Course Syllabus

Chemistry 211: Principles of Chemistry I
(1579 – CHM 211 - 202)
Department of Chemistry, Marshall University
Spring 2009

Instructor: Dr. Anne Howells   Phone: (304) 696 - 2307
Office: 403 Science Building   Email: howellsa@marshall.edu
Office Hours: 12:30 -1:30 PM, TR Course Web Page: see MU Online
1:00 PM – 2:00 PM W
5:30 PM – 6:30 PM W

Course Time & Location:
Lectures 9:30 - 10:45 AM TR, Science Building 473
Help Sessions TBA

Prerequisites (one of the following must be satisfied): a MATH ACT Score of 21 or better, a grade of C or better in MATH 127, or a grade of C or better in an equivalent math course.

Required Texts and Materials:
(1) Textbook - Chemistry: The Central Science, 11th Edition by Brown, LeMay, Bursten, and Murphy. (10th edition is also acceptable.)
(2) A scientific calculator. Students must bring a calculator to all lectures and exams.
(3) Clicker (ResponseCard RF Keypads, $35.00, available from AXE.)


Blackboard Page / Announcements: Material distributed in class will be posted on the course web site (see course page on MU Online), as well as the answer keys to exams and other assignments. Homework assignments will also be posted as assessments on Blackboard. Grades will be posted weekly on Blackboard. Special announcements, such as class cancellations, will be sent by email.

Catalog Description: A study of the properties of materials and their interactions with each other. Development of theories and applications of the principles of energetics, dynamics and structure. Intended primarily for science majors and pre-professional students.

Course Curriculum: Lectures and assignments will cover chapters 1 through 11 in the text.

Important Learning Objectives:
- To develop an integrated and interdisciplinary understanding of the nature of science and scientific reasoning.
- To develop analytical thinking skills and use them to solve chemical problems.
- To understand the electrical nature of matter and chemical reactivity.
- To understand the influence of energy on the stability of a system.
- To understand nuclear, atomic, and molecular structure.
- To understand the nature of the periodicity of chemical properties.
- To understand modern molecular orbital theory from a qualitative standpoint.
Study tips for general chemistry:
1. Allow enough time in your daily and weekly schedule for studying. College is a full time job. Expect to spend 8-10 hours/week studying for this class (about 3 study hours/credit hour). Study throughout the week, preferably after each lecture.

2. Attend class. While there, participate in group activities and ask questions.

3. Take meaningful notes. Do not attempt to write down every word the professor says or copy slides word-for-word. Take notes using a shorthand of your own devising.

4. After a class, read the APPLICABLE material in the text and rewrite your notes into a legible, coherent document. Also review daily quiz questions and relate them to the material that was covered.

5. Do a good job on homework assignments. Chemistry exams consist of chemistry problems. The more you practice, the better you will be at solving them.

6. Work with other people. Study with other students. Find upperclassmen who can help you. If necessary, engage a formal tutor. Attend office hours and help sessions scheduled by the instructor. You will learn more working with other people than you can by working alone.

7. When studying for exams, refer to quiz questions, homework problems, and questions on old exams. This is your best guide for predicting what will be on an exam and what format the questions will have. Once you can answer a problem, try to rewrite it yourself. Change the details or emphasis of the questions. (This is how many instructors write exam questions.) Consider how the changes you make affect the final answer. Try answering questions that your study partners have rewritten.

Determination of Course Grade:

Grade point distribution: (700 points total.)

Midterm Exams: 300 points (100 each, best 3 of four exam scores.)

Quizzes: Homework - 120 points (15 pts each, best 8 of 9 quiz scores)
Daily/clicker - 80 points (The grade point score will be calculated from the raw score obtained on the department final.)

Department Comprehensive Final Exam: 200 points (The grade point score will be calculated from the raw score obtained on the department final.)

Course Grade Assignment (The letter grade is based on per cent of grade points earned.)

Scale*  A: 90-100%
B: 80-89%
C: 70-79%
D: 60-69%
F: <60%

* Alterations to the given scale will be based on the class’s performance on the department final.

Exam Schedule

<table>
<thead>
<tr>
<th>Midterm</th>
<th>Date</th>
<th>Chapters (sections)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam I</td>
<td>Thursday, January 29, 2009</td>
<td>1 &amp; 2</td>
</tr>
<tr>
<td>Exam II</td>
<td>Thursday, February 26, 2009</td>
<td>3 &amp; 4</td>
</tr>
<tr>
<td>Exam III</td>
<td>Thursday, March 19, 2009</td>
<td>5 &amp; 6</td>
</tr>
<tr>
<td>Exam IV</td>
<td>Tuesday, April 21, 2009</td>
<td>7, 8, &amp; 9</td>
</tr>
</tbody>
</table>

Final Exam: Tuesday, 5/5/08, 8:00 AM (Chapters 1 through 11)
Homework Quiz Schedule (Questions drawn from posted homework assignments)

<table>
<thead>
<tr>
<th>Individual (closed book)</th>
<th>Group (Open book/notes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, January 20</td>
<td>Tuesday, January 27</td>
</tr>
<tr>
<td>Thursday, February 12</td>
<td>Tuesday, February 24</td>
</tr>
<tr>
<td>Tuesday, March 10</td>
<td>Tuesday, March 17</td>
</tr>
<tr>
<td>Tuesday, April 7</td>
<td>Thursday, April 16</td>
</tr>
</tbody>
</table>

On-line Quiz
Due May 1

Policies

The instructor will adhere to the University Policies and Procedures described in the Marshall University General Undergraduate Catalog. The items listed below are of special significance.

Attendance: Regular attendance is essential for adequate performance and is required. In situations where the student is aware of the absence in advance (athletic events, field trips, etc.), arrangement for accommodations must be made prior to the absence. Otherwise, the designation of an absence as excused and any accommodation for that absence will be decided by the Dean of Students. If a student decides to not complete the course, he or she must visit the registrar and complete the appropriate paperwork to remove the course from his or her schedule.

Make-up Quizzes and Exams: There will be no make-up exams or quizzes. Students can drop their lowest homework quiz score, and miss 6 daily quiz questions without penalty. Any student involved in an official school function or an unavoidable commitment to his or her employer can arrange to take a midterm IN ADVANCE of the scheduled time and date. All students can drop their lowest midterm score.

Electronic Device Policy: All cell phones and pagers must be turned off during class. During exams and quizzes, all electronic devices except calculators must be inaccessible. Calculators that are part of a cell phone or PDA are not acceptable. Laptops must be turned off and placed on the floor during the lecture period.

Required devices
1) A scientific calculator for each lecture and exam period.
2) A ResponseCard RF pad (clicker) for daily quiz participation. Refer to supplemental information on the TurningPoint Student Response System.

Classroom Courtesy: Students must be considerate of their fellow classmates and refrain from disruptive behavior during the lecture period. This includes talking and whispering, while the instructor is addressing the class. People who are sensitive to this kind of disruption should sit in the rows of seats at the front of the classroom.