

CHEM123: Introduction to General, Organic, and Biochemistry I

Course Syllabus: Summer 2014

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Course Meeting Times and Location

Tuesday, Wednesday, Thursday; 9:00-12:10 PM
University Center – Room 115

Required Course Materials

Course Textbook

- *Fundamentals of General, Organic, and Biological Chemistry, 7th ed.*, McMurry, Ballantine, Hoeger, and Peterson; Pearson: Prentice Hall. 2014.

Calculator

- TI 36X (solar)
- TI 30Xa (battery)

Course Website

<http://www.umbc.edu/blackboard>

CHEM123 is the first semester of a two-semester course that covers general, organic, and biochemistry. Topics include bonding and molecular structure, elementary organic chemistry, proteins, lipids, carbohydrates, and nucleic acids. This course will fulfill requirements in chemistry for students in the nursing, dental hygiene, and physical therapy programs. **This course is not appropriate for students planning to major in chemistry.**

Course Grading

20%	Exam 1
20%	Exam 2
20%	Exam 3
15%	Problem Sets
<u>25%</u>	<u>Final Exam</u>
100%	

The following grading scale will be used in determining final grades:

A: 90-100; B: 80-89; C: 70-79; D: 60-69; F: 0-59

Description of Graded Assignments

Exams. There will be three exams given during the course and a comprehensive final exam. All exams are closed book. Exams are multiple choice and a scantron form will be used. **It is your responsibility to bring a pencil and approved calculator to the exams.** Answer keys will be posted on Blackboard. There are no make-up exams. If you miss an hourly exam because of a documented University recognized excuse, your remaining scores will be averaged. Unexcused absences will result in a grade of zero for that exam. The exam dates are as follows:

Exam 1: Wednesday, June 04, 2014

Exam 2: Thursday, June 12, 2014

Exam 3: Wednesday, June 25, 2014

Final Exam: Thursday, July 03, 2014

Problem Sets. You will complete 6 problem sets over the course of the semester. Unless announced otherwise, the problem sets will be due at the start of the next class. The lowest problem set score will be dropped from your grade. No make-up problem sets or time extensions will be given. If you are unable to turn in your problem set because of a documented University recognized excuse, then that problem set will be dropped and the remaining scores averaged. Answer keys and grades will be posted on Blackboard.

Learning Objectives

The central focus of this course is to make the wide variety of chemical processes, occurring both within our bodies and in our surroundings, accessible to you and to teach the problem-solving skills you will need in your future studies. Specific learning objectives include an understanding of:

- The scientific method
- The basic mathematics and the language of chemistry
- Physical and chemical properties
- Modern atomic theory
- The composition of compounds
- The formation of chemical and ionic bonds
- The nomenclature and reactions of hydrocarbons

How to do well in this course

The following is a list of a few tips for doing well in this course. You should come to class every day and read the text before class. You should review your class (and book) notes immediately after class and clear up any questions you may have while the material is still fresh in your mind. In this course, we are going to be covering a very large amount of material in a relatively short period of time. In Chemistry, the understanding of new material often relies on comprehension of earlier concepts and principles. Therefore, do not fall behind in your reading. There are several “example problems” in your textbook that you should try as you read the chapters as well as many problems at the end of each chapter. Studying in a group may also help you to be successful in this course.

Supplemental Instruction

Supplemental Instruction (SI) is a proactive academic assistance program that provides opportunities (via group review sessions and collaborative learning) for students to increase academic performance. More information will be provided throughout the semester regarding the dates/times of review sessions. This is a service provided by the University that is separate from the Chemistry Tutorial Center.

Statement of Academic Integrity

By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, **but is not limited to**, suspension or dismissal. To read the full Student Academic Conduct Policy, consult the

UMBC Student Handbook, the Faculty Handbook, the UMBC Policies section of the UMBC Directory, or <http://www.umbc.edu/provost/integrity/index.html>.

Course Schedule:

Tuesday, May 27, 2014	Chapter 1	Matter and Measurements
Wednesday, May 28, 2014	Chapter 2	Atoms and the Periodic Table
Thursday, May 29, 2014	Chapter 3	Ionic Compounds Problem Set #1
Tuesday, June 03, 2014	Chapter 4	Molecular Compounds Review for exam
Wednesday, June 04, 2014	Test #1	
Thursday, June 05, 2014	Chapter 5	Classification and balancing of chemical reactions Problem Set #2
Tuesday, June 10, 2014	Chapter 6	Chemical reactions: Mole and Mass relationships Problem Set #3
Wednesday, June 11, 2014	Chapter 7	Chemical Reactions: Energy, rates and Equilibrium Review for exam
Thursday, June 12, 2014	Test #2	
Tuesday, June 17, 2014	Chapter 8	Gases, Liquids and solids
Wednesday, June 18, 2014	Chapter 9	Solutions Problem Set #4
Thursday, June 19, 2014	Chapter 10	Acids and Bases Problem Set #5
Tuesday, June 24, 2014	Chapter 11	Nuclear Chemistry Review for exam
Wednesday, June 25, 2014	Test #3	
Thursday, June 26, 2014	Chapter 12	Introduction to Organic Chemistry
Tuesday, July 01, 2014	Chapter 13	Alkenes, Alkynes and Aromatic compounds Problem set #6
Wednesday, July 02, 2014	Chapter 14	Some compounds with oxygen, sulfur or a halogen Review for Final
Thursday, July 03, 2014	Final Exam	