Prototyping Science Education for Non-Science Majors

Margaret Byrne, Manager, Academic Support Unit, University of California, Davis, USA  
mmbyrne@ucdavis.edu

Richard H. Falk, Professor, Section of Plant Biology, University of California, Davis, USA  
rhfalk@ucdavis.edu

The University of California at Davis, like many California institutions, is faced with a growing student population and must address issues such as quality of learning, classroom space, the technology needs of specific disciplines, the learning needs of an increasingly technology-savvy student body and efficiency/cost-effectiveness.

One approach is to examine the use of Web-based courses. Biological Science 10, a traditional lecture-discussion course aimed at non-science majors, was restructured to diminish the need for physical classroom space and to provide “anytime, anywhere” learning through the use of the Web. It may be examined at http://bio2000.ucdavis.edu/bis10/.

We discuss instructional design issues, the learning/teaching challenges associated with non-science students facing a science course and the use of technology to improve science education as well as outcomes and student attitudes about “learning science”. The entire process of course development, from prototyping to formal offering, is presented. The problems that we encountered and their solutions are discussed.