

CHEM 123: Introduction to General, Organic, and Biochemistry I

This detailed course description provides information about course topics & content. It is not a course syllabus. Summer 2013 course syllabi are updated in the spring, and may not be available until summer classes begin.

Instructor Information

Instructor	Email	Course Format	Number of Credits
Allison Tracy	atracy@umbc.edu	Lecture	4

General Information

Delivery Format

In-Person

Prerequisite /Co-requisite: NA

Course Materials

Currently Used Materials

- Fundamentals of General, Organic and Biological Chemistry (6th ed.), McMurry, Castellion and Ballantine, 2010

Course Objectives/Learning Outcomes:

CHEM 123 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.

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

Potential Topics Covered:

- Matter and Life
- Measurements in Chemistry
- Atoms and the Periodic Table
- Ionic Compounds
- Molecular Compounds
- Chemical Reactions
- Gases, Liquids and Solids
- Solutions
- Acids and Bases
- Nuclear Chemistry
- Introduction to Organic Chemistry
- Alkenes and Alkynes
- Oxygen, Sulfur and Halogen Compounds