

# **Chemistry 103: Concepts in Chemistry (4 credits)**

## **Cedar Crest College (Fall 2009)**

Prerequisite: Basic Math and Algebra skills

**Instructor:** Dr. Jeanne Berk

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Office Hours: W & F 11:00 – 12:00 p.m., TH & F 1:30-3:00 and other times by appointment.

**Class Hours:** Tuesday & Thursday 9:00-10:50

**Course Materials:** Textbook: John McMurry and Mary E. Castellion, Fundamentals of General, Organic and Biological Chemistry, 6<sup>th</sup> Edition, Prentice Hall, Inc. A scientific calculator will also be needed for this course.

**Objective:** This course will examine selected aspects of general, organic and biochemistry designed for non-chemistry majors going into a health related fields. This course will progress from principles of general chemistry and will continue on into organic and biochemistry in the second half of this course. In covering these topics the chemistry of the human body will be part of the focus, and examination of clinical problems from a chemical perspective will be achieved.

**Attendance & Class Protocol:** Courses of this type require regular attendance due to the pace of the material; therefore absences will be noted and if it becomes a persistent problem will be discussed. It is also important that you be on time and don't disrupt the class by walking in late. During class please refrain from using electronic communication; this includes cell phones, iPods, and pagers.

**Grading:**

5-7 Quizzes (~30 minutes in length)	40%
Mid-Term Examination (first half of material-Cumulative)	30%
Final Examination (second half of material – Cumulative)	30%

**Exams:** Material to be covered on each exam will be announced in class, several days in advance of the exam. Exams will be closed book with the honor code in effect. Make-up exams are only permitted for valid reasons. These include illness, emergency, or official work or college-sponsored events. In all cases, documentation may be requested, and the final decision rests with the instructor. Once exams are returned the answer key will be posted. If there is a grading concern you have one week to meet with the instructor to discuss the issue and to have the exam re-evaluated. After that time the grade stands. Exams may be randomly photocopied and if an exam has been modified and then submitted for re-grading this will result in a zero for that exam. Again the honor code applies.

**Quizzes:** Five to seven announced quizzes will be given throughout the semester, these will be closed book.

**Homework:** Homework will not be corrected. Detailed answers to the recommended text homework problems are in the study guide and will also be posted. However, homework problems will appear on exams, so it would be beneficial for you to work through these problems.

**Evaluation:** Grades will be assigned based on the scale:

<b>A</b>	93-100%	<b>C</b>	73-76%
<b>A-</b>	90-92%	<b>C-</b>	70-72%
<b>B+</b>	87-89%	<b>D+</b>	67-69%
<b>B</b>	83-86%	<b>D</b>	60-66%
<b>B-</b>	80-82%	<b>F</b>	Below 60%
<b>C+</b>	77-79%		

**Note:** There will be no extra credit projects or retaking of exams.

### **Schedule of Lecture Topics:**

*Week 1:*

8/25 and 8/27      Matter & Life (Ch. 1)  
Measurements (Ch. 2)

*Week 2:*

9/1 and 9/3      Atoms and Periodic Table (Ch. 3)  
Ionic Compounds (Ch. 4)

*Week 3:*

9/8 and 9/10      Ionic Compounds cont.  
Molecular Compounds (Ch. 5)

*Week 4:*

9/15 and 9/17      Chemical Reactions (Ch. 6)

*Week 5:*

9/22 and 9/24      Gases, Liquids & Solids (Ch. 8)  
Solutions (Ch. 9)

*Week 6:*

9/29 and 10/1      Equilibrium (Ch. 7)  
Acids & Bases (Ch. 10)

<i>Week 7:</i> 10/6 and 10/8	Acid & Bases cont. Nuclear Chemistry (Ch. 11)
<i>Week 8:</i> 10/15	*****Mid-Term Exam*****
<i>Week 9:</i> 10/20 and 10/22	Organic: Alkanes (Ch. 12)
<i>Week 10:</i> 10/27 and 10/29	Alkenes, Alkynes & Aromatics (Ch. 13) Compounds with O, S & x (Ch. 14)
<i>Week 11:</i> 11/3 and 11/5	Aldehydes & Ketones (Ch. 16) Carbohydrates (Ch. 22)
<i>Week 12:</i> 11/10 and 11/12	Carbohydrates cont. Carboxylic Acids (Ch. 17)
<i>Week 13:</i> 11/17 and 11/19	Lipids (Ch. 24)
<i>Week 14:</i> 11/14	Amines (Ch. 15)
<i>Week 15:</i> 12/1 and 12/3	Amino Acids & Proteins (Ch. 18)

**Note:** The schedule given above is tentative. Certain sections from above mentioned chapters will be omitted due to time restrictions.