

## Project Year

2002

## Project Team

Faculty: Louise Pasternack, Chemistry Department, Krieger School of Arts & Sciences

Fellows: Antonio Kim, Medicine, School of Medicine; Elaine Lin, Biology Department, Krieger School of Arts & Sciences

## Project Title

Introductory Chemistry Lab Demonstrations

## Audience

Undergraduate Hopkins students enrolled in the *Introductory Chemistry Laboratory* course.

## Pedagogical Issue

The *Introductory Chemistry Laboratory* course offers a unique opportunity for students to learn the properties and reactivity of many different molecules through a series of laboratory exercises. Students more fully grasp the chemical theories and principles learned from the textbooks when they have had some hands-on experience with those same principles in the lab. Many students have indicated that the experiments used in *Introductory Chemistry Laboratory* are, technically, very challenging.

## Solution

This team proposes to develop an interactive virtual lab manual that will facilitate understanding of the procedures and techniques required for each experiment. This resource will enhance students' ability to appreciate the chemistry behind each experiment without being preoccupied with difficult lab protocols. The virtual lab manual will consist of videos of experiment demonstrations, as well as digital still photographs of the chemicals and equipment involved in each lab. In addition, the manual will include pictures of what the products should look like upon completion of the experiments. Twelve lab demonstrations (six experiments in the fall, and six in the spring) will be performed by technically skilled teaching assistants of the *Introductory Chemistry Laboratory* course. After recording, the files will be edited and voice instructions added. The completed videos will be available to students in Quicktime format.

## Technologies Used

Web programming, WebCT, Digital Video