Overview

Biochemistry covers the structure and function of the four major polymers produced by living organisms. These include nucleic acids, proteins, carbohydrates, and lipids. This course focuses on application! Be sure to understand the underlying biochemistry in order to grasp how it is applied. By successfully completing this course, you will gain an introductory understanding of the chemicals and reactions that sustain life. You will also begin to see the importance of this subject matter to health.

Competencies

▲ Lipids
The graduate constructs models of fatty acids and demonstrates why lipids are essential to the functioning of cells.

▲ Carbohydrate Metabolism and Adenosine Triphosphate (ATP)
The graduate constructs models of carbohydrates, demonstrates metabolism of carbohydrates, and demonstrates how adenosine triphosphate (ATP) is essential to energy transfer in the cell and how irregularities in ATP synthesis in the cell can cause cytopathologies.

▲ Amino Acids, Peptide Bonds, and Protein Structure
The graduate constructs models of the structure and function of amino acids and peptide bonds, predicts ionization of an amino acid, demonstrates peptide bond breaking, and demonstrates how protein structure affects susceptibility or resistance to disease.

▲ Myoglobin and Hemoglobin
The graduate constructs models of various states of hemoglobin, demonstrates how changes in the usual configuration of hemoglobin can lead to molecular disease, and distinguishes between the chemical structure and function of hemoglobin and myoglobin.

▲ Enzymology and Catalytic Mechanism
The graduate constructs models of enzymes, demonstrates how enzymes act as a catalyst in a reaction, including factors that influence this reaction, and solves enzyme and pathway problems.
Learning

Getting Started

Welcome to Biochemistry! In this course, you will demonstrate competency in the structure and function of the four major polymers produced by living organisms. These structures include nucleic acids, proteins, carbohydrates, and lipids. It is important for you to review the underlying biochemistry in order to understand how it is applied. This course is delivered in the Wiley learning platform, which incorporates textbook access, videos, and a variety of other interactive learning components. Competency in this course will be demonstrated by the successful completion of both an objective and a performance assessment.

Assessments

- Preassessment Biochemistry
  - STATUS: Not Attempted
  - # OF ITEMS: 70
  - TIME ALLOTTED: 120 minutes
  - CODE: PDYO

- Objective Assessment: Biochemistry
  - STATUS: Not Attempted
  - # OF ITEMS: 70
  - TIME ALLOTTED: 120 minutes
  - CODE: DYO2
A score of **Competent** or **Exemplary** is required to pass all assessments. Passing a preassessment does not guarantee you will pass the high stakes assessment.

On objective assessments, you will be charged a retake fee for the third attempt and every attempt thereafter. For more information [click here](https://my.wgu.edu/courses/course/4240006).

**Course Information**

**WGU Statement of Teaching Dispositions**

**Course Instructor**

**Course Instructor Group**

✉️ sarah.hudon.miller@wgu.edu

🔍 Schedule an Appointment with any Mentor

**Announcements**

**Course Tips**

**Course Search**

**Course Chatter**