

# COURSE OVERVIEW

# Science

Course Number: 330

Course Name: Advanced Placement Biology

Content ID Code: SC

## Course Description

The Advanced Placement Biology course is to provide interested students with an opportunity to participate in a college-level experience in the high school, with the possibility of advanced placement and /or credits as they enter a college or university. Major biological themes include: chemical basis of life, metabolism of cells, genetic continuity, homeostasis in animals and plants, and how populations evolve and are part of ecosystems. All students are strongly urged to take the AP exam offered in May.

Credits:

Course Creation Date:

Local Course #:

## Instructional Time

Minutes:

Periods per Cycle

Cycles:

Clock Hours:

## Methods of Assessment

- |   |   |  |  |
|---|---|--|--|
| <input type="checkbox"/> 3-D Projects               | <input type="checkbox"/> Debates                | <input type="checkbox"/> Plays             | <input type="checkbox"/> Simulations             |
| <input type="checkbox"/> Anecdotal Records          | <input type="checkbox"/> Demonstrations         | <input type="checkbox"/> Portfolios        | <input type="checkbox"/> Speeches                |
| <input type="checkbox"/> Benchmarks                 | <input type="checkbox"/> Diary/Journals         | <input type="checkbox"/> Presentations     | <input type="checkbox"/> Standardized Tests      |
| <input type="checkbox"/> Chapter Tests              | <input type="checkbox"/> Final Tests            | <input type="checkbox"/> Projects          | <input type="checkbox"/> Student Self Evaluation |
| <input type="checkbox"/> Checklists                 | <input type="checkbox"/> Group Work             | <input type="checkbox"/> Publisher Tests   | <input type="checkbox"/> Teacher Made Tests      |
| <input type="checkbox"/> Class Participation        | <input type="checkbox"/> Interviews             | <input type="checkbox"/> Quizzes           | <input type="checkbox"/> Visuals                 |
| <input type="checkbox"/> Computer Products          | <input type="checkbox"/> Laboratory Experiences | <input type="checkbox"/> Research Projects |  |
| <input type="checkbox"/> Conferences                | <input type="checkbox"/> Observations           | <input type="checkbox"/> Role Play         |  |
| <input type="checkbox"/> Criterion-referenced Tests | <input type="checkbox"/> Performance Tasks      | <input type="checkbox"/> Rubrics           |  |

## Possible Adaptations

- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> Large Print Books      | <input type="checkbox"/> Hands on Activities | <input type="checkbox"/> Peer Tutors        | <input type="checkbox"/> Independent Study |
| <input type="checkbox"/> Audio Taped Tests      | <input type="checkbox"/> Individual Aide     | <input type="checkbox"/> Word Banks         | <input type="checkbox"/> Contracts         |
| <input type="checkbox"/> Extended Time          | <input type="checkbox"/> Manipulatives       | <input type="checkbox"/> Visual Cues        | <input type="checkbox"/> Mentorships       |
| <input type="checkbox"/> Preferential Seating   | <input type="checkbox"/> Flash Cards         | <input type="checkbox"/> Key Words          | <input type="checkbox"/> Telescoping       |
| <input type="checkbox"/> Advanced Organizers    | <input type="checkbox"/> A Notetaker         | <input type="checkbox"/> Acceleration       |  |
| <input type="checkbox"/> Additional Practice    | <input type="checkbox"/> Wait Time           | <input type="checkbox"/> Tiered Assignments |  |
| <input type="checkbox"/> Alternate Assessments  | <input type="checkbox"/> Computation Aids    | <input type="checkbox"/> Expansions         |  |
| <input type="checkbox"/> Visualize the Auditory | <input type="checkbox"/> Study Guide         | <input type="checkbox"/> Learning Centers   |  |

# COURSE OBJECTIVES

## Advanced Placement Biology

Total Objectives: 12

Course Objective #	Course Objective	Month
<b>The student will</b>		
330-01 Analysis	The student will analyze how the themes provide a framework for understanding biology.	September
330-02 Analysis	The student will explain the mechanisms of the theory of evolution.	September
330-03 Analysis	The student will analyze the interactions that occur within an ecosystem.	October
330-04 Analysis	The student will explain the formation of compounds and their resulting properties using bonding theories.	October
330-05 Evaluation	The student will list and analyze the characteristics of water that are emergent properties resulting from hydrogen bonding.	October
330-06 Evaluation	The student will name the four groups of organic compounds and explain their structures, formation and functions.	October
330-07 Synthesis	The student will describe the structure and function of all cellular organelles and explain how molecules are transported across the cell membrane.	November
330-08 Analysis	The student will explain the role of anabolic and catabolic pathways in cellular metabolism.	December
330-09 Analysis	The student will compare and contrast the functions of mitosis and meiosis and describe how these processes are regulated.	
330-10 Application	The student will explain how phenotypic expression is determined by the different patterns of inheritance.	
330-11 Analysis	The student will diagram how information encoded in DNA will be translated into the production of proteins. The student will explain how advances in recombinant DNA technology have affected our society.	
330-12 Application	The student will identify how viruses, bacteria and protists cause disease and relate this to the functioning of the immune system.	