

Course Title/Number	Principles of Chemistry I / CHM 211, Sections 104, 105, 106
Semester/Year	Fall 2015
Days/Time/Location	MWF 10:00-10:50 PM, Science Hall 473 (lecture) W 2:00–2:50 PM, S460 (section 104) W 4:00–4:50 PM, S460 (section 105) W 5:00–5:50 PM, S460 (section 106)
Instructor	Derrick R. J. Kolling
Office	2217 AWFAEC; Research lab: 2208 AWFAEC
Phone	(304) 696-2307
E-Mail	kolling@marshall.edu
Office Hours	Tuesday 9–11 A.M., Wednesday 1–4 P.M. If you cannot attend the scheduled times, email or call me to set up an appointment. Expect to wait at least 24 hours before responses to emails.
University Policies	By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to www.marshall.edu/academic-affairs and clicking on “Marshall University Policies.” Or, you can access the policies directly by going to www.marshall.edu/academic-affairs/policies/ . Academic Dishonesty/Excused Absence Policy for Undergraduates/Computing Services Acceptable Use/Inclement Weather/Dead Week/Students with Disabilities/Academic Forgiveness/Academic Probation and Suspension/Academic Rights and Responsibilities of Students/Affirmative Action/Sexual Harassment

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

Required Texts, Additional Reading, and Other Materials

1. ***Principles of General Chemistry, Third Edition*** by Martin S. Silberberg, McGraw-Hill, 2013.
2. ALEKS access
3. Turning Point Personal Response Device (must be registered on MUOnline)
4. non-programmable calculator for quizzes, tests, and exams (it must not have keys for the alphabet)
5. #2 pencil and black or blue ink pen for tests/quizzes

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 classify matter and chemical reactions.	<ul style="list-style-type: none"> • in-class exercises • ALEKS exercises 	<ul style="list-style-type: none"> • exams • quizzes • 'clicker' questions
Students will apply principles of atomic structure and bonding theories to describe how matter is composed.	<ul style="list-style-type: none"> • in-class exercises • ALEKS exercises 	<ul style="list-style-type: none"> • exams • quizzes • 'clicker' questions
Students will apply mathematical techniques to describe reactions, physical properties, and energies of matter.	<ul style="list-style-type: none"> • in-class exercises • ALEKS exercises 	<ul style="list-style-type: none"> • exams • quizzes • 'clicker' questions
Students will identify and explain trends in physical and chemical properties.	<ul style="list-style-type: none"> • in-class exercises • ALEKS exercises 	<ul style="list-style-type: none"> • exams • quizzes • 'clicker' questions

Grading Policy

ALEKS exercises [%]	150	points
quizzes (in learning assistance sessions) [*]	150	points
tests (4 during the semester)	500	points
final exam	200	points
	1000	TOTAL POINTS[#]
<p>[*] the lowest quiz score will be dropped.</p> <p>[%]ALEKS Grades: There are two components to the ALEKS score, each worth 75 points. 1) Objective completion- points are earned by completing objectives by the due date. 2) Topic (pie chart) mastery- at the end of the semester, the percentage of topics completed will be multiplied by 75 points to arrive at the Topic score.</p> <p>[#]Clicker Problems: Clicker problems are worth up to 50 points extra credit.</p> <p>Grading Scale:</p>		

900-1000 points	A
800-899 points	B
700-799 points	C
600-699 points	D
000-599 points	F

Attendance Policy

Attendance is mandatory for quizzes, tests and exams. Make-up tests and exams will be granted only in cases that are recognized by the University through an excused absence. Students should contact the instructor as soon as they are able to return to classes. If class is cancelled unexpectedly, scheduled tests will be given during the next class meeting. Attendance is highly suggested for lectures; 'clicker' questions that are work extra credit will be given.

Tentative Course Schedule

Week of:	Chapter	Topic
8/24	1	Definitions, Problem Solving, Measurements
8/31	2	Components of Matter
9/7	no class on 9/7; 3	Stoichiometry
9/14	TEST 1 on 9/14; 3/4	Stoichiometry, Chemical Reactions
9/21	4	Chemical Reactions
9/28	5	Ideal Gases
10/5	TEST 2 on 10/5; 5/6	Ideal Gases, Thermochemistry
10/12	6	Thermochemistry
10/19	7	Quantum Theory
10/26	TEST 3 on 10/26; 7, 8	Quantum Theory, Electron Configuration
	10/30 is last day to withdraw from full-semester courses	
11/2	8/9	Chemical Periodicity, Chemical Bonding
11/9	9/10	Chemical Bonding, Shapes of Molecules
11/16	TEST 4 on 11/16; 10/11	Shapes of Molecules, Covalent Bonding
11/23	no class (Thanksgiving Break)	
11/30	11	Covalent Bonding
12/5 SATURDAY 10:00 AM FINAL EXAM (location TBA)		