FALL 2010 STUDENT GUIDE FOR CHEM 1101

Contact Information: Prof. Penny Beuning (006 HT, Ext. 2865, p.beuning@neu.edu)
Lectures: MWTh Time: 4:35-5:40 PM Location: 129 Hurtig
Key/CRN # 10347

REQUIRED MATERIALS:

General, Organic, and Biological Chemistry by Janice Gorzynski Smith, McGraw Hill
“Catalyst” General Chemistry Lab Manual, Pearson Custom Publishing
Turning Technologies Response System Keypad RF, “clicker”

A. INTRODUCTION

This Student Guide contains information about this course in general chemistry and how it will be run during the coming quarter. CHEM1101 is the first of a two quarter sequence of college chemistry courses for students in the health sciences. Success in the course requires an understanding of basic chemical principles and the ability to independently solve problems related to them. The math in these problems is essentially basic algebra. If you are weak in algebra, then you should seek help immediately (see WHERE TO GET HELP on page 5 of this guide). Remember that the best way to improve your math skills is to use them (practice makes perfect), and the best way to use them is to do the practice problems assigned.

It is important that you keep up with the reading and practice problems. That means reading the relevant pages in the text and reviewing the learning goals at the beginning of each chapter before they are covered in lecture. It is important that you read "actively", pausing to think about the material in each section and writing down any question that you may have so that they can be answered in lecture or the discussion session. When you do homework assignments, do not treat them as examinations. Instead, use your textbook in solving them to learn about the concept that is the basis for each problem. You should plan to spend at least two hours outside of class studying and doing homework assignments for every hour of lecture.

B. COURSE STRUCTURE

1. Hour Exams: There will four one-hour exams with no make-ups exams. If you miss an exam due to illness or any other reason, we will use your grade on the final exam to replace one missed exam.

2. Final Exam: There will be a cumulative, comprehensive two-hour final exam covering all topics discussed in the course. The grade on the final exam may also be used in place of an excused absence during an hour exam.
3. **Discussion** (Recitation) Session: The purpose of discussion session is to learn how to solve problems related to the lecture material. Quizzes will be given at all recitation sessions except during the weeks of hour examinations. The difficulty and format of these quizzes will be comparable to exam problems. If you miss a discussion session for a medical or other valid reason, see your lecturer or discussion instructor. It is your responsibility to safeguard all of your exams and returned quizzes for future reference, study and questions related to grading. The recitations for this lecture section are scheduled as follows:

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>CRN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday</td>
<td>11:45</td>
<td>10060</td>
</tr>
<tr>
<td>Tuesday</td>
<td>11:45</td>
<td>10462</td>
</tr>
<tr>
<td>Friday</td>
<td>11:45</td>
<td>15901</td>
</tr>
</tbody>
</table>

4. **Homework:** There will be problem sets or some questions at the end of each chapter that will be assigned. They will be due during recitation. Some homework problems will be discussed in class.

5. **Laboratory:** The laboratory meets for up to three hours every week. The chemical and operational basis for each laboratory experiment will be covered in lecture, and there may be lab-related questions on the hour exams and on the final exam.

6. **Office Hours:** Both your lecturer and discussion instructor will be available to help you in Chem Central during their posted hours.

7. **Withdrawal:** To withdraw from the course, you must have the professor in charge sign the withdrawal form. After the third week (September 28), withdrawing results in a withdrawn (W) grade on your transcript. After the eleventh week (November 19) no withdrawal is allowed. Absence does not guarantee automatic withdrawal. Any student who does not withdraw formally and has an unexcused absence for the final exam will receive an F. Before deciding to withdraw the student should consult with an academic advisor to be informed of the consequences of a withdrawal. A withdrawal from this course will necessitate retaking the laboratory portion of the course (unless all experiments are performed). Grades of W must be converted to passing letter grades before a student may enroll in General Chemistry II (CHEM1104). A withdrawal can be removed only by repeating (and paying a second time for) the entire course. When repeating the course, no grades are carried over from quizzes, exams, etc, which a student may have taken before withdrawing from the course the first time.

8. **Incomplete:** To get an incomplete (I) grade, you must have a passing grade for the work already done. An incomplete will not be given for work missed because of unexcused absences. To have an excused absence, you must have a medical reason documented by the Northeastern Health Service or a doctor, or you must present an acceptable reason in writing to your lecturer instructor. Unless you choose to remove the incomplete by repeating (and paying a second time for) the entire course, only the missing exam, etc, may be made up.
You must also fill out an Incomplete Form (obtained from the Dean's Office) indicating when you will be making up the incomplete and get this form signed by your instructor unless you retake the entire course. Grades of I must be converted to passing letter grades before you may enroll in General Chemistry II (CHEM1104).

9. **Course credit**: 5 credits; three 65-minute lectures per week, one 1-hour discussion per week and one 3-hour laboratory per week.

10. **Clicker questions**: During some lectures you will be asked to answer questions or solve problems related to concepts covered in that lecture using your remote response system (“Clicker”). You will receive zero points for being absent when questions are asked. You will receive $\frac{3}{4}$ of a point for answering each question and another $\frac{1}{4}$ of a point for answering correctly. There will be four allowed absences per semester (four free days when missing the clicker questions will not count against your grade). At the end of the semester, the total points will be normalized to 100 points of the total grade. There is no make-up work for absences.

11. **Grading System**: The numerical breakdown of your grade is as follows:

<table>
<thead>
<tr>
<th>GRADE COMPONENT</th>
<th>POINT VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four one hour exams</td>
<td>100 pts each</td>
</tr>
<tr>
<td>Discussion Session</td>
<td>100 pts</td>
</tr>
<tr>
<td>Clicker Questions</td>
<td>100 pts</td>
</tr>
<tr>
<td>Laboratory</td>
<td>200 pts</td>
</tr>
<tr>
<td>Final Examination</td>
<td>300 pts</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1100 pts</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assignment of Letter Grades</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>990 – 1100 pts</td>
<td>A, A-</td>
</tr>
<tr>
<td>880 – 989 pts</td>
<td>B+, B, B-</td>
</tr>
<tr>
<td>770 – 879 pts</td>
<td>C+, C, C-</td>
</tr>
<tr>
<td>660 – 769 pts</td>
<td>D+, D, D-</td>
</tr>
<tr>
<td>&lt; 660 pts</td>
<td>F</td>
</tr>
</tbody>
</table>
12. **Missed Work:** You are responsible for all announcements and requirements even if you were absent when they were made. If you miss all or part of any class, check with a classmate to find out what you have missed. You are responsible for checking exam dates and homework assignments listed on Blackboard.

13. **Registration:** Your name must be on the official Registrar's list for this course in order to receive a grade. If your name is not on this list go immediately to the Registrar's office (120 Hayden) to have your name added.

C. **LABORATORY**

1. **Purpose:** Practice in the application of basic chemical principles is an important part of the course, and is carefully integrated with the lecture material. The laboratory is the place where the abstract lecture topics come to life before your eyes! You should study and understand each experiment before coming to the laboratory. See your lab instructor before your lab if you have any questions. Feel free to consult reference materials in the Snell Library. If you prepare for the lab, you will find your experience more informative and enjoyable.

2. **Check-list:** The following is the check-list of the things you will need for the FIRST lab meeting:

   - **EYE PROTECTION** - Government regulations insist that all persons present in laboratories must wear some sort of eye protection, whether or not the person is him/herself working on an experiment. If you do not wear shatterproof prescription glasses, you must purchase protective eye-wear at the University Bookstore before coming to the lab. **Failure to wear appropriate eye protection at all times in the laboratory is grounds for dismissal from this course.**

   - **General Chemistry Lab Manual** - Get a copy at the Bookstore before your second lab meeting: you will be performing Experiment 1 in this workbook during the second lab meeting. Complete the Preliminary questions for Experiment 1 before coming to your second lab class on a separate piece of paper and turn it into your lab instructor at the beginning of the lab, and each week, complete the Preliminary Questions for the appropriate experiments. You will not be allowed to start the days experiment unless the prelab questions have been attempted.
D. WHERE TO GET HELP

1. Your Discussion Section Instructor: This is the person who is primarily responsible for individual help. He/She has specific office hours in Chem Central (115 HT): find out immediately when these are. Whenever you have a question or a problem, seek him or her out! You can, of course, seek out the Lecturer for help during his/her own Conference Hours or you can go to Chem Central and get help from the person on duty at that time.

2. i) Chem Central: The Department of Chemistry has set up an Academic Assistance Center for students in General Chemistry courses. The center is located on the first floor of Hurtig Hall (115 HT). It is open from 10:00 AM to 4:30 PM, Monday through Friday. The center is staffed by faculty and teaching assistants who will assist you with whatever problems you are having in this course. For example, if you are having difficulty with a homework assignment, bring your work to Chem Central and someone will help you. If you and several friends like to do your homework together, Chem Central is a place where you can do that, too. If you are having difficulty with a lab you can get help on your lab in Chem Central.

   ii) Chemistry Department - 102 HT (617) 373 - 2822

   The Chemistry Departments keeps a list of graduate students who are willing to tutor students for a fee. The cost for this service is determined by each tutor. In general, they charge between $10 and $15 per hour for their services.

3. Students with Disabilities: Students needing accommodations must register with the Disability Resource Center and open a file. The Disability Resource Center is located at 20 Dodge Hall, 617-373-2675.

Useful Dates to Keep in Mind:
Last day to drop without a W grade – Sept 28
Last day to drop with a W grade – Nov 19
Final Exams – begin December 10
   Exam date for this class will be announced when it is available.

Academic Honesty: Northeastern University is committed to the principles of intellectual honesty and integrity. All members of the Northeastern community are expected to maintain complete honesty in all academic work, presenting only that which is their own work in tests and assignments, including in the use of clickers. Academic dishonesty is outlined in the Undergraduate Student Handbook and at http://www.neu.edu/osccr/academichonesty.html.
Please be sure to register your clicker on Blackboard using the instructions below:

STUDENT REGISTRATION OF CLICKERS IN BLACKBOARD

1. Students will need to visit Blackboard to register their response device so that Blackboard can match their input with their name.

2. Students should enter the course and click on the Tools button or Course Tools link.

3. Click on the TurningPoint Registration Tool link.

4. Enter the Response Device ID by following the on-screen instructions.

   Please enter your Response Device ID in the field provided below. Tracking of these IDs is essential for proper grading of classroom quizzes and participation, so please be sure to copy the ID exactly as it is written.

   If you are using a ResponseCard, the ID can be found on the back of the card, where it is the 6 characters directly below the barcode.

   Response Device ID: 
   Confirm Response Device ID: 

   Your currently registered Response Device ID is: N/A
Practice problems and exam dates will be posted on Blackboard and announced in lecture. The following topics will be covered in order:

Chapter 1: Matter and Measurement

Chapter 2: Atoms and the Periodic Table

Chapter 3: Ionic Compounds

Chapter 4: Covalent Compounds

Chapter 5: Chemical Reactions

Chapter 6: Energy Changes, Reaction Rates, and Equilibrium

Chapter 7: Gases, Liquids, and Solids

Chapter 8: Solutions

Chapter 9: Acids and Bases

Chapter 10: Nuclear Chemistry