

The Southwestern College Biotechnology Education and Training Sequence Investment (BETSI)

From the High School via the Community College and Baccalaureate to Industry

Southwestern College, a Hispanic-serving community college, is spear-heading a ***Biotechnology Education and Training Sequence Investment (BETSI) Project***. Southwestern College is the only community college that currently serves the needs of southern San Diego County for biotechnology training. This education and training pipeline will facilitate the movement of students through the educational system and prepare them for industry employment. The ***BETSI Project*** is a stepwise project designed to educate students from three feeder high schools, in the Sweetwater Union High School District, in biotechnology and recruit them into the Southwestern College Biotechnology Program. At Southwestern College, biotechnology students have the choice of three tracks: a certificate, an associate degree, or a transfer track. All three tracks lead to possible employment with the biotechnology industry.

The focus of the ***BETSI Project*** is outreach to three feeder high schools through faculty training and curricular support in the basics of biotechnology. Through summer workshops, high school biology teachers and selected students will work through new curriculum designed for high school science courses, practice strategies and use new equipment.

Each high school will have access to biotechnology equipment, kept at Southwestern College, and supplies for integrating biotechnology into the curriculum. The Project Coordinator, and community college students, trained through the Southwestern College Biotechnology Program, will serve as high school mentors and provide technical support as lab assistants to high school faculty. This approach ensures the successful implementation of the project curriculum and the continued use of the equipment at the high schools.

The ***BETSI Project*** will facilitate updating of the Southwestern College Biotechnology curriculum to address current topics that include the Ethical, Legal and Social Implications of the Human Genome Project. The community college articulation and partnerships with feeder high schools and 4-year transfer institutions will form the basis for segue into industry employment. This pipeline is referred to as the high school (2-year), community college (2-year), transfer institute (4-year) and industry partnership (2+2+4+industry). The transfer track of the Southwestern College Biotechnology Program distinguishes it from most vocational training programs now available at the community college level. Articulation of the Southwestern College Biotechnology Program with biotechnology programs at the four-year institutions will provide an influx of students from Southwestern College to these four-year colleges and universities.



The training aspect of the *BETSI Project* will concentrate on increasing the number of funded student research internships and cultivating collaborative relationships with the local biotechnology industry. Coordination of students' participation in internships with industry and academia will immerse them in the biotechnology environment and provide them with employment opportunities. This will lead to increased possibilities for economic development of the south San Diego County community through employment of trained individuals in industry.

The **multiple benefits** of the *BETSI Project* include:

- increased awareness of SUHSD high school students of biotechnology
- more SUHSD faculty trained in biotechnology
- expanded career options for community college students
- increased opportunities for pursuing baccalaureate and post-graduate education
- rise in numbers of skilled employees for local industry
- enhanced prospects for economic development for individuals and industry

