

Biochemistry

This is a self-paced course with continuous enrollment

Biochemistry is a course that is the nemesis of many in that it frequently forces students to reevaluate their career goals. This is an updated version of the Biochemistry course that was taught to senior undergraduate and graduate students at the University of Colorado several years ago. It is intended for students who have struggled with the topic in the past, for those who desire a “pre-course” to familiarize themselves with the subject before they must take it for credit at their college or university, or for those who need a refresher course in the subject.

As Biochemistry is a topic that builds throughout the course, it is cumulative and students should be expected to be tested on material learned in previous lessons throughout the duration of the course. No textbook is required and there are no materials to purchase.

This course is geared to those who plan to enter the medical professions. Thus it is ideal for those planning to enter medical, veterinary, pharmacy, dental, physical therapy, physicians' assistant, nursing, medical technology, occupational therapy, epidemiology, public health, and other related programs and professions. It is a rigorous course that will almost certainly improve a student's performance in the classroom when they must take the course for credit.

The course will deal at length with the following Topics:

- Lesson 1 – Aqueous Solutions & the Scope of Biochemistry
- Lesson 2 – A Review of Thermodynamics
- Lesson 3 – The Amino Acids
- Lesson 4 – Techniques of Protein Purification
- Lesson 5 – The Primary Structure of Proteins
- Lesson 6 – The Secondary Structure of Proteins
- Lesson 7 – Tertiary and Quaternary Structure of Proteins
- Lesson 8 – Protein Folding and Dynamics
- Lesson 9 – Carbohydrates: Sugars and Polysaccharides
- Lesson 10 – Nucleic Acid Structure
- Lesson 11 – Lipids and Membranes
- Lesson 12 – Enzyme Basics
- Lesson 13 – Rates of Enzymatic Reactions
- Lesson 14 – Enzyme Catalysis
- Lesson 15 – Hemoglobin as a Model of Protein Function
- Lesson 16 – Allosteric and Regulatory Enzymes
- Lesson 17 – Introduction to Metabolism
- Lesson 18 – Glycolysis
- Lesson 19 – Glycogen Metabolism

Grading Policy

- A = 100 - 90
- B = 89 - 80
- C = 79 - 70

D = 69 - 60
F = 59 – Below

Students have the opportunity to purchase CEU and Course certificates upon successful completion of the course.

This course is worth 5 Continuing Education Units (5 CEUs)

- A score of 90% and above entitles the student to purchase a **Certificate of Academic Excellence**
- A score of 80-89% entitles the student to purchase a **Certificate of Merit**
- A score of 75% entitles the student to purchase a **Certificate of Appreciation**

Certificates cost \$25 and can be purchased after completion of the course.

Disclaimer

This class is for informational or refresher purposes, not certification. It cannot be substituted for any state, government, licensing, or educational requirements.

Questions? Feel free to contact me prior to enrollment in my class at webbycyberclasses@yahoo.com