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| Course Title/Number | Principles of Chemistry I / CHM 211, Sections 114, 115, 116 |
| Semester/Year | Fall 2015 |
| Days/Time/Location | MW 4:00-5:15 PM, Science Hall 465 (lecture) T 2:00 – 2:50 PM, Science Hall 460 (section 114 LA session) T 4:00 – 4:50 PM, Science Hall 460 (section 115 LA session) T 6:00 – 6:50 PM, Science Hall 460 (section 116 LA session) |
| Instructor | Dr. Laura McCunn-Jordan ***PLEASE CALL ME DR. MCCUNN |
| Office | 466 Science Hall (research lab: 404 Science Hall) |
| Phone | (304) 696-2319 |
| E-Mail | mccunn@marshall.edu |
| Office Hours | 1:30-4:00 Monday and Wednesday; other times by appointment. I welcome drop-in visits, but cannot guarantee availability outside of office hours. Simple questions can be answered via email. |
| 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. access to MU Online and a Marshall email account
4. non-programmable calculator for quizzes, tests, and exams (it must not have keys for the alphabet)
5. #2 pencil and 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"> • lectures • textbook readings • ALEKS exercises | <ul style="list-style-type: none"> • tests and quizzes |
| Students will apply principles of atomic structure and bonding theories to describe how matter is composed. | <ul style="list-style-type: none"> • lectures • textbook readings • ALEKS exercises | <ul style="list-style-type: none"> • tests and quizzes |
| Students will apply mathematical techniques to quantify reactions, physical properties, and energies of matter. | <ul style="list-style-type: none"> • lectures • textbook readings • ALEKS exercises | <ul style="list-style-type: none"> • tests and quizzes |
| Students will identify and explain trends in physical and chemical properties. | <ul style="list-style-type: none"> • lectures • textbook readings • ALEKS exercises | <ul style="list-style-type: none"> • tests and quizzes |

Grading Policy

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|---|-------------|---------------------|
| ALEKS exercises | 150 | points |
| quizzes (in lecture and LA sessions) | 150 | points |
| tests (4 during the semester) | 500 | points |
| final exam | 200 | points |
| | 1000 | TOTAL POINTS |
| <p>Quiz Grades: Each student's two lowest quiz grades from the semester will be dropped. Quizzes cannot be made up unless the student presents a university-approved excuse to Dr. McCunn by the first scheduled class meeting after the student is permitted to return to campus.</p> <p>ALEKS Grades: There are two components to the ALEKS score, each worth 75 points.</p> <p>1) Objective completion- points are earned by completing objectives by the due date. Each student's two lowest individual objective scores will be dropped. Deadline extensions will only be granted for excused, extended absences, at the instructor's discretion.</p> <p>2) Topic (pie chart) mastery- at the end of the semester, the percentage of topics mastered will be multiplied by 75 points to arrive at the Topic score.</p> | | |

Grading Scale: A: 90-100%, B: 80-89%, C: 70-79%, D: 60-69%, F: 0-59%

The percentage of total points earned will be rounded to the nearest whole percentage. The final grading scale may be adjusted in order to lower the threshold for a letter grade. If you believe there has been an error in the grading of your work, please consult Dr. McCunn.

Attendance Policy

Attendance is highly recommended. In the case that class is cancelled due to inclement weather or an emergency on the day of a scheduled test, the test will be given in the next scheduled class period. If student tardiness becomes a significant distraction during lecture, the instructor reserves the right to refuse admission to tardy students.

Miscellaneous Policies

Please silence cell phone ringers during class or exams. The instructor reserves the right to answer any ringing cell phones during lecture, or to dismiss the offending student. Use of cell phones / PDAs / MP3 players and similar devices during tests, quizzes, and exams will be considered academic dishonesty. Recording of lectures without the instructor's permission is prohibited. Laptops should not be used during class without permission. The content of this course will adhere closely to the information contained in the textbook. You may use other resources (alternate texts, notes from other professors, etc.). If you find information that contradicts something written in the textbook or said in the lecture, please consult Dr. McCunn. Class announcements may be made occasionally via email to your university email address. Please check it on a regular basis. Lecture notes and handouts will be available in Dr. McCunn's office during office hours or by appointment. They will also be posted at MU Online as time permits.

Tentative Course Schedule

| Week of: | Chapter | Topic |
|---|--|---|
| 8/24 | 1 | Measurements and Problem Solving |
| 8/31 | 2, 3 | Atoms, Elements, and Compounds |
| 9/7 | no class on 9/7; 3 | Stoichiometry |
| 9/14 | 3; TEST 1 on 9/16 | Stoichiometry |
| 9/21 | 4 | Chemical Reactions |
| 9/28 | 4, 5 | Reactions, Ideal Gases |
| 10/5 | 5; TEST 2 on 10/7 | Ideal Gases |
| 10/12 | 6 | Thermochemistry |
| 10/19 | 7 | Quantum Theory and Numbers |
| 10/26 | 8 | Electron Configurations and Periodic Trends |
| | 10/30 is last day to withdraw from full-semester courses | |
| 11/2 | TEST 3 on 11/2; 9 | Chemical Bonds |
| 11/9 | 9, 10 | Bond Energies, Lewis Structures |
| 11/16 | 10; TEST 4 on 11/18 | Molecular Geometries |
| 11/23 | no class (Thanksgiving Break) | |
| 11/30 | 11 | Covalent Bonding Theories |
| 12/5 SATURDAY 10:00 AM FINAL EXAM (location TBA) | | |