

AP Biology

COURSE DESCRIPTION

This rigorous course is designed to be the equivalent of a college introductory biology course. It is typically taken by students that have a strong interest in, or desire to pursue a career in, the sciences. Topics covered include biochemistry, cells, photosynthesis, respiration, heredity, molecular, genetics, evolution, diversity of life, plant and animal form and function, and ecology. Laboratory work is an integral component in this class. This course follows the College Board Advanced Placement syllabus and students are strongly encouraged to take the National College Board exam in May.

PREREQUISITS

"B" or better in Biology & completion or concurrent registration in Chemistry I

TEXTS

Campbell, Neil A., J. Reece, and L. Mitchell. *Biology*, 5th edition (1999), Addison Wesley.
*Scheduled for new books in 2007-2008

Various Additional Readings as Assigned.

COURSE OVERVIEW

Our Advanced Placement (AP) Biology course was implemented in the 1999-2000 school year. Enrollment is typically less than 20 students, therefore only one section is offered. We meet for an extended class period consisting of 75 minutes. Each day class time is divided among lecture, discussion, and lab. Students spend about 20 minutes per day in the lab reinforcing material learned during lectures. This is in addition to the regularly scheduled lab days, accumulating to nearly one third of the class time. Lectures are presented in our science department's multimedia lab using PowerPoint, Shockwave animation, video clips, and a document camera. Students are provided skeleton outlines and expected to complete chapter reading assignments prior to lecture.

Labs are conducted using the traditional "wet-lab" protocol, as well as modified protocols utilizing the Vernier Lab Pro and probeware. Students complete pre-lab worksheets and a full lab report for each of the 12 required AP Biology Labs. Each lab report includes the following: title, introduction, purpose, variables, hypothesis, materials, procedure, data, analysis, conclusion, limitations, and recommendations. Students are provided a template early in the year to develop their skills in scientific writing. Lab groups are typically limited to four students, unless adequate materials are available. All lab assignments, however, are completed individually.

Students are not required, but strongly encouraged to take the AP Biology Exam upon completion of this course. Students are allowed to opt out of the course final exam if they continually demonstrate competence and prepare for and take the AP exam. AP Exam preparation is primarily the student's responsibility outside of class time. However, each of this course's unit exams is modeled after the AP Exam by offering both multiple-choice and free-response questions. Students are given review materials in the second semester and AP Biology test prep books are available in our school library.

The organization of our AP Biology curriculum is based on the Topic Outline in the *AP Biology Course Description* and the organization of our textbook. This focuses on the intricate details of