But if the question is something that others can benefit from, we may repost the topic on the Piazza page.) You will receive a sign-up invite for Piazza via your Purdue email, or you may use the following link to sign up: https://piazza.com/purdue/spring2020/chm111

LABORATORY
Laboratory exercises are an integral part of CHM 11100, and are opportunities for you to directly experience the chemical concepts discussed in lectures. There are a total of 12 labs (20 pts. each); at the end of the semester, we will drop the lowest lab grade (or one missed lab). Your final lab grade will be based on a maximum of 220 points.

Laboratory Attendance
Laboratory exercises are an integral part of CHM 11100 and are an opportunity for you to experience in a hands-on way the chemical concepts discussed in lecture.

- Lab attendance is required, as CHM 11100 is also a lab course. There are NO make-up labs or excused absences, except if covered by MAPS or GAPS policies.
- You are required to complete 9 of the 11 scheduled lab projects (Labs 2–12) to pass the course. If you miss more than two lab projects (not including the Excel Lab, Lab 1), an automatic grade of “F” will be assigned at the end of the semester, regardless of your HW and test scores.
- You must also complete the online safety certification on Blackboard with a score of 20 or better, by 11:59 pm on Tuesday, January 28. If you do not complete it in time for Lab 2, you will not be allowed to participate and will receive a zero for that lab (no make-ups are possible).

Weekly Laboratory Preparation
The following is expected before coming to lab:

1. Read the experiment and attend recitation to help you prepare. During recitation or office hours, consult your TA to clarify questions ahead of time.
2. Complete all pre-lab exercises, and prepare an experimental procedure in your lab notebook the day before. For each lab, you have to complete an online pre-lab assignment on bluedoorlabs and write an outline for the experimental procedure in your lab notebook. Both the online assignment and the procedure (written in your lab notebook) are due at the beginning of the lab period. You cannot work on them during the lab, and expect to receive credit.
3. Always dress appropriately for lab, and arrive on time. If you do not come with appropriate clothing, footwear, and eyewear, or arrive more than 10 minutes late, you will not be permitted in the laboratory and will receive a score of zero.

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**Appropriate Clothing:** The Chemistry Safety Committee requires everyone in laboratory to wear clothing that protects your skin, from your neck to your feet, whether you are sitting, standing or reaching on your tiptoes. Shoes must cover your feet entirely—no sandals or flip-flops!

**Recommended** chemistry lab attire: T-shirt, jeans (no holes), sneakers with socks. Long-sleeved shirts are best.

**Unacceptable** clothing includes (but are 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 that expose skin;
- Tights or thin (translucent or transparent) leggings, including silk or nylon stockings
- Capri or cropped pants that expose your ankles
- Shorts
- Skirts without appropriate leggings (again, nylon stockings are unacceptable)
- Open-toed and/or open-heeled shoes (including Crocs, Birkenstocks, clogs), sandals, boat shoes, slippers, or moccasins. Footwear must protect the entire foot from chemical spills.

**Lab safety:**
Safe laboratory practices is a top priority! Everyone is required to comply. Failure to comply will result in being sent home from lab with a score of zero, which counts as a lab absence.

- Again, appropriate clothing and shoes and goggles are required. Refer to the previous page for proper laboratory dress code.
- Wear gloves when specified. Nitrile (non-latex) gloves will be provided in the laboratory.
- Food and beverages are not allowed on lab benches, and must be kept with your personal belongings in fully closed containers.
- If your hair is longer than shoulder length, you must tie it behind your head.
- Contact lens wearers are strongly encouraged to wear glasses in the laboratory.
- Follow your lab instructor’s guidance on appropriate handling of hazardous materials and disposal of chemical waste.
- Promptly clean up spills, and tidy the laboratory before leaving.
**Lab Reports:**

Lab reports are to be submitted online to bluedoorlabs, and are due 48 hours after each lab. Failure to submit a lab report by the assigned due date will result in a score of zero in the report section for every member that participated in the completion of the report.

Scores for graded lab reports will be posted on Blackboard. These scores will be updated within 2 weeks, or whenever new exam scores are posted. For questions about your grade, speak with your lab instructor or the lab coordinator.

Below are some tips for getting high marks on your lab reports.

- Do your best to work as an effective member of a lab team.
- Participate in discussion and share the responsibility in checking the correctness of the answers.
- Answer as many of the questions as possible during the lab period (when your TA and lab partners are available to help) instead of leaving the lab early and completing the report afterward.
- Answer questions in complete sentences.
- Always save your work for each question before moving on the next question or the next page.
- Label all graphs and tables made from the data you collected in lab.
- Make sure you are using proper units of measurement and significant figures.
- Check all chemical terms and concepts for correct usage.
- Ensure results and conclusions are consistent with your data and observations.
- Submit the report on time. If it is a report that has to be completed in a group, make sure your partner(s) submit their report on time!
EXAMS
Exams are a direct reflection of your understanding of course material, and are worth more than 50% of your final grade. As a benefit to students, your lowest exam score or ½ your final exam score will be dropped at the end of the semester.

Spring 2020 hourly exam schedules and locations:

<table>
<thead>
<tr>
<th>Exam I:</th>
<th>Thurs., Feb. 13</th>
<th>8:00 pm – 9:00 pm</th>
<th>various (ask your TA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam II:</td>
<td>Wed., Mar. 11</td>
<td>8:00 pm – 9:00 pm</td>
<td>CL50 224</td>
</tr>
<tr>
<td>Exam III:</td>
<td>Wed., Apr. 8</td>
<td>8:00 pm – 9:00 pm</td>
<td>various (ask your TA)</td>
</tr>
</tbody>
</table>

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

- Attendance of all exams is mandatory. There are NO make-up exams and absences cannot be excused. If you are absent for one exam, your score will appear as a zero until the end of the semester (at which point the lowest score can be dropped). You will receive a zero score for each additional missed exam.

- Scores for approved GAPS/MAPS leaves and makeup exams required as an approved academic accommodation through the Disability Resource Center will be handled individually. Contact Casey Wright for more information.

- Preparation: Hourly exams will be based on weekly lectures and related HW assignments as follows:
  - Exam 1: Weeks 1–4
  - Exam 2: Weeks 5–8
  - Exam 3: Weeks 9, 11, 12

  In addition to completing HW assignments as directed, you may also wish to study the questions included in the weekly recitation study guides, and in your textbook at the end of each chapter.

- If you have a direct conflict with another exam, class, or university-approved activity, you will need to contact the General Chemistry Office (BRWN 1144) at least one week before the conflict. You will be asked to provide written verification of the exam 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 an exam, the student will contact the Office of the Registrar, who 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.

- Hourly exams are exactly one hour in length. You should arrive at least 15–20 minutes before the start of the exam. If you arrive more than 15 minutes after the exam begins, you will not be allowed to take the exam and will receive a zero.

- Prior to each exam, you will receive a seat assignment in Blackboard. Bring your PUID, seat assignment card, an appropriate calculator (see details on page 3), and #2 lead pencils with eraser. You may not share calculators, or exchange information of any sort, with any other student during the exam.
Final Exam
- The final is a 2-hour comprehensive exam. Time and place will be announced mid-semester.

- Preparation: The final exam is cumulative, but with added emphasis on materials not tested in the first three hourly exams (that is, more weight will be given to topics in Weeks 14 and 15). As before, we recommend reviewing both the HW problems on CONNECT and questions accompanying your weekly recitation study guides and in your textbook. Also, check Announcements on Blackboard for special review sessions or workshops.

- Alternate Final Exam Time: 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.”

*** Wait for 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. ***

Determining your Course Grade
The number of points for each assigned course activities for CHM 11100 is listed below. Before course grades are finalized, the following scores will be dropped:

- your lowest homework score(s) (max. 180 / 200 pts)
- your lowest lab score (max 220 / 240 pts)
- your lowest exam score or ½ of your final exam score, whichever is less

The total number of points for CHM 11100 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>180 pts</td>
<td>(Connect Homework, best of 15 assignments; see p. 4)</td>
</tr>
<tr>
<td>Labs</td>
<td>220 pts</td>
<td>(best 11 of 12, 20 pts each)</td>
</tr>
<tr>
<td>Exams</td>
<td>450 pts</td>
<td>(3 exams, 150 pts each)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>300 pts</td>
<td>(comprehensive, worth 2 regular exams)</td>
</tr>
<tr>
<td>Sub-total</td>
<td>1,150 pts</td>
<td></td>
</tr>
<tr>
<td>Drop</td>
<td>-150 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>
<td></td>
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</tbody>
</table>

In addition, bonus points can be earned through Course Policies Review (+5 pts), Lab Badge Exercises (up to +15 pts), and i-Clicker participation (up to +20 pts; see p. 3 for details)

After the Final Exam, your course grade will be based on the following scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>875 pts and above</td>
</tr>
<tr>
<td>B</td>
<td>775 – 874 pts</td>
</tr>
<tr>
<td>C</td>
<td>675 – 774 pts</td>
</tr>
<tr>
<td>D</td>
<td>575 – 674 pts</td>
</tr>
<tr>
<td>F</td>
<td>0 – 574 pts OR if you have fail-to-complete scores for 3 or more of the 11 scheduled lab projects (Labs 2–12). <strong>Missing more than 2 labs will result in an automatic F.</strong></td>
</tr>
</tbody>
</table>

Save all returned graded papers and your exams until after you have received your course letter grade for CHM 11100. These will be needed in order to resolve any grade discrepancies.
**Administrative Policies**

**Studying Chemistry**
Students should expect to devote **at least 6–9 hours per week** on CHM 11100, outside of normal class time and lab. Regular activities should include: reading and preparations before lecture, reviewing notes after lecture, completion of online homework and lab assignments, and preparing for exams. Additional time may be reserved for: attending SI sessions, extra help sessions, and office hours (see below).

**Sources of Help**
There are several **free** sources of help for CHM 11100 students, including: professor office hours, TA office hours, SI sessions, and the Chemistry Resource Room in WTHR 117. Further resources 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/).

**Emergencies**

In the event of a major campus emergency, course requirements, deadlines and grading schemes may be subject to changes due a revised semester calendar or other circumstances beyond the instructor's control. Any major changes will be posted on the course Blackboard site, or can be obtained by contacting the General Chemistry Office by phone (765-494-5250), or by contacting the instructor or head TAs via email.

- **“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 environment, 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. Please note 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 seek shelter. Lab grades will **not** be penalized in this situation.

**Absences**

- The lowest score in each category (lab grade, HW, exam) will be dropped at the end of the semester to accommodate unforeseen or unavoidable absences. If you have concerns about multiple absences affecting your grade, contact the General Chemistry Office.

- Verified grief and military absences are the only excused absences accepted in CHM 11100, not related to other University activities.

**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 (assigned a score based on your average and the class average). Final arrangements will be determined by course instructor (Prof. Wei).

**Military Absence Policy for Students (MAPS)**
In the case of a mandatory call to duty, students should contact the Office of the Dean of Students (ODOS) and request that a leave notice be sent to the instructor as soon as the student is informed of the dates of mandatory absence. Given proper documentation, the instructor will excuse the student from class and provide opportunities to earn equivalent credit and/or demonstrate evidence of achieving the learning outcomes for missed assignments or assessments.
If you anticipate or experience an absence that will be for an extended period (one week or more), contact the Office of the Dean of Students at 765-494-1747. A member of the Dean of Students staff will notify the student’s instructor(s) of the circumstances. The student should be aware that this intervention does not change in any way the outcome of the instructor’s decision regarding the student’s academic work and performance in any given course.

### Changing Sections/Dropping

#### UNIVERSITY DEADLINES – Spring 2020
- **Mon, Jan 20:** Last day to cancel (drop) a course without it appearing on your record.
- **Mon, Feb 10:** Last day to cancel (drop) a course without a grade.
- **Fri, Mar 13:** Last day to cancel (drop) a course (with passing or failing grade).

#### CHEMISTRY DEPARTMENT DEADLINES – SPRING 2020
- **Fri, Jan. 17:** LAST day to add chemistry or switch lab sections without instructor approval
- **Fri, Jan. 31:** LAST day to switch lab sections or LAST day to add CHM 11100 (if not enrolled in another CHM course)
- **Fri, Feb. 7:** LAST day to switch from another CHM course to CHM 11100 (subject to instructor approval)

### Changing Sections:
A change in lecture or lab section after the first week of classes requires the approval of the General Chemistry Office (BRWN 1144). Because of the processes associated with lab drawer assignments, Blackboard, and CONNECT enrollment, we cannot make a section change for students after the 3rd week of the semester (deadline January 31). If you change sections after checking into a locker drawer, you must first check out before receiving a new drawer in your reassigned section.

### Adding the Course/Late Registration:
Students are usually not permitted to add CHM 11100 after the 3rd week of the semester (by Jan. 31). In any case, the General Chemistry Office must be notified no later than the 4th week (by Feb. 7) in order to make up missed assignments for credit.

### 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 in which you and your TA or other staff member inspect the items in your drawer, before releasing you 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.
Disability Accommodations
If you require special accommodations to access course activities or materials, they must be described and approved by the Disability Resource Center (Young Hall, Rm. 830, 302 Wood St., 765-494-1247, www.purdue.edu/drc). To implement accommodations, follow the instructions listed as “Responsibilities of the Student” in the letter prepared by the DRC. Take a copy of this letter to the course coordinator in BRWN 1144 within the first three weeks of the semester (by Jan. 31) or within one week of the date of the letter to discuss your accommodation needs. Timely notification of the course coordinator is critical for implementation. Please also take your letter to BRWN 1144 so that your exams can be scheduled to be taken within the Department of Chemistry.

Academic Integrity: Statement and consequences
Please visit: http://www.purdue.edu/odos/osrr/academic-integrity/index.html

Diversity Statement
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. See: http://www.purdue.edu/diversity-inclusion/

For details about other Purdue University policies, including academic integrity, class attendance and absence reporting, emergency, nondiscrimination, and disability services, visit the course Blackboard portal.
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Lecture Topic</th>
<th>Reading (Textbook)*</th>
<th>Laboratory &amp; Pre-lab/ HW (CHM 111 Lab. Manual)</th>
<th>Exams &amp; Hard deadlines</th>
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<tbody>
<tr>
<td>1</td>
<td>14 – Jan</td>
<td>Course Overview; Introduction</td>
<td>1.1 – 1.7 (self-review)</td>
<td>Check-Into Lab Drawers</td>
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<td>16 – Jan</td>
<td>Scientific Notation; Significant Figures; Dimensional Analysis; Unit Conversions</td>
<td>2.1 – 2.2 (self-review)</td>
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<td>1.8 – 1.9; pp. 18–27</td>
<td><strong>Bring laptop/tablet for various online activities, incl. safety certification (mandatory)</strong></td>
<td><strong>Week 1 HW:</strong> hard deadline on 24-Jan, 11:59 pm</td>
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<td>2</td>
<td>21 – Jan</td>
<td>Atomic Theory; The Periodic Table</td>
<td>2.3 – 2.4; pp. 48–51</td>
<td><strong>L1: Introduction to Excel, Chapter 1</strong></td>
<td><strong>Online Safety Certification (Blackboard): 28-Jan, 11:59 pm</strong></td>
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<td>23 – Jan</td>
<td>Electromagnetic Radiation &amp; Energy; Modern Model of the Atom</td>
<td>3.1; pp. 80–81</td>
<td>Lab notebook and proper lab clothes required, in addition to laptop/tablet</td>
<td><strong>Week 2 HW:</strong> 31-Jan, 11:59 pm</td>
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<td></td>
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<td></td>
<td>7.1; pp. 275–278</td>
<td><strong>Online (Connect) homework, Week 2</strong></td>
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<td>7.3; pp. 282–286</td>
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<td>QM model: p. 294</td>
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<td>3</td>
<td>28 – Jan</td>
<td>Electron Configurations; Valence and Core Electrons;</td>
<td>7.8 – 7.9; pp. 301–311</td>
<td><strong>L2: Introduction to Laboratory Techniques: Part 1, Chapter 2</strong></td>
<td><strong>Week 3 HW:</strong> hard deadline on 07-Feb, 11:59 pm</td>
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<td>30 – Jan</td>
<td>Periodicity of Electron Configurations; Electron Configuration of Ions; Size of Atoms &amp; Ions</td>
<td>8.2 – 8.3; pp. 329–339</td>
<td>Lab notebook, safety goggles and proper lab clothes required</td>
<td><strong>Exam I (Wk. 1–4): Thurs. 13-Feb, 8–9 pm</strong> (hard deadline HW4 delayed)</td>
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<td>4</td>
<td>04 – Feb</td>
<td>Molecular &amp; Ionic Compounds, And How to Name Them</td>
<td>2.5– 2.6; pp. 52–57, 2.7; pp. 61–63</td>
<td><strong>L3: Introduction to Laboratory Techniques: Part 2, Chapter 3</strong></td>
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<td>06 – Feb</td>
<td>Monatomic &amp; Polyatomic Ions; Naming Acids and Bases</td>
<td>2.7; pp. 58–61, pp. 64–66</td>
<td><strong>Volumetric Badge Exercise</strong></td>
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<td><strong>Online (Connect) homework, Week 4</strong></td>
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<tr>
<td>5</td>
<td>11 – Feb</td>
<td>Ionic Bonding &amp; Electronegativity</td>
<td>9.1 – 9.2; pp. 367–370</td>
<td><strong>L4: Measuring Density, Chapter 4</strong></td>
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<td>13 – Feb</td>
<td>Covalent Bonding; How to Draw Lewis Structures</td>
<td>9.4 – 9.5; pp. 375–380</td>
<td><strong>Online (Connect) homework, Week 5</strong></td>
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<td>9.6; pp. 381–384</td>
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<td>20 –Feb</td>
<td>Molecular Shape &amp; Polarity</td>
<td>10.2; pp. 421–426</td>
<td>Online (Connect) homework, Week 6</td>
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<td>7</td>
<td>25 –Feb</td>
<td>Atomic &amp; Molecular Mass; Avogadro’s Number</td>
<td>3.1 – 3.3; pp. 79–86</td>
<td>L6: Molecular Geometry and Polarity (posted on Blackboard)</td>
<td>Week 6 HW: 28-Feb, 11:59 pm</td>
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<td>27 –Feb</td>
<td>Moles and Molar Mass; Percent Composition by Mass</td>
<td>3.5; pp. 88–91 (also see p. 518)</td>
<td>Online (Connect) homework, Week 7</td>
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<td>8</td>
<td>03 –Mar</td>
<td>Solution Concentration &amp; Molarity; Dilution Factors</td>
<td>4.5; pp. 147–151 (also see p. 518)</td>
<td>L7: Electrolytes and Nonelectrolytes, Chapter 7</td>
<td>Week 7 HW: 06-Mar, 11:59 pm</td>
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<td>05 –Mar</td>
<td>Solutions of Acid, Bases, &amp; Electrolytes</td>
<td>4.1, 4.3; pp. 122–124 130–135</td>
<td>Online (Connect) homework, Week 8</td>
<td></td>
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<td>9</td>
<td>10 –Mar</td>
<td>Chemical Reactions &amp; Equations</td>
<td>3.7; pp. 93–98</td>
<td>No labs this week (compensation for evening exams)</td>
<td>Exam II (Wk. 5–8): Wed. 11-Mar, 8–9 pm CL50 224</td>
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<td>12 –Mar</td>
<td>Acid–Base Reactions; Precipitation &amp; Ion-Exchange Reactions</td>
<td>4.2; pp. 125–129</td>
<td>Online (Connect) homework, Week 9</td>
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<td>10</td>
<td></td>
<td>Spring Break: Mar. 16 – Mar. 21</td>
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<td>(hard deadline for HW 8 delayed)</td>
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<td>11</td>
<td>24 –Mar</td>
<td>Net Ionic Equations; Oxidation–Reduction Reactions</td>
<td>4.2; (review)</td>
<td>L8: Chemical Interactions, Chapter 8</td>
<td>Week 8 HW: 27-Mar, 11:59 pm Week 9 HW: 27-Mar, 11:59 pm</td>
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<td>26 –Mar</td>
<td>Quantitative measurements: Titration &amp; Spectroscopy</td>
<td>4.4; pp. 136–142</td>
<td>Online (Connect) homework, Week 11</td>
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<td>02 –Apr</td>
<td>Workshop II: Converting Reactants to Products (Chapter 4 review)</td>
<td>Lab Manual, pp. 133–135 98–102</td>
<td>Buret Badge Exercise</td>
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<td>(Mole Highway II handout; Worksheet II)</td>
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<td>Online (Connect) homework, Week 12</td>
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<tr>
<td>13</td>
<td>07 –Apr</td>
<td>Energy Changes in Reactions</td>
<td>6.1; pp. 231–234</td>
<td><strong>L10:</strong> How Hard is “Hard” Water? Chapter 10&lt;br&gt;Online (Connect) homework, Week 13</td>
<td>Exam III (Wk. 9, 11, 12): Wed. 8-Apr, 8–9 pm (hard deadline for HW 12 delayed)</td>
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<td>09 –Apr</td>
<td>Review for Exam III</td>
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<td>14</td>
<td>14 –Apr</td>
<td>Reaction Stoichiometry and Energy Practice</td>
<td>6.4; pp. 242–244 &lt;br&gt;6.5; pp. 246–247</td>
<td><strong>L11:</strong> Analysis of Wine Chapter 11&lt;br&gt;Online (Connect) homework, Week 14</td>
<td>Week 12 HW: 17-Apr, 11:59 pm&lt;br&gt;Week 13 HW: 17-Apr, 11:59 pm</td>
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<td>16 –Apr</td>
<td>Specific Heat &amp; Calorimetry</td>
<td>6.5; pp. 249–252</td>
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<td>15</td>
<td>21 –Apr</td>
<td>Limiting Reactants</td>
<td>3.9; pp. 102–106</td>
<td><strong>L12:</strong> Chemical Reactions and Heat Changes, Chapter 12&lt;br&gt;Online (Connect) homework, Week 15</td>
<td>Week 14 HW: 24-Apr, 11:59 pm</td>
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<td>23 –Apr</td>
<td>Percent Yield</td>
<td>3.10; pp. 106–109</td>
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<td>16</td>
<td>28 –Apr</td>
<td>Final Review</td>
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<td><strong>Check out of lab drawers by Apr. 29</strong>&lt;br&gt;(Safety goggles and proper lab clothes still required!)</td>
<td>Week 15 HW: 01-May, 11:59 pm</td>
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<td>30 –Apr</td>
<td>Final Review</td>
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<td>17</td>
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<td><strong>Finals Week: May 4 – May 9</strong></td>
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<td>Final Exam: Time and Place TBA</td>
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