

# Course Syllabus Spring 2017

## Chemistry 212: Principles of Chemistry II

(CRN:5471 – CHM 212 – Section 231)  
Department of Chemistry, Marshall University

**Instructor:** Jenifer Markiewicz      **Phone:** 304-720-4001 ext. 3611  
**Office:** Room #3202 TPB      **E-mail:** markiewiczj@marshall.edu  
**Office Hours:** By appointment  
**Credit Hours:** 3.00 hours  
**Course Time and Location:** 2-3:15 MW MUGC Academic Bldg., Room #212

**Course description:** A continuation of CHM 211 with emphasis on the inorganic chemistry of the representative elements and transition metals. Intended primarily for science majors and pre-professional students.

**Prerequisite:** C or better in CHM 211.

### Required Materials:

- **Text:** *Principles of General Chemistry, Third Edition* by Martin S. Silberberg, McGraw-Hill, 2013.
- **Calculator:** You will need a basic, non-programmable calculator. You should be able to find a suitable calculator for \$15 or less. Calculators with alphanumeric and/or graphing capabilities are **not permitted** during quizzes and exams. Additionally, cell phone calculators are off limits during quizzes, exams, and during normal lecture periods.

### Grading:

- **Exams (75%):** Four exams and a cumulative final exam (five exams total), will be administered over the course of the semester. These exams will be strictly limited to the confines of the normal class period (75 minutes) and to the time limit set for the final exam (2 hours). All exams will be taken independently, and without the use of cell phones, books, and class notes. No exam grades will be dropped.
- **Quizzes (15%):** Quizzes will be administered during the final ten minutes of the class period, minimally once per week. The lowest quiz score will be dropped.
- **Homework (10%):** Homework will be assigned after each lecture period and will be collected at random (minimally once per week). When grading the homework, the focus is on completion rather than perfection. This is an opportunity for me to give you feedback and for you to seek out help, if necessary.

- **Participation/Attendance:** Regular attendance and participation is expected. **No makeup tests or quizzes will be given unless prompt arrangements are made.** Should attendance problems arise, please contact me before you miss, if possible. Any student involved in an official school function or an unavoidable commitment to his or her employer can arrange to take an exam at another time than the scheduled time. Additionally, please be on time in order to avoid disrupting your peers and my instruction.

**Grading Scale:** **A** > 90%, **B** 80 to 89%, **C** 70 to 79%, **D** 60 to 69%, and **F** < 60%.

**Course Curriculum/Learning Objectives:** Lectures and assignments will cover chapters 12, 13, and 16 through 23 in the text.

Course Student Learning Outcomes	How students will practice each outcome in this course	How student achievement of each outcome will be assessed in this course
Students will identify and explain trends in physical and chemical properties.	-Lecture -Homework assignments -In-class problems -Recitation session	-Exams -Quizzes
Students will understand how the energy of a system governs the rate and extent of chemical reactions.	-Lecture -Homework assignments -In-class problems -Recitation session	-Exams -Quizzes
Students will understand how the relative amounts of chemical species govern the rate and extent of chemical reactions.	-Lecture -Homework assignments -In-class problems -Recitation session	-Exams -Quizzes
Students will apply mathematical techniques to formulas and solve problems in chemistry.	-Lecture -Homework assignments -In-class problems -Recitation session	-Exams -Quizzes

**Electronic Device Policy:** All cell phones and pagers must be turned to vibrate during class. Recording of lectures without my permission is strictly prohibited. During examinations, all electronic devices, except calculators, must be inaccessible. Students **MUST BRING A CALCULATOR** to class for all lectures and exams. Calculators that are part of a cell phone or PDA are not acceptable during an exam or quiz.

**University Policies:** All university policies, which can be found at this link [http://www.marshall.edu/wpmu/academic-affairs/?page\\_id=802](http://www.marshall.edu/wpmu/academic-affairs/?page_id=802), will be observed.

**Important Dates:**

**First day of classes:** January 9 **Martin Luther King Jr. Holiday:** January 16  
**Freshman/Sophomore Midterm grades due:** February 27 **Last Day to Drop:** March 17  
**Spring Break:** March 20-25 **Dead Week:** April 24-28

**The final exam will be given to all CHM 211 students on Saturday, April 29<sup>th</sup> at 10:00 a.m.**

**Approximate Schedule:**

<b>Week of:</b>	<b>Chapters/Sections</b>	<b>Topics:</b>
1/9	<b>M:</b> 12.1-12.2 <b>W:</b> 12.3-12.5	Intermolecular Forces
1/16	<b>M:</b> NC <b>W:</b> 12.6, 13.1	Solid State & Solution Properties
1/23	<b>M:</b> 13.2-13.4 <b>W:</b> 13.5 & Review	Solution Properties
1/30	<b>M:</b> Exam 1 (12,13) <b>W:</b> 16.1-16.4	Reaction Rates and Rate Laws
2/6	<b>M:</b> 16.5-16.7 <b>W:</b> 17.1-17.3	Chemical Kinetics and Equilibrium
2/13	<b>M:</b> 17.4-17.6 <b>W:</b> 18.1-18.4	Equilibrium/Acid-Base
2/20	<b>M:</b> Exam 2 (16, 17) <b>W:</b> 18.5-18.8	Acid-Base Equilibrium
2/27	<b>M:</b> 19.1-19.2 <b>W:</b> 19.3-19.4	Ionic Equilibrium
3/6	<b>M:</b> 20.1-20.2 <b>W:</b> 20.3-20.4	Thermodynamics
3/13	<b>M:</b> Review <b>W:</b> Exam 3 (18-20)	
3/20	<b>Spring Break</b>	
3/27	<b>M:</b> 21.1-21.3 <b>W:</b> 21.4-21.5	Redox/Electrochemistry
4/3	<b>M:</b> 21.6-21.7 <b>W:</b> 22.1-22.2	Electrochemistry Transition Elements
4/10	<b>M:</b> 22.3, 23.1 <b>W:</b> 23.2-23.5	Transition Elements Nuclear Chemistry
4/17	<b>M:</b> 23.6-23.7 <b>W:</b> Exam 4 (21, 22)	Nuclear Chemistry
4/24	<b>M:</b> Review <b>W:</b> Review	Review for Final
<b>4/29</b>	<b>12, 13, and 16-23</b>	<b>Cumulative final exam</b>