CHEM 124: Introduction to General, Organic, and Biochemistry II

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	3

General Information

Delivery Format

In-Person

Prerequisite /Co-requisite:

CHEM 123

Course Materials

Currently Used Materials

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

Course Objectives/Learning Outcomes:

CHEM 124 is the second 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:

- Amines
- Aldehydes and Ketones
- Carboxylic Acids
- Amino Acids and Proteins
- Chemical Messengers
- Biochemical Energy
- Carbohydrates
- Carbohydrate Metabolism
- Lipids
- Lipid Metabolism
- Nucleic Acids/Proteins
- Genomics

Instructions for Visiting Students:

Visiting students must provide proof that they have passed the equivalent of CHEM 123 with a grade of "C" or better.