Week 1 8/22–8/26 0 Chemical Tools: Experimentation and Measurement
1 The Structure and Stability of Atoms
2 8/29–9/2
3 9/5
9/7–9/9 1 The Structure and Stability of Atoms
2 Periodicity and the Electronic Structure of Atoms
4 9/12–9/16
5 9/19
9/21–9/23 3 Exam 1 covering Chapters 0–2
6 9/26–9/30
7 10/3–10/7
8 10/10–10/14
9 10/17
10/19–10/21 5 Exam 2 covering Chapters 0–5 with emphasis on Chapters 3–4
6 10/24–10/28
7 10/31–11/4
8 11/7–11/11
9 11/21
11/23–11/25
10 11/28–12/2
11 Monday, 12/5, 2:00–3:50 PM
12 Exam 4 covering Chapters 1–9 with emphasis on Chapters 7–9
13 Comprehensive Final Exam covering Chapters 1–9
15 Also available in Faraday Library are many old chemistry texts. These might explain a topic more clearly or provide extra end-of-chapter problems that will help you study for the class. Ask the library staff for help finding them.
INFORMATION AND POLICIES

This syllabus is a contract between us. I promise that the exams will be given on the days stated, and that homework assignment time slots will be announced. In return, you promise to read the syllabus before asking questions about class procedure. I reserve the right to deduct 5 points from your overall total in the class every time you ask a question answered on this syllabus.

General Education Course Objectives
– Improve ability to think critically and logically.
– Improve ability to reason quantitatively, to interpret mathematical models, and to perform basic chemical computations.
– Learn how to use the scientific method and theories to understand chemical phenomena.
– Develop an appreciation for the importance of the role of chemistry in everyday life.
– Develop an understanding of the historical development of the field of chemistry.

Content Objectives of Chem 210
– Understand the concepts of matter and energy and the specifics of SI units of measurement.
– Understand atoms and ions and their subatomic components.
– Learn chemical nomenclature, chemical reaction formalisms, and the fundamentals of stoichiometry calculations.
– Develop the ability to predict outcomes of chemical reactions from knowledge of reactants and reaction types.
– Understand the chemical basis for the physical behavior of gases, liquids, and solids.
– Learn the electronic structures of atoms and ions, and understand their relationship to periodic properties and chemical reactivity.
– Correctly predict the shapes of complex molecules and ions, and how they arise from theories of chemical bonding.

Homework, Exams and Grades: There will be three examinations given during the lecture times within the semester (100 points each, see schedule for dates). A fourth examination (100 points) and a comprehensive Final examination (100 points) will be given during the Final Examination period. The exams will consist of 25 multiple–choice questions, and will be scored by Scantron. To minimize tardiness and the potential for cheating, once any student turns in their Scantron and leaves the examination room, no students will be allowed to enter the examination room to begin the exam. Requests for scoring checks must be made within one week from the day the scores are posted on Blackboard.

The lowest score of the four regular exams will be dropped. This allows you to miss an exam if absolutely necessary, and minimizes the effect of one poor score on the overall grade. Because of this policy, there will be no makeup exams. If you miss an exam without a documented excuse, you earn a score of zero for that exam. If you miss the comprehensive Final Exam without a documented excuse, you will receive a grade of F for the course, regardless of your performance on the previous exams. The professor will deal with issues affecting your ability to attend exams (such as medical problems or athletic events) on a case-by-case basis. His decision is final.

In addition, you must study online using the Mastering Chemistry system accessed from BlackBoard. The Mastering Chemistry homework is worth 100 points. You will also take online and in-recitation quizzes, which will contribute 70 points to your recitation score (see below).

Your overall final class grade will be determined as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best Three Scores of the Four Regular Exams</td>
<td>300</td>
</tr>
<tr>
<td>Online Homework from Mastering Chemistry</td>
<td>100</td>
</tr>
<tr>
<td>Recitation Score</td>
<td>100</td>
</tr>
<tr>
<td>Comprehensive Final Exam</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>600</td>
</tr>
</tbody>
</table>

The grading scale will be 90% (540 points)+ = A, 80–89.9% (480–539 points) = B, 70–79.9% (420–479 points) = C, 60–69.9% (360–419 points) = D, <59.9% (359 points) = F. This scale may be revised downward. There will not be a curve.

Study Resources
CHEM 210 is a challenging course. There are many resources available to help you succeed – it is your responsibility to take advantage of them. Success will require diligent study habits, paying attention to announcements, and attendance at all scheduled lectures and labs. As a general rule of thumb, you should be studying outside of the classroom for at minimum 3 hours per week per credit hour, so 9 hours per week.

Text: J. E. McMurry and R. C. Fay, "General Chemistry: Atoms First" 2nd Edition, Pearson, 2014. You must purchase a license code for Pearson's Mastering Chemistry on-line assignments. Having a Mastering license gives you access to the text as an ebook. Consequently, you are not required to purchase the hardbound copy of the textbook. An access code for Mastering is bundled with the textbook, is available separately from the NIU Bookstore, or may be purchased on-line the first time that you open an assignment on Blackboard.
Blackboard: Relevant class documents, such as this syllabus, and exam scores will be posted on Blackboard. In addition, Mastering Chemistry will be available as part of the Pearson system implemented with BlackBoar. Thus, you should make certain you know how to access BlackBoard.

Office Hours: I will hold office hours on Mondays and Wednesdays, from 3:00–3:35 PM (right after lecture). You are welcome to come to LaTourette (Faraday West) 309 without an appointment for class assistance during these times. If you can't make it then, you may make an appointment for another time. However, since I have other responsibilities, appointments will be limited. You can contact me by e–mail to ask short, concise questions or for appointments. However, be aware I check my e–mail sporadically, so the turnaround time will probably not be instantaneous.

Homework: There will be multiple Mastering Chemistry assignments offered at appropriate times throughout the semester. The professor will announce on BlackBoard and/or in lecture when the assignments are available, and what the availability period will be. More than 100 homework points will be available; therefore, each student's lowest homework assignment scores will be dropped such that they earn the maximum points possible out of 100. Because students will have an excess of homework points available, and will have at least a week to complete each homework assignment, there will be no makeup homework assignments.

There are no other homework assignments. However, solving all of the problems at the end of each chapter in the text, with a time limit, is good practice for the exams.

Recitation: Each of you must attend the recitation section assigned when you registered for the course (see schedule below). Recitation will involve problem–solving and discussion of course material. The recitation score (100 points) will be based on attendance (2 points for each of 15 class meetings = 30 points) and on online and in-recitation quizzes (70 points). As with homework, more than 70 quiz points will be available; therefore, each student's lowest quiz scores will be dropped such that they earn the maximum points possible out of 70. Because students will have an excess of quiz points available, there will be no makeup quizzes.

The Recitation TA is Ashley Trownsell. Her office is LaTourette (Faraday West) 310. She will inform you of her office hours and other aspects of recitation. You should take advantage of her office hours and appointment opportunities.

Weekly Recitation Schedule

<table>
<thead>
<tr>
<th>Section</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>R0009</td>
<td>Wednesday 11:00–11:50 AM</td>
<td>Faraday 205</td>
</tr>
<tr>
<td>R0011</td>
<td>Wednesday 4:00–4:50 PM</td>
<td>Faraday 205</td>
</tr>
<tr>
<td>R0012</td>
<td>Wednesday 5:00–5:50 PM</td>
<td>Faraday 205</td>
</tr>
<tr>
<td>R0013</td>
<td>Wednesday 3:00–3:50 PM</td>
<td>Faraday 205</td>
</tr>
</tbody>
</table>

Free tutoring and resources: The Department of Chemistry & Biochemistry maintains Faraday Hall 247 as a free tutoring room for the benefit of General Chemistry students. It is staffed irregularly (approximately 8:30 AM –3:30 PM Monday through Friday); look for the schedule sheets posted around the Faraday complex and near the tutoring room.

The Department of Chemistry & Biochemistry has a satellite library in Faraday Hall, Room 212. A number of old chemistry texts are available there. These older texts might explain a topic more clearly or provide extra end–of–chapter problems that will help you study for the class. Ask the library staff for help finding them.

You may ask your laboratory TA for assistance in understanding the lecture material. However, you should understand that lab TAs have other responsibilities, and may not accommodate requests instantly or at all.

In addition to the resources described above, the following university resources may benefit you:
– NIU Office of Student Academic Success: http://www.niu.edu/osas/index.shtml
– NIU Tutoring Centers: http://www.niu.edu/access/tutoringcenters/
– One-on-one tutoring: http://www.niu.edu/access/pal/

Supplemental Instruction (SI): The NIU ACCESS program provides further assistance with course material through its Supplemental Instruction (SI) system. If an SI person is available for this section, she/he will offer office hours and help sessions at convenient times, as well as other class assistance at their discretion. Further information on this will be provided if and when available.

Tutoring and resources that aren’t free: Names of tutors who charge for their services are available from Linda Davis in Faraday 319 (the Chemistry Department Office).
NIU Policies

Academic Integrity and Dishonesty

Good academic work must be based on honesty. The attempt of any student to present as his or her own work that which he or she has not produced is regarded by the faculty and administration as a serious offense. Academic dishonesty includes, but is not limited to, looking at or copying work from another student's exam during a testing session, allowing another student to copy work, turning in a paper or an assignment written, in whole or in part, by someone else, and using unauthorized materials (e.g., lecture notes, crib sheets, textbooks, prohibited electronic devices including pagers, cell phones, or programmable calculators containing stored equations, formulas, or text) during exams. Students are responsible for plagiarism, intentional or not, if they copy material from books, magazines, or other sources without identifying and acknowledging those sources, or if they paraphrase ideas from such sources without acknowledging them. CHEATING IN ANY FORM WILL NOT BE TOLERATED. Violation of any of these terms will result, at minimum, in awarding a score of zero for the assignment in question. Students responsible for, or assisting others in, either cheating or plagiarism on an assignment, quiz, or examination may receive a grade of F for the course involved and may be suspended or dismissed from the university.

A faculty member has original jurisdiction over any instances of academic misconduct that occur in a course the faculty member is teaching. The student shall be given the opportunity to resolve the matter in meetings with the faculty member and the department chair. If the student does not dispute the facts of the incident, the faculty member may elect to resolve the matter at that level by levying a sanction no greater than an F for that course. The faculty member shall notify the student in writing whenever such action is taken, and the Office of Community Standards and Student Conduct shall receive a copy of the Academic Misconduct Incident Report indicating final disposition of the case, which will be placed in the student's judicial file. In all matters where the charge of academic misconduct is disputed by the student, or if the faculty member feels a sanction greater than an F in the course is appropriate (such as repeated offenses or flagrant violations), the faculty member shall refer the matter to the Office of Community Standards and Student Conduct, making use of the Academic Misconduct Incident Report. Additional sanctions greater than an F in a course can be levied only through the University Judicial System. With regards to finding the student either responsible or not responsible for his or her action, the ruling of the Judicial Hearing Board shall be binding. In cases where there is either a finding of responsibility or an admission of responsibility by the student, any recommendations by the hearing board regarding the course grade are non-binding on the instructor, who remains solely responsible for assigning a course grade, consistent with the policies set forth in the course syllabus.

Attendance

The university does not use a "cut" system. Each instructor decides whether to excuse class absences and determines how to permit make-up work. If a student will be absent from classes for a week or more because of an accident, illness, or other emergency, instructors will be notified of the absence only if students or their parents request it through the Division of Student Affairs. Health Services will not release information about students unless they provide a written request.

Leaves of absence will be granted for volunteer services related to disaster relief in accordance with applicable Illinois statutes or executive orders issued by the State of Illinois in response to emergency situations. To initiate a leave of absence, students should contact their College Dean's office, or the vice provost (or the vice provost's delegate) for any student who has no college affiliation. Following the period of volunteer service, Registration and Records will facilitate reenrollment of the student.

Students are expected to comply with each individual instructor's established attendance policy. Students should avoid registering for classes in which they would amass significant absences. In the case of an absence due to required attendance at a university-sponsored event such as a department trip, performing arts activity, ROTC function, or athletic competition, reasonable attempts shall be made by faculty members to allow the student to make up missed work. Students are responsible for completing the work assigned and/or due on the days they are absent for university-sponsored events. Both the sponsoring unit and the student should inform the faculty member as soon as possible in the semester in order for arrangements to be made for completing missed assignments, examinations or other required course work. The student is required to provide each instructor with an official notification in advance of the absence (e.g., a letter from the chair of the sponsoring department, the head of the sponsoring unit, or the coach).

Accommodations for Students with Disabilities

NIU abides by Section 504 of the Rehabilitation Act of 1973, which mandates that reasonable accommodations be provided for qualified students with disabilities. A student who believes that reasonable accommodations with respect to course work or other academic requirements may be appropriate in consideration of a disability must (1) provide the required verification of the disability to the Disabilities Resource Center, (2) meet with the DRC to determine appropriate accommodations, and (3) inform the faculty member in charge of the academic activity of the need for accommodation. Students are encouraged to inform faculty of their requests for accommodations as early as possible in the semester, but must make the requests in a timely enough manner for accommodations to be appropriately considered and reviewed by the university. If contacted by the faculty member, the staff of the DRC will provide advice about accommodations that may be indicated in the particular case. Students who make requests for reasonable accommodations are expected to follow the policies and procedures of the DRC in this process.

Students with disabilities can obtain a wide range of services, including housing, transportation, adaptation of printed materials, and advocacy with faculty and staff. Students with disabilities who need such services or want more information should contact the Disabilities Resource Center (4th floor of the University Health Services building) at 815-753-1303.