

Course Description for AP Biology at B-CC

Aims/Objectives of the Course

The revised AP Biology course shifts from a traditional “content coverage” model of instruction to one that focuses on enduring, conceptual understandings and the content that supports them. This approach will enable students to spend less time on factual recall and more time on inquiry-based learning of essential concepts, and will help them develop the reasoning skills necessary to engage in the science practices used throughout their study of AP Biology.

To foster this deeper level of learning, the breadth of content coverage in AP Biology is defined in a way that distinguishes content essential to support the enduring understandings from the many examples or applications that can overburden the course. Illustrative examples are provided that offer teachers a variety of optional instructional contexts to help their students achieve deeper understanding. Additionally, content that is outside the scope of the course and exam is also identified.

Students who take an AP Biology course designed using this curriculum framework as its foundation will also develop advanced inquiry and reasoning skills, such as designing a plan for collecting data, analyzing data, applying mathematical routines, and connecting concepts in and across domains. The result will be readiness for the study of advanced topics in subsequent college courses — a goal of every AP course. The revised AP Biology course is equivalent to a two-semester college introductory biology course and has been endorsed enthusiastically by higher education officials.

Big Ideas for AP Biology

Big Idea 1: The process of evolution drives the diversity and unity of life.

Big Idea 2: Biological systems utilize free energy and molecular building blocks to grow, to reproduce and to maintain dynamic homeostasis

Big Idea 3: Living systems store, retrieve, transmit and respond to information essential to life processes.

Big Idea 4: Biological systems interact, and these systems and their interactions possess complex properties.

Structure of the AP Biology Exam

The AP Biology Exam consists of two sections: multiple choice and free response. Both sections include questions that assess students’ understanding of the big ideas, enduring understandings, and essential knowledge and the ways in which this understanding can be applied through the science practices. These may include questions on the following:

- the use of modeling to explain biological principles;
- the use of mathematical processes to explain concepts;
- the making of predictions and the justification of phenomena;
- the implementation of experimental design; and
- the manipulation and interpretation of data.

The exam is 3 hours long and includes both a 90-minute multiple choice section and a 90-minute free-response section that begins with a mandatory 10-minute reading period. The multiple-choice section accounts for half of the student’s exam grade, and the free-response section accounts for the other half.

The Difference Between IB Biology and AP Biology

This page summarizes the differences between IB Biology and AP Biology at B-CC, and addresses some common questions students and parents often have when deciding between the two courses.

Course	IB Biology	AP Biology
Duration	1 year course – double period	1 year course – double period
Grades	Seniors only	50% seniors, 50% juniors
Math used	Algebra I & Basic Statistics	Algebra I
Exam format	3-part exam at the end of the second year. Total of 270 minutes Paper 1: all multiple-choice, 60 minutes Paper 2: free response on core, 135 mins Paper 3: free response options, 75 mins	Section I (90 minutes) <ul style="list-style-type: none">• Multiple Choice – 63 questions• Grid in mathematic analysis – 6 questions Section II (90 minutes) <ul style="list-style-type: none">• Long Free Response – 2 questions• Short Free Response - 6 questions
IB/AP Score	IB Score of 1-7. IB Score is determined : -75% of the grade is from the IB exam -25% from in-class labs & projects	AP score of 1-5. AP Score is 100% based on exam.
College Credit (all colleges are different)	Many colleges grant the equivalent of 1 course (4 credits) of freshman-level Biology for a qualifying IB Biology score. Usually a score of 5,6, or 7 is required.	Many colleges grant the equivalent of 1 course (4 credits) for scores of 4 or 5 on the AP Biology exams.