C-ID Descriptor
Introduction to Organic and Biochemistry

Descriptor Details

- **Descriptor Title**: Introduction to Organic and Biochemistry
- **C-ID Number**: 102
- **Units**: 4
- **Date of Last Revision**: 10/12/2017 11:44:08 PM GMT+0000

General Description

This course is a survey of organic and biochemistry for nursing majors and other allied health fields. Topics include general organic chemistry and biological chemistry as they apply to living systems. *The laboratory component will support the course topics including both qualitative and quantitative experiments, and analysis of data.*

Prerequisites

Introduction to Chemistry (C-ID CHEM 101)

Corequisites

None

Advisories

Content

1. Hydrocarbons
2. Alcohols, ethers and thiols
3. Aldehydes and ketones
4. Carboxylic acids
5. Amines
6. Esters and amides
7. Carbohydrates
8. Proteins
9. Lipids
10. Nucleic acids
11. Metabolism

Lab Activities

Hands-on laboratory activities, such as separation techniques, characterization of organic molecules, and reactions of organic compounds, will support the range of topics covered in lecture. It is expected that this will be explicitly covered in the course outline of record.

Objectives

At the conclusion of this course, the student should be able to:

1. Draw and name structures containing common mono-functional organic molecules and differentiate functional groups when they appear in an organic structure, relate the physical and chemical properties of compounds containing these groups with the structure of each functional classification;
2. Distinguish roles of four major classes of bio-molecules in living cells,
3. Compare and contrast the processes of DNA replication and transcription, RNA translation, and common types of mutations; and
4. Demonstrate knowledge of major biochemical components in metabolism.

Evaluation Methods

Examinations
Homework
Lab work

Portfolios
Projects
Written papers and/or reports
Quizzes

Textbooks

Timberlake, Introduction to General, Organic and Biological Chemistry

Janice Smith, General, Organic, and Biological Chemistry

Timberlake, Lab Manual for General, Organic, and Biological Chemistry