

Biotechnology is a growing field that increasingly includes applications from various fields including molecular biology, biochemistry, engineering, computing, and chemistry. SCCBEP at SJSU has been developing hands-on curricula and mobile kits in biotechnology that can be used in various levels of high school science courses. Many high school science teachers have little or no training in biotechnology. We offer workshops for teachers wanting to use our kits in the classroom. We also provide all equipment, reagents and supplies for the lab activities. We work with master teachers on curriculum development and to develop teacher leaders. Currently, most of the demand for our kits has been for use in biology classes and some chemistry classes. It is our goal to develop a Bioprocess Technology kits that can be used by an advanced level of science class, thus exposing these students to biotechnology applications, engineering career choices and incorporating inquiry-based project learning experiences. This project was initiated through past collaboration with SJSU Engineering which resulted in the beginnings of teaching resource materials, small kit from donated equipment and a pilot teacher workshop. In order to actualize the usage of a curriculum applicable for the classroom and kits to serve that purpose, our proposal is to work with teacher and university student interns to draft out a laboratory based curriculum. Leveraging with our existing Bridge-to-Employment Silicon Valley (BTE-SV) high school internship program, we aim to include a high school intern with the working group for the mentoring and role modeling experiences. The BTE-Silicon Valley program also includes company tours during the 6 weeks of summer. To benefit other students and teachers not part of this project, a company tour to Genecor where the applications of bioprocessing can be seen as reality will be part of the agenda for 2010. Once teachers are trained in the workshop and used the kit in the classroom, we expect to improve upon both curriculum offering and kit materials before broader dissemination through the BABEC (Bay Area Biotechnology Education Consortium) network.