CHM 11600 Course Packet Spring 2016

CHM 11600A:
Dr. John Nash; BRWN 4103C; 765-494-0175; jnash@purdue.edu
Lecture: M/W 10:30 and 11:30 AM, WTHR 200
PARTÉ (PSO): F 10:30 and 11:30 AM, WTHR 200

CHM 11600B:
Dr. Mathew Tantama; WTHR 331B, 765-494-5312, mtantama@purdue.edu (1st 8 weeks)
and
Dr. Yu Xia; BRWN 3131C; 765-494-1142; yxia@purdue.edu (2nd 8 weeks)
Lecture: M/W 2:30 and 3:30 PM, WTHR 200
PARTÉ (PSO): F 2:30 and 3:30 PM, WTHR 200

Course Coordinator: Marybeth Miller, BRWN 1144, phone: 765-494-5251; mille201@purdue.edu.
Mrs. Miller supervises the lab teaching assistants and maintains all of the grade records for the course. She can address concerns or questions you may have about 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. Course Coordinator Mrs. Miller and assistants Mrs. Linn and Mrs. Reynolds are able to help you with a variety of requests so you can maximize your success in general chemistry.

In CHM 11600, General Chemistry II, the following topics will be covered:

- Kinetics and the quantitative application of kinetics concepts to understand the factors that control rates of reaction
- Equilibria in chemical reactions, including gas phase reactions, acid-base reactions, heterogeneous reactions, and reactions in solution and the application of quantitative equilibrium concepts to selected chemical reactions
- Chemical thermodynamics and the quantitative application of chemical thermodynamics to understand the role of energy transfer in chemical changes
- Electrochemical cells and evaluation of the potentials and energy changes associated with reactions in these cells
- The relationships between thermodynamics, electrochemistry, and equilibrium.

Course Information: Blackboard  http://www.itap.purdue.edu/tlt/blackboard
Assignments, announcements and other course information are available on the course Blackboard page. We recommended you visit it often.

Foundational Core: This course meets the science requirement of Purdue University’s foundational core curriculum. Course Learning Objectives will be provided in lecture and on Blackboard.
Required Course Materials

Textbook and Online Homework: In CHM 11600, you are required to complete homework assignments online using the McGraw-Hill Connect Plus program. If you took CHM 11500 in Fall 2015, your Connect Plus access is still valid, so you do not need to purchase access again. If you do not already have Connect Plus access, you need to purchase it through the course Blackboard site for $110. Instructions are posted in the Connect HW folder on the course Blackboard page.

Connect Plus includes an electronic version (ebook) of the textbook, *The Molecular Nature of Matter and Change*, Silberberg, 7th Edition. It is recommended that you also purchase a loose-leaf version of the textbook ($10 plus $2-3 shipping) from the Connect site. (See Blackboard for instructions.) Connect Plus access codes and/or code/loose-leaf textbook bundles may also be purchased in the bookstores (but the cost will likely be higher than the online cost through Blackboard).


Calculator: A simple battery operated scientific calculator with exponential, logarithm and square root functions is needed for exams. You are NOT allowed to use alpha-numeric, graphing and/or programmable calculators for exams. (Two-line non-programmable calculators are allowed.) Solar calculators do not function well in some areas of the Hall of Music. Approved calculators are available for purchase outside WTHR 200 during the first 2 weeks of class.

Lab materials: A padlock for your assigned lab drawer (by the end of week 4 – Feb. 5) 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).
- Register for your CONNECT account and begin your first assignment.
- Attend lab check-in.
- Attend recitation and lecture.
- Read all the information in this course packet.
- Review the Reading Assignments and Learning Objectives (on Blackboard).
- Complete the safety certification on the course Blackboard page with a score of at least 20/25 by 11:59 PM on Wed. Jan. 27. You must complete your safety certification before you can work in lab and receive credit for the lab.

Weekly Assignments:
- Attend lecture, recitation, lab and PARTÉ (PSO).
- Do the reading assignment for lecture.
- Complete your Connect homework assignment (due each Monday at 9:59 PM).
- Complete the concept problems (posted on Blackboard) in preparation for the recitation quiz.
- Prepare for lab: read the relevant lab manual chapter, do the textbook reading assignment for lab, and complete the pre-lab assignment in preparation for the lab quiz.

Late Registration If you register late, notify the Course Coordinator, Mrs. Miller (mille201@purdue.edu), no later than Fri., Feb. 5 to see about the possibility of making up missed assignments.
Overview of CHM 11600 Activities and Policies

How to Study for CHM 11600  (written by Dr. John Nash and Dr. Marcy Towns)
It will take you at least two hours out of class for every hour we spend in class in order to study and learn the material. This means about 8-12 hours of distraction-free studying and working with chemistry each week. You may spend this time working on your lecture notes, reading the text, studying the required material, doing homework, studying for exams, or other things. You may find yourself spending more than 8-12 hours per week if your math skills need improvement or if it has been a few years since you took a chemistry course. If you are committed to your goals and dreams, then dedicate yourself to spending the necessary time to study and do well.

Before Class
- Complete the assigned reading (given in lecture) and review your notes from the previous class.

During Class
- Take notes!
- Write down each step of every problem or example even if you do not understand the step. You can always ask about it later.
- Try to answer all the questions that the professor presents.
- Write a question mark next to things you don’t understand so you can return to them after class.
- Use shorthand or abbreviations so that you can write quickly, but understandably.

After Class
- Review your notes while things are still fresh in your mind.
- Check your text in order to understand those items that you did not understand and marked in lecture. If necessary, use graduate instructor (TA) office hours to help you.
- Never miss lecture. Chemistry is cumulative. What is presented tomorrow depends upon your knowledge of what was covered today. If you will miss class, then get a friend to take notes for you or get the notes from the Boilercast recording.
- Listen to the Boilercast lecture recordings on Blackboard to fill in things you missed.

Read Differently
- Read technical material (like your Chemistry textbook) differently than you would read a novel. Read in short "chunks" and give yourself time to reflect and interpret the information presented. With technical material, it is often difficult to pick up the "story" in the second paragraph if you did not process the first paragraph.

- Try the problems in the book without looking at the solutions! If you have understood what you’ve read, then you should be able to do the problems. First, cover the solution and try the problem. Second, quickly look at the answer to see if you are correct. If your answer is incorrect, try re-reading the section to see if you missed anything. Third, look at your work again to find your mistake. Fourth, look at the solution of the problem presented in the book. The key is to force yourself to recall and apply material.

- Read technical material in a "distraction free" environment. Processing technical information will be more effective in the absence of TVs, radios, headsets, etc. Turn your phone off!

- Read and interpret subheadings. With technical material, the subheadings often carry important information. This is different from the chapter headings in a novel which usually contain no information.
• Use the textbook as a reference when you study your lecture notes. Fill in any gaps and correct any information.

When Should I do the Homework?
• Do some work in chemistry every day. Work at least two chemistry problems each day. If you are drawing a blank about the problem after 5-10 minutes, go on to another a problem. Seek help from a graduate instructor (TA) the next day during office hours. After a day or so, work related problems in the textbook.

• Read the assigned pages in the textbook before you attempt any of your homework problems.

Practice, Practice, Practice
• Work additional problems at the end of each chapter which were not assigned as homework.

• Look for similarities and differences in problems (homework questions, lecture examples). Classify problems by the type of knowledge that is needed to solve the problem.

Sources of Help
There are several free sources of help for CHM 11600 students, including professor office hours, TA office hours (WTHR 116 C), Supplemental Instruction (SI, www.purdue.edu/SI), PARTÉ sessions (see below), and the Chemistry Resource Room (WTHR 117 B). Find more information in the “Resources” folder on Blackboard.

Reading
Refer the lecture schedule on pp. 15-16 and/or your lecture notes 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. Learning objectives (LO) will be posted on Blackboard.

Lectures
• Student versions of lecture slides may be posted on Blackboard. These are outlines of the lectures and are not a substitute for taking notes in lecture.

• Recordings of lectures may be downloaded from the Boilercast link on Blackboard.

• Cell phones, computers, iPods or other electronic devices not being used for instructional 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, texting, 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.
PSO (Optional Friday PARTÉ sessions)
During Preparation And Readiness to Take Exams (PARTÉ) sessions you can work exam-type questions with other students and get help from TAs.

- PARTÉ will be held on Fridays in WTHR 200 at 10:30 AM, 11:30 AM, 2:30 PM and 3:30 PM.

- PARTÉ is a time to work problems with your classmate and get help from the TAs. As such, you are expected to stay for all or most of the class period (50 minutes). You are not allowed to obtain the PARTÉ packet and leave immediately.

- Answers will be provided only after you have attempted or completed all of the problems. If you don’t have time to check your answers during the session, you may consult with the TAs during office hours.

- Two PARTÉ packets will be provided each week: PARTÉ I at 10:30 AM and 2:30 PM and PARTÉ II at 11:30 AM and 3:30 PM. To obtain both packets, you must obtain both sessions. If you are unable to attend both sessions, you can connect with a classmate to share the packets.

- PARTÉ sessions are not a time to get help with homework or prelab questions; TA office hours are available for this purpose.

Homework (Connect)
- Each week you will have one homework assignment on the online Connect system (see Blackboard for the link). Homework will usually be due on Monday at 9:59 pm, 10 days after it is assigned. Due dates will be listed on Blackboard.

- You have 2 assignment submission attempts for each Connect homework. Each assignment attempt contains 3 question attempts. You must submit your first assignment attempt to access your second assignment attempt. Your score is the best of the 2 assignment submissions.

- Each Connect homework assignment is worth 10 points. The one lowest homework score will be dropped at the end of the semester to account for illnesses, trips, technical difficulties and other situations.

- No time extensions are possible for Connect homework assignments. Allow plenty of time to do your homework and get the highest possible score.

- Exams are likely to include questions taken from homework assignments.

- For technical difficulties with the Connect system, call 1-800-331-5094 or use the online form: http://mpss.mhhe.com/contact.php.

Recitation and Concept Problems
- Each week a number of concept problems will be assigned and posted on the CHM 11600 Blackboard site (on Fridays, unless otherwise stated). Plan to bring these problems to lecture and work on them during the next week. Resources to aid you in completing the problems TA office hours, professor office hours and group work with fellow students.

- There will be a 10-minute quiz over one of the concept problems at the beginning of each recitation class. Each recitation quiz is worth 5 points. The lowest recitation quiz score will be
dropped at the end of the semester. There are no make-up quizzes.

- If you are late for recitation, you will not receive extra time to complete the quiz.

- You need to bring a simple, battery-operated scientific calculator and a non-erasable ink pen with you to each recitation quiz. There will be no “spare” calculators available during quizzes and you may not share a calculator with another student. Cell phones and programmable (graphing) or alphanumeric calculators may not be used during quizzes.

- After the recitation quiz, there will be time for the class to discuss the solutions to the concept problems.

- The remainder of the recitation period will be devoted to answering your questions about prelab and homework assignments, and preparing for lab.

- Quizzes must be written in non-erasable ink to be eligible for a regrade. A written request for a regrade, which provides an explanation that the grader can follow, must be submitted to the Course Coordinator, Mrs. Miller, within one week of the graded quiz being returned to you.

### Laboratory

Laboratory exercises are an integral part of CHM 11600 and are an opportunity for you to experience in a hands-on way the chemical concepts discussed in lecture.

#### Laboratory Attendance

- Lab attendance is required since CHM 11600 is a laboratory course. There are no make-up labs or excused absences, except those covered by the GAPS or MAPS policies (see p. 12).

- You are required to complete 10 of the 12 scheduled lab projects to pass the course. If you fail to complete or miss more than 2 lab projects, 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/MAPS approved absences)
  - being dismissed from lab for an incomplete Safety Certification (score <20/25)
  - being dismissed from lab for safety violations, including 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

- You must complete the online safety certification found on Blackboard with a score of 20/25 or better by 11:59 PM on Wed. Jan. 27. You must confirm your score in the Blackboard grade center. You will receive a zero for each lab you miss due to an incomplete safety certification.

#### Lab Preparation

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

- Prelab practice questions will be posted on Blackboard each week. These exercises are designed to help you prepare for the lab and the prelab quiz. The practice problems will not be collected or graded.

- 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 for that week’s lab and the pre-lab quiz.

**Lab Quizzes**

At the beginning of each laboratory period there will be a quiz based on the lab procedure and the prelab practice questions. The purpose of these quizzes is to ensure your preparation for and safety in lab. Lab quizzes do *not* count towards the total points in the course, but rather failure of a lab quiz results in a lab score penalty (see below).

- A score *less than* 3/5 on a lab quiz is considered a failing grade. The first time you fail a lab quiz, you will receive a verbal warning from your laboratory instructor (TA), but your lab grade will not be penalized. For every subsequent quiz you fail during the semester, a penalty will be applied to the corresponding lab grade as follows: 2/5 on quiz = 75% credit on lab, 1/5 on quiz = 50% credit on lab, 0/5 on quiz = 25% credit on lab.

- If you are 1-10 minutes late for lab, you will not receive extra time to complete the quiz. If you arrive more than 10 minutes late, you will not be allowed to complete the quiz or the lab.

- You need to bring a simple, battery-operated scientific calculator and a non-erasable ink pen with you to each lab quiz. There will be no “spare” calculators available during quizzes and you may not share a calculator with another student. Cell phones and programmable (graphing) or alphanumeric calculators may not be used during quizzes.

- Quizzes must be written in non-erasable ink to be eligible for a regrade. A *written* request for a regrade, which provides an explanation that the grader can follow, must be submitted to the Course Coordinator, Mrs. Miller, *within one week* of the graded quiz being returned.

**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.

- Dress appropriately (see p. 8).
- 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.

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 and ankle, with or without socks

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

► **Your best option for chemistry lab attire is a crew neck t-shirt, jeans without holes, and sneakers with socks.**
**Lab Reports**

- Complete the lab report appropriately:
  - Use pen and write neatly.
  - Label graphs and tables.
  - Use the data *your team 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.

- Endeavor to work as an effective member of a team. Upon completion of each lab project, you will be required to complete a Peer and Self Evaluation form. Your TA will use your completed evaluation as well as those completed by your lab partner(s) to calculate a scaled score for the lab project. If you come to lab unprepared, don’t carry your fair share of the load and/or don’t do what you are supposed to do, you will receive a lower score for the lab project.

- The grading of some labs will be heavily weighted on the accuracy of your results. Communication of details will follow during the semester.

- Lab reports are due before leaving lab the day lab work is completed and the lab is closed, that is 10:20 AM, 2:20 PM or 5:40 PM. Lab reports submitted after the lab period ends, up to 24 hours late, are worth 50%. Lab reports submitted after 24 hours are worth no (zero) credit.

- Graded lab reports will be returned by your lab instructor one week after they are submitted. It is suggested that all lab partners review the graded report, as exams will likely include lab-related questions. If you have questions about a lab report grade, speak with your lab instructor (TA) or the Course Coordinator (Mrs. Miller) **within one week** of the report being returned to you. Your report must be completed in pen to be eligible for a regrade.

**Exams**

Exams are a chance for you to demonstrate your comprehension of the course material and are worth approximately 50% of your final grade. Your lowest exam score or ½ your final exam score will be dropped at the end of the semester.

**Spring 2016 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>Tues. Feb. 9</td>
<td>8:00 – 9:00 PM</td>
<td>Elliott Hall of Music</td>
</tr>
<tr>
<td>Exam II:</td>
<td>Tues. Mar. 8</td>
<td>6:30 – 7:30 PM</td>
<td>Elliott Hall of Music</td>
</tr>
<tr>
<td>Exam III:</td>
<td>Tues. Apr. 5</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/MAPS policies (see p. 12). 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 no score (zero points) 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. 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.

- Hour exams are one hour in length. You should arrive at least 15 minutes before the exam start time. If you arrive more than 15 minutes after the exam start time, you will not be allowed
to take the exam.

- Exams are given in the Elliott Hall of Music. Before Exam I, you will receive an exam seat assignment (level, aisle, row, and seat) for the entire semester. Take your PU ID, your seat assignment, an appropriate (non-graphing) calculator (see details on p. 2), and #2 lead pencils with you to the exam. You may not share a calculator with another student.

**Final Exam**
- Details about the final exam, including content, date, time and location, 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 2016**
Each of the assigned course activities for CHM 11600 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:
- Lowest homework score
- Lowest lab score, provided you have completed at least 10/12 labs (the 15-point exercise in Week 2 cannot be dropped)
- Lowest recitation quiz score
- Lowest exam score or ½ your final exam score, whichever is lower

The total number of points for CHM 11600 will be distributed as follows:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams I - III</td>
<td>360 pts.</td>
<td>(3 at 120 pts. each)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>240 pts.</td>
<td>(comprehensive)</td>
</tr>
<tr>
<td>Homework</td>
<td>140 pts.</td>
<td>(best 14 of 15 at 10 pts. each)</td>
</tr>
<tr>
<td>Quizzes</td>
<td>55 pts.</td>
<td>(best 11 of 12 at 5 pts. each)</td>
</tr>
<tr>
<td>Labs</td>
<td>265 pts.</td>
<td>(best 10 of 11 (Labs 2-12) at 25 pts. each + Lab 1 (15 pts)</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>1060 pts.</strong></td>
<td></td>
</tr>
<tr>
<td>Drop</td>
<td>-120 pts.</td>
<td>drop lowest exam or ½ final exam score, whichever is lower</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>940 pts.</strong></td>
<td></td>
</tr>
</tbody>
</table>

If you miss more than 2 labs during Weeks 2-15 (Labs 1-12) your course grade will automatically be an F. Except for approved GAPS or MAPS leaves, there are NO EXCUSED ABSENCES in CHM 11600.
The point total available for exams is 480 (4 x 120). 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 1-3 (T1, T2, and T3) and the lowest of these 5 scores will be dropped (i.e. not counted into your total points).

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 10 of the 12 lab projects

At various times during the semester, this approach will be used to create tentative grading scales which you can use to see how well you are doing in the course. 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, Mrs. Miller, 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 11600. To resolve any discrepancies, your paper(s) will need to be reviewed.
UNIVERSITY AND COURSE POLICIES

Absences
- Verified grief and military absences are the only excused absences in CHM 11600. 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, quiz, exam) is dropped at the end of the semester to account for absences due to illnesses, trips, conflicts or other situations. If you have concerns about how an absence will affect your course grade, contact your instructor or Course Coordinator Mrs. Miller 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 excuse you or change in any way the outcome of the instructor’s decision regarding your academic work and performance in CHM 11600.

- 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 (Mrs. Miller) 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 (Mrs. Miller) 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-brochure/).

  “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 11600 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/Changing Sections**

<table>
<thead>
<tr>
<th>DATE</th>
<th>DEADLINES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mon. Jan. 18:</strong></td>
<td>- last day to add CHM 11600 or switch lab sections <em>without</em> instructor’s signature</td>
</tr>
</tbody>
</table>
| **Fri. Jan. 29:** | - last day to switch lab sections *with* instructor approval*;  
- last day to add CHM 11600 with instructor approval* if not already enrolled in another CHM course |
| **Fri. Feb. 5:** | - last day to switch from *another CHM course* to CHM 11600 with instructor approval* |

*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. 5** to see about the possibility of making up missed assignments.

**UNIVERSITY DROP DEADLINES – Spring 2016**

<table>
<thead>
<tr>
<th>DATE</th>
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<tbody>
<tr>
<td><strong>Mon. Jan. 25:</strong></td>
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<tr>
<td><strong>Fri. Mar. 11:</strong></td>
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**Course Drop and Lab Drawer Check-Out** If you drop CHM 11600 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](http://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 11600 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>Date</th>
<th>Lecture</th>
<th>Lecture Topic</th>
<th>Textbook Chapter/Section</th>
<th>Week</th>
<th>Lab (Lab Manual Chapter)</th>
<th>Lab Reading Assignment</th>
<th>Exams</th>
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<tbody>
<tr>
<td>1</td>
<td>11-Jan</td>
<td>1</td>
<td>Introduction to CHM 11600</td>
<td>Course Packet</td>
<td>1</td>
<td>Baseline Knowledge Assessment</td>
<td>doesn't count toward course grade</td>
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<td></td>
<td>13-Jan</td>
<td>2</td>
<td>Concentration Expressions, Kinetics</td>
<td>4.1, 4.4, 13.5, 16.1</td>
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<td>Check-in; Cooperative Work Agreement</td>
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<td>2</td>
<td>18-Jan</td>
<td></td>
<td>NO CLASSES (MLK Day)</td>
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<td>2</td>
<td>Lab 1: Observing, Recording and Communicating Experimental Information</td>
<td>- 15 pts (cannot be dropped)</td>
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<td></td>
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<td>3</td>
<td>Kinetics</td>
<td>CH 16</td>
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<tr>
<td></td>
<td>20-Jan</td>
<td></td>
<td>&quot;How to Study for CHM 11600&quot;</td>
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<td></td>
<td>22-Jan</td>
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<td>(in WTHR 200 at normal lecture time)</td>
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<td>25-Jan</td>
<td>4</td>
<td>Kinetics</td>
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<td>Lab 2: A Chemical Oscillation Reaction - 25 pts (CH 1; review Appendix B &amp; C)</td>
<td>textbook 4.1, 13.5</td>
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<td>CH 16</td>
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<td></td>
<td>29-Jan</td>
<td></td>
<td>First PARTÉ session (every Friday</td>
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<td><em><strong>Safety Certification (due Jan. 27 at 11:59 PM) must be completed (min. 20/25) before working in lab</strong></em></td>
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<td>4</td>
<td>1-Feb</td>
<td>6</td>
<td>Kinetics</td>
<td>CH 16</td>
<td>4</td>
<td>Lab 3: Chemical Kinetics, Part I (Rate Law) - 25 pts (CH 2; review Appendix A &amp; D)</td>
<td>textbook CH 16</td>
<td>Exam I Tues Feb 9 8:00 PM</td>
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<td>3-Feb</td>
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<td>Equilibrium</td>
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<td>8-Feb</td>
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<td>Equilibrium</td>
<td>CH 17</td>
<td>5</td>
<td>Lab 4: Chemical Kinetics, Part II (Activation Energy) - 25 pts (CH 2; review Appendix A &amp; D)</td>
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<td>15-Feb</td>
<td>10</td>
<td>Acids and Bases</td>
<td>CH 4, 18</td>
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<td>Lab 5: Bromocresol Green Equilibrium Systems - 25 pts (CH 3; review Appendix C &amp; D)</td>
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<td>17-Feb</td>
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<td>Acids and Bases</td>
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<td>Lab 6: Iron(III) Thiocyanate Equilibrium System - 25 pts (CH 4; review Appendix A &amp; D)</td>
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<td>24-Feb</td>
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<td>29-Feb</td>
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<td>CH 18</td>
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<td>7-Mar</td>
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<td>Acid-Base Buffers</td>
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<td>Lab 7</td>
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<td>17</td>
<td>Acid-Base Titrations</td>
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<td><strong>SPRING BREAK (Mar. 14-19)</strong></td>
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<td>Acid-Base Equilibria (Part II) - 25 pts</td>
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<td>Spontaneity and Entropy</td>
<td>Sect. 20.1</td>
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<td>Lab 10</td>
<td>Thermodynamics and Equilibrium - 25 pts</td>
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<td>Entropy Changes</td>
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<td>18-Apr</td>
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<td>Electrochemical Cells</td>
<td>Sect. 21.1, 21.2</td>
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<td>Lab 12</td>
<td>A Metal Ion Sensor - 25 pts</td>
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<td>20-Apr</td>
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<td>Electrode Potentials</td>
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<td>25-Apr</td>
<td>28</td>
<td>Electrochemistry and Thermodynamics</td>
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<td>Electrolysis</td>
<td>Sect. 21.7</td>
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**Final Exam Week: May 2-7**

Do NOT make travel plans until you know the date of the final exam.