

AP BIOLOGY

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AP Biology Course Overview

AP Biology is an introductory **college-level biology** course. Students cultivate their understanding of biology through **inquiry-based** investigations as they explore the following topics: evolution, cellular processes — energy and communication, genetics, information transfer, ecology, and interactions.

Prerequisites & College Course Equivalent

- Students should have successfully completed high school courses in biology and chemistry.
- The AP Biology course is equivalent to a two-semester college introductory biology course for biology majors.

AP Biology Course Content

Four Big Ideas:

- The process of evolution explains the diversity and unity of life.
- Biological systems utilize free energy and molecular building blocks to grow, to reproduce, and to maintain dynamic homeostasis.
- Living systems store, retrieve, transmit, and respond to information essential to life processes.
- Biological systems interact, and these systems and their interactions possess complex properties.

Units

Unit 1: Chemistry of Life

Unit 2: Cell Structure and Function

Unit 3: Cellular Energetics

Unit 4: Cell Cycle

Unit 5: Heredity

Unit 6: Gene Expression and Regulation

Unit 7: Natural Selection

Unit 8: Ecology

LABORATORY REQUIREMENT

This course requires that 25 percent of the instructional time will be spent in hands-on laboratory work, with an emphasis on **inquiry based** investigations that provide students with opportunities to apply the science practices.

AP BIOLOGY EXAM: 3 HOURS

Assessment Overview

- Solve problems mathematically — including symbolically
- Design and describe experiments and analyze data and sources of error
- Explain, reason, or justify answers with emphasis on deeper, conceptual understanding
- Interpret and develop conceptual models

Format of Assessment

Section I: Multiple Choice | 60 Questions | 1 Hour, 30 Minutes

50% of Exam Score

Multiple-choice questions also assess mathematical calculations.

Section II: Free Response | 6 Questions | 1 Hour, 30 Minutes

(includes 10-minute reading period) | 50% of Exam Score

- **Long Free Response (2 questions, one of which is lab or data-based)**
- **Short Free Response (4 questions, each requiring a paragraph length argument/response)**