BIO 268 - BIOCHEMISTRY

Course Description

This course is a study of the basic fundamentals of the chemical composition of living matter with application of concepts to normal and abnormal human function. Structure and function of proteins, lipids, carbohydrates and nucleic acids will be covered as well as their metabolic interrelationships. The course also covers the most current biochemical techniques, and an investigation of molecular genetics and published findings in the field of biochemistry. Group 1 course.

Credit Hours

3

Contact Hours

3

Lecture Hours

3

Required Prerequisites

CHM 101, CHM 101L

Recommended Prerequisites or Skills Competencies

BIO 227, BIO 227L, ENG 111, MTH 111 or MTH 120

General Education Outcomes supported by this course

Critical Thinking - Direct

Course Learning Outcomes

Knowledge:

- Master a broad set of biology-centered knowledge concerning the fundamentals of biochemistry, draw conclusions, and conduct hypothesis-based experiments.
- Use standard laboratory equipment, modern instrumentation, and classical techniques to carry out experiments.

Application:

- Design conceptual, biochemical, hypothesis based experiments.
- Synthesize complicated conceptual ideas by organizing, condensing and evaluating information.

Integration:

- Apply biochemical principles and generalizations already learned to new problems and situations.
- Synthesize information and ideas from several different sources.
- Construct professional criticisms of primary-source materials and interpret experimental data.
- Identify interactions between biochemistry and other areas of knowledge.

Human Dimension:

- Work collaboratively on learning activities.
- Be able to describe and discuss complex biochemical processes with lay people and peers.
- Understand how to use the content in this course to inform and help others and yourself.

Caring - Civic Learning:

- Reflect on the real-world applications of biochemistry.

Learning How to Learn:

- Connect the knowledge in this course to real-life situations and experiences.
- Use new problem solving skills and strategies in real-life situations.
- Utilize scientific literacy skills to conduct research beyond this course.