



Fairfield Ludlowe High School - Fairfield Warde High School

ADVANCED PLACEMENT BIOLOGY

Insert Teacher Name

Insert Room Number

Insert Full Year/Semester

Insert Period

Insert Email Address

COURSE DESCRIPTION

The Advanced Placement Biology course is a college-level laboratory course. The course focuses on helping students gain enduring understandings of biological concepts and the scientific evidence that supports them through a “student directed” approach. The key concepts and related content that define the AP Biology course and exam are organized around four underlying principles called the *big ideas*, which are as follows: evolution, cellular processes: energy and communication, genetics and information transfer, and interactions. A student-directed, inquiry-based lab experience supports the AP Biology curricular requirements by providing opportunities for students to design plans for experiments, data collection, application of mathematical routines, and refinement of testable explanations and predictions. Such a lab experience reinforces the curriculum’s focus on quantitative skills.

COURSE OBJECTIVES

Students will understand the Four Big Ideas in AP Biology:

- The process of evolution drives 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.

Students will be able to perform the Science Practices of AP Biology:

- Use representations and models to communicate scientific phenomena and solve scientific problems.
- Use mathematics appropriately.
- Engage in scientific questioning to extend thinking or to guide investigations within the context of the AP course.
- Plan and implement data collection strategies appropriate to a particular scientific question.
- Perform data analysis and evaluation of evidence.
- Work with scientific explanations and theories.

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- Connect and relate knowledge across various scales, concepts and representations in and across domains.

UNITS OF STUDY

- Chemistry of Life
- Cell Structure and Function
- Cellular Energetics
- Cell Communication and Cell Cycle
- Heredity
- Gene Expression and Regulation
- Natural Selection
- Ecology

COURSE POLICIES AND REQUIREMENTS

GRADING (see FPS BOE [Policy 6154.1AR](#) and [Policy 6146.1AR](#))

o Cumulative/In-Progress Grade:

10% of the grade will be based on formative assessments, homework completion, and/or behavior

90% will be based on summative assessments, of which there will be a minimum of eight for this full-year course; these may include Unit Tests, Mid-Unit Tests, Projects, Performance Tasks, Summative Quizzes, etc.

o End-of-the-Year Grade:

80% of the overall course grade will reflect the student's mastery of course content and skills during the school year through the Cumulative/In-Progress Grade

10% of the End-of-the-Year course grade will be based on the Mid-Year Assessment

10% of the End-of-the-Year course grade will be based on the Final Assessment

o Grade Reporting:

All grades will be communicated through Infinite Campus

Summative assessment results will be reported back to the student within ten school days from the date of submission or the due date

o Guidelines for Late Work:

Late work will be accepted for both summative and formative tasks within a defined timeline agreed upon between the student and the teacher

The total points may be reduced as a penalty for late work

MATERIALS

EXPECTATIONS OF STUDENTS

EXTRA HELP