Course Syllabus Spring 2018
Chemistry 211: Principles of Chemistry I

(CRN: 5447 – CHM 211 – Section 205)
Department of Chemistry, Marshall University

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Office Hours: By appointment
Credit Hours: 3.00 hours
Course Time and Location: MWF 10-10:50 MUGC Academic Bldg., Room #213

Course 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.

Prerequisite: (PR or CR: CHM 217; PR: Math ACT of 23 or better, or C or better in CHM 111, or pass placement exam).

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%):** Five exams and a cumulative final exam (six 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 (50 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, unless otherwise specified.

- **Quizzes (15%):** Quizzes will be given at the end of most class periods and should take no more than 5-10 minutes to complete. As with the exams, they too will be taken independently, without the use of cell phones, books, and class notes unless otherwise specified. The three lowest quiz grades will be dropped.

- **Homework (10%):** Homework will be assigned after each lecture period and will be collected at random (minimally once per week). While grading the homework, my 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. **Make-up exams will only be given if the absence has been excused by the university.** For example, 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. Should attendance problems arise, please contact me before you miss, if possible. 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 1 through 11 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
Become familiar with the atomic structure of matter.	-Lecture -Homework assignments -In-class problems -Recitation session	-Exams -Quizzes
Develop analytical skills to solve problems presented in a chemical context.	-Lecture -Homework assignments -In-class problems -Recitation session	-Exams -Quizzes
Understand how energy is utilized in natural systems.	-Lecture -Homework assignments -In-class problems -Recitation session	-Exams -Quizzes
Describe and predict the basic chemical bonding patterns that explain the physical and chemical properties of matter.	-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: By enrolling in this course, you agree to the University Policies. Please read the full text of each policy by going to www.marshall.edu/academic-affairs and clicking on "Marshall University Policies." You may also access the policies directly by going to http://www.marshall.edu/academic-affairs/policies/

Important Dates:

First day of classes: January 8 **Martin Luther King Jr. Holiday:** January 15 **Freshman/Sophomore Midterm grades due:** February 26 **Last Day to Drop:** March 16 **Spring Break:** March 19-24 **Dead Week:** April 23-27

The final exam will be given to all CHM 211 students on Saturday, April 28th at 10:00 a.m.

Approximate Schedule:

Week of:	Chapters/Sections			Topics:
1/8	**M:** 1.1	**W:** 1.2-1.3	**F:** 1.4-1.5	Measurements/Problem Solving
1/15	**M:** NC	**W:** 2.1-2.3	**F:** 2.4-2.6	Atoms, Elements, and Compounds
1/22	**M:** 2.7-2.9	**W:** Review	**F: Exam 1** (1, 2)	Atoms, Elements, and Compounds
1/29	**M:** 3.1-3.2	**W:** 3.3-3.4	**F:** 3.5	Stoichiometry
2/5	**M:** Ch. 3 Rev.	**W:** 4.1-4.2	**F:** 4.3-4.4	Stoichiometry/Chemical Reactions
2/12	**M:** 4.5-4.6	**W:** Review	**F: Exam 2** (3, 4)	Chemical Reactions
2/19	**M:** 5.1-5.2	**W:** 5.3-5.4	**F:** 5.5-5.6	Ideal Gases
2/26	**M:** Ch. 5 Rev.	**W:** 6.1-6.2	**F:** 6.3-6.4	Ideal Gases/ Thermochemistry
3/5	**M:** 6.5-6.6	**W:** Ch. 6 Rev.	**F: Exam 3** (5, 6)	Thermochemistry
3/12	**M:** 7.1-7.2	**W:** 7.3-7.4	**F:** Ch.7 Rev.	Quantum Theory and Numbers
3/19	**Spring Break**			
3/26	**M:** 8.1-8.2	**W:** 8.3-8.4	**F:** 9.1-9.3	Electron Configs, Periodic Trends, Chemical Bonds
4/2	**M:** 9.4-9.5	**W:** Review	**F: Exam 4** (7, 8, 9)	Chemical Bonds, Bond Energy
4/9	**M:** 10.1-10.2	**W:** 10.2-10.3	**F:** 11.1-11.2	Lewis Structures/ Molecular Geometry
4/16	**M:** 11.2-11.3	**W:** Review	**F: Exam 5** (10, 11)	Covalent Bond Theory
4/23	**M:** Review	**W:** Review	**F:** Review	Review for Final
4/28	**1-11**			**Cumulative final exam**