For by him all things were created: things in heaven and on earth, visible and invisible… [Colossians 1:16]

Prerequisites:
- proficiency with algebra. The student must not be concurrently enrolled in any DEV math courses.
- some chemistry background highly recommended

Required Materials:
- Online ChemSkill Builder. (bundled with the text book - free, or available separately at the campus bookstore - $$)
- Essential Algebra for Chemistry Students 2nd ed., by David W. Ball. (available at the campus bookstore)
- Chem1410 Laboratory Manual. (available at the university print shop)
- Working Safely with Chemicals 2nd ed., Genium Publishing. (available at the campus bookstore)
- Scientific calculator

Course Objectives:
This course is the first part of the two-semester general chemistry sequence. After successfully completing this course, the student will understand and be able to apply basic chemical principles. To do this, the student will also develop skills in critical thinking and finding solutions, mathematical and conceptual ideas, and application of learned principles. The course also includes a laboratory component, and after successful completion, the student will be capable of performing basic chemistry laboratory techniques.

Course Topics:
The following chapters and sections will be covered (with noted exceptions). The student is expected to have read the material before lecture.

Chapter 1: Keys to the Study of Chemistry
Chapter 2: The Components of Matter
- skip “Multiple Proportions”
- skip “An Introduction to Naming Organic Compounds”
Chapter 3: Stoichiometry
- skip “Combustion Analysis of Organic Compounds”
Chapter 4: The Major Classes of Chemical Reactions
- skip “Balancing Redox Equations”
- skip “Redox Titrations”
- skip “Displacing One Element by Another; Activity Series”
- limited disc “Reversible Reactions: An Introduction…”
Chapter 5: Gases and the Kinetic-Molecular Theory
Assignments:

- **Chapter Problems** will be assigned for each chapter and will be due the class period following completion in lecture of that chapter. Chapter problems are intended to give you practice applying the principles presented in class and in the textbook. Only problems with supplied solutions will be assigned. While you will get credit (5 pts) for handing in your solutions to the problems, they will not be graded in detail. You are encouraged to work together or in study groups on chapter problems.

- **Quizzes** will be given at the beginning of each chapter. Quizzes will mainly include vocabulary words as indicated by bold font in the textbook.

- **Examinations** will be given three times throughout the semester. The tentative schedule is: Exam 1 – ch1-3; Exam 2 – ch4-6; Exam 3 – ch7-9.

- **Final examination**: A comprehensive final examination will be given at the end of the course.

- **Extra Credit** will be offered in the form of www.chemskillbuilder.com assignments. For each section a score of 80% or better is required for credit. A maximum of one letter grade (10%) extra credit will be possible.

  - note: when registering online for chemskillbuilder, you must choose this course (McMurry – Dr. Pyenta – chem1401 sec 01) and you must choose the “credit mode” option.

Attendance:

Attendance at all lectures and laboratories is mandatory. Attendance will be taken each class period; absences will be excused only if the student is away on an official university function and has obtained authorization from the Vice President of Academic Affairs (see student handbook) or if specifically excused by the professor. It is the student’s responsibility to notify the professor about each excused absence; otherwise, the student will be marked to have an unexcused absence for that day. It is the student’s responsibility to obtain any missed lecture material.

Attendance will count toward the course grade. All students will begin with a 5% participation grade. Up to three unexcused absences are allowed and will have no effect on this grade; excused absences will also have no effect. However, the student will lose 1 percentage point (1%) from this grade for each unexcused absence beyond three, until 0% is reached. Students with ten or more unexcused absences will be administratively dropped from the course.
Grading:

Course grades will be computed according to the following percentages:

- Final Exam 20%
- Quizzes 10%
- Examinations 30%
- Chapter Problems 10%
- Laboratory 25%
- Participation Grade 5%

Letter grades will be assigned as follows:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 – 93%</td>
<td>A</td>
</tr>
<tr>
<td>90 – 92.99%</td>
<td>A-</td>
</tr>
<tr>
<td>87 – 89.99%</td>
<td>B+</td>
</tr>
<tr>
<td>83 – 86.00%</td>
<td>B</td>
</tr>
<tr>
<td>80 – 82.99%</td>
<td>B-</td>
</tr>
<tr>
<td>77 – 79.99%</td>
<td>C+</td>
</tr>
<tr>
<td>73 – 76.00%</td>
<td>C</td>
</tr>
<tr>
<td>70 – 72.99%</td>
<td>C-</td>
</tr>
<tr>
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<td>D+</td>
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<td>D</td>
</tr>
<tr>
<td>60 – 62.99%</td>
<td>D-</td>
</tr>
<tr>
<td>0 – 59.99%</td>
<td>F</td>
</tr>
</tbody>
</table>

Moodle:

All students must enroll in McMurry’s online “Moodle” and then into this course (chem1410). Students will find course documents, assignments, homework, and extra credit listed on blackboard. A simple log of where the class is at in the course as far as chapters and topics will be posted. Also, any class announcements will be made using e-mail via moodle.

- Note: you must enroll yourself in chem1410 after you sign into moodle.
- Moodle is located at [http://cs1.mcm.edu/moodle](http://cs1.mcm.edu/moodle).
- Your initial login is lastname.firstname
- Your initial password is your student ID number.

Classroom and Academic Conduct:

- As explained in the student handbook, students are expected to conduct themselves in a manner compatible with McMurry University’s function as an educational, church-affiliated institution. Any and all instances of dishonest or disruptive behavior, including cheating and plagiarism, will result in a zero for that assignment, will be reported to the Dean of Student Affairs, and could lead to official action against the student.
- Cell phones are not permitted in class. Special exceptions can be granted by the professor on a person by person basis.
- Computers and PDAs are permitted for note taking only! All other uses, such as web surfing, e-mailing, or instant messaging, are prohibited.
- Respectful behavior is expected at all times; subsequent rules include:
  1. no hats are to be worn in the classroom
  2. no loud or disruptive behavior
  3. no rude or insulting comments will be tolerated

If a student violates these rules, he will be asked to leave for the rest of the class period, and will be marked as “unexcused absent” for the day.

Disability Accommodation:

McMurry University abides by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. If you have a disability, whether physical, learning, emotional, or otherwise, you must register with the Disability Services Office (Old
Main 102). The disability office will then instruct your professors and instructors as to what accommodations are appropriate for your situation.

“What will it take to pass this course?”:

1. Take responsibility for your own learning. As the saying goes, “You can lead a horse to water, but you can’t make him drink.” No matter how good the instructor is, no matter how good a lecture is, if the student does not take the initiative to learn, then he will not learn.
2. Read the text. There is not enough time to cover all topics in lecture. If it’s on the list above, you are responsible for reading and learning it.
3. Read the text before lecture, and ask about points you do not understand.
4. Pencil and paper: chemistry can only be learned with a pencil and paper. In other words, attending lecture and reading the text will not be enough. To learn the concepts fully, you must practice the concepts by doing problems.
5. Do the homework. Do the homework again and again until you fully understand how each problem is answered. All quizzes and exams are based on the homework!
6. Use resources available to you! Successful students seek out help for things they don’t understand:
   a. Study with groups of fellow students
   b. Get help from the free tutors at the Academic Enrichment Center (AEC)
   c. Ask your professor questions during his office hours
7. Don’t put off till tomorrow what should be done today. Procrastination in college will lead to failure. Keep up with the course work.
8. Attend class, be prepared for the lecture topics, and when appropriate, ask questions. Others will probably have similar questions.
9. Complete and turn in all assignments and quizzes. Nothing will lower a student’s grade faster than missed assignments or quizzes.
10. Take advantage of the extra credit offered in this class.