Fall 2010 AP Biology Higher Ed Validation Study

The Advanced Placement (AP®) Program, in partnership with Harris Interactive®, conducted a study of 60 representative AP-score-receiving colleges and universities to finalize the AP Biology curriculum. The AP program sought confirmation that—

- The revised course and exam aligns with the expectations of post-secondary institutions as to what content and skills AP students should learn in AP Biology to qualify them for successful placement into a subsequent college course; and
- The depth and breadth of the revised course content is appropriate for two semesters of introductory college-level study.

Qualified study participants included department chairs and/or faculty members, who either taught introductory college-level biology during the past three years or influence the department's credit- and-placement policy. The following institutions were represented:

American University
Amherst College
Barnard College
Baylor University
Boston University
Bowdoin College
Brigham Young University
CA State University, Fresno
CA State Polytechnic University
Carleton College
Carnegie Mellon University
Claremont McKenna College
Clemson University
Colby College
Colgate University
College of Charleston
College of the Holy Cross
Connecticut College
Cornell University
Davidson College
Georgetown University
Georgia Institute of Technology
Haverford College
Iowa State University
Johns Hopkins University
Loyola University, Chicago
University of Notre Dame
Ohio State University
Penn State University
Pepperdine University
Rochester Institute of Technology
Stanford University
SUNY Center, Albany
Trinity College
Union College
Villanova University
Washington State University
Wellesley College
Whitman College
University of Alabama
University of Arkansas, Fayetteville
University of CA, Los Angeles
University of CA, Riverside
University of CA, Santa Barbara
University of Central Florida
University of Connecticut
University of Colorado
University of Florida
University of Iowa
University of Kentucky
University of Mary Washington
University of Maryland
University of Pittsburg
University of Tennessee
University of Vermont
University of Virginia
University of Wisconsin, Madison
University of Wisconsin, La Crosse
University of British Columbia
Yale

The study's findings revealed that the AP Biology Curriculum Framework reflects the conceptual approach of a college-level biology survey course, and encourages teachers to approach the course in the same way that college instructors do—with a focus on science practices, inquiry, and depth of conceptual understanding. Specifically—

1) The scope of the revised course reflects the position of college and university instructors on the scope of introductory college-level biology courses.
2) The revised course emphasizes the key concepts and skills valued within the discipline of biology.
3) The revised course encourages instructional flexibility and depth in how students investigate science using college-level inquiry skills.

"The progression of the curriculum is logical and builds on prior steps, reinforcing the individual 'enduring understandings' multiple times as other topics are explored."

—College Faculty Participant

"If students 'get' and retain the enduring ideas outlined in the curriculum, they are going to be successful in our subsequent courses. . . . The course looks challenging, which is great."

—College Faculty Participant

With regard to the depth of conceptual understanding and breadth of course content coverage, the college faculty who participated in this study reported that the revised course—

- Is very effective at preparing students for success in sequent college-level biology courses
- Is highly favorable for granting credit and placement
- Balances depth of conceptual understanding with breadth of topic coverage and inquiry-based instruction to foster student success in sequent college-level courses.

"*I found this to be an effective, comprehensive, and coherent curriculum that hits on the key concepts in biology, which students will need for sequent courses. I was especially impressed by the emphasis on concepts and synthesis over facts and details; the balance between conceptual and factual knowledge is very strong. The hierarchical organization is highly effective and the cross-connections linking of what are traditionally considered distinct fields and concepts is impressive*."

—College Faculty Participant