

- ▶ EXCELLENCE IN PARTNERSHIP ..... 1
- ▶ SAN MATEO COUNTY CENTRAL LABOR COUNCIL PROMOTES EFFECTIVE PARTNERSHIPS ..... 1
- ▶ GENENTECH DEMAND LEADS INNOVATION ..... 2
- ▶ SAN MATEO COUNTY WIB FUNDS INNOVATIVE BIO WORKFORCE TRAINING ..... 2
- ▶ ALAMEDA WIB GETS \$2 MILLION FOR BIO WORKFORCE ..... 2
- ▶ SKYLINE AWARDED \$700K FOR BAY REGION BIO EDUCATION..... 5

SPRING - SUMMER 2005 SKYLINE COLLEGE



# Biotech

CENTER FOR WORKFORCE DEVELOPMENT  
& SCIENCE MATH & TECHNOLOGY DIVISION

A PUBLICATION OF THE CENTER FOR WORKFORCE DEVELOPMENT AT SKYLINE COLLEGE 3300 COLLEGE DR SAN BRUNO CA 94066

## Excellence In Partnership



The California Community College Association for Occupational Education (CCCAOE) recognizes the Skyline College Bio-Manufacturing Training Partnership with Genentech, Inc. and the San Mateo County Workforce Investment Board with the prestigious statewide 2005 Excellence in Partnership Award. Since 2002, the Center for Workforce Development at Skyline College has partnered with the San Mateo County Workforce Investment Board (SMCWIB) and Genentech, Inc. to deliver an intensive bio-manufacturing certificate program that prepares highly skilled bio-manufacturing workers for great jobs at Genentech, Inc. This program has proved very successful with over a 90% training persistence rate and an approximately 80% placement rate at completion of the program. **Program features include:**

- 204 hours of instruction (9 units of college credit) developed by Genentech, Inc. and Skyline College and delivered by Skyline in an intensive 3 month program;
- 12 week on-the-job training subsidized by Genentech, Inc. and the San Mateo WIB;
- Genentech, Inc. identification of targeted positions;
- Targeted recruitment and assessment to Genentech, Inc., standards;
- Coordination with the San Mateo County Central Labor Council.

The partnership demonstrates the capacity to bridge the diverse organizational cultures represented by education, government, labor, and business, and deliver highly effective workforce development programs to ensure California's economic vitality.



PHOTO: ADOLFO LEIVA

L TO R: WILLIAM ALLEN, SAN MATEO COUNTY WIB / PAIGE LLOYD, GENENTECH / WILLIAM WATSON, SKYLINE COLLEGE CENTER FOR WORKFORCE DEVELOPMENT

### Skyline Partners With The San Mateo County Central Labor Council

The San Mateo County Central Labor Council and the California Labor Federation support creative partnerships between schools, colleges, businesses, unions and the public sector to expand the skills of California workers. Labor encourages the creation of high skill training programs and high road partnerships to keep all workers well trained and competitive. Labor is an active participant on state and local Workforce Investment Boards, joining community partners to maximize the use of government programs including the Workforce Investment Act, The Employment Training Panel and other economic development grants.

In 2001, thousands of airline mechanics, flight attendants, hotel and restaurant workers, security screeners, drivers, parking lot attendants, construction and other workers were laid off. The San Mateo County Central Labor Council Community Services Program lead an outreach effort and partnered to deliver a comprehensive response which included access to re-employment and re-training services, healthcare, hardship funds and food.

In 2002, the San Mateo County Central Labor Council joined with Skyline College and the San Mateo County WIB in applying for and receiving a U.S. Department of Labor grant to retrain dislocated air transportation industry workers. That successful effort, spearheaded by Rayna Lehman, Community Services Director, Raya Zion, Workforce Development Director, and Shelley Kessler, Labor Council Executive Director, established the award winning bio-manufacturing program at Skyline College and illustrates Labor's central role in regional economic and workforce development. The Labor Council's on-going effort includes extensive job development and job placement in the growing biotech sector.



## Genentech Demand Drives Innovative Workforce Partnerships

On April 7, 1976, Herb Boyer and Bob Swanson founded Genentech, Inc., in a semi-vacant South San Francisco warehouse based on the belief that recombinant DNA technology would produce commercially viable, breakthrough medicine. That belief led Genentech, Inc. to become the second



largest biotechnology company in the world, discovering, developing, and manufacturing biotherapeutics for significant unmet medical needs.

Eighteen of the currently FDA approved biotechnology products originated from or are based on Genentech science. Genentech, Inc. manufactures and commercializes twelve biotechnology products in the United States, which have been used to treat more than one million patients worldwide.

Genentech's development pipeline now numbers over thirty projects. Recently, total operating revenues for the first time exceeded \$1 billion in a single quarter. Following Genentech's pioneering efforts, the life sciences industry has grown steadily in South San Francisco with over 80 biotech firms in a two-square mile industrial zone making the area arguably the highest concentration of biotechnology firms in the world.

Genentech's success led to the development of an innovative partnership 2002 that develops highly skilled workers for great jobs in bio-manufacturing. Genentech's *Hank Stern, Monica Poindexter, Paige Lloyd, Pat McKay* and *Pam Leung* serve key roles in the partnership which just earned recognition from the CA Community College Association for Occupational Education for Excellence In Partnership. ([www.gene.com](http://www.gene.com))

## San Mateo County Workforce Investment Board Targets High Growth Jobs in Bio-Manufacturing

The San Mateo County Workforce Investment Board establishes and oversees the implementation of policies which promote an integrated, innovative workforce development system. The WIB includes thirty-one members comprised of business, educational entities, labor organizations, community-based organizations, economic development entities, one-stop partners, local government or elected officials, and a Board of Supervisors designee.

The WIB develops policy and provides the guidance for, and exercises oversight with respect to, activities under the local plan for its workforce development area in partnership with San Mateo County Board of Supervisors.

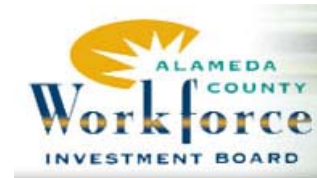


In 2002, San Mateo County Workforce Investment Board partnered with Skyline College, San Mateo County Central Labor Council and others in applying for and receiving a U.S. Department of Labor grant to retrain dislocated air transportation industry workers.

That successful effort established the award winning bio-manufacturing program at Skyline College and illustrates the WIB's central role in regional economic and workforce development. The Chair of the Workforce Investment Board is *William J. Allen*. *Fred Stone*, SMC Workforce Development Manager; *Emma Gonzalez*, Human Services Supervisor; and *Claudia Andrade*, Employment Services Specialist, also serve key roles in the partnership. ([www.smchsa.org](http://www.smchsa.org))

## The U.S. Department of Labor Awards an Alameda County WIB \$2 Million for Bay Area Biotech Consortium Career Pathway Project

With an estimated 85,000 biotech-related manufacturing jobs already in the Bay Area and the industry continuing to grow, there is an increased demand for entry-level and skilled biotech manufacturing workers.





In response to growing employer demand for biotech manufacturing workers, the Alameda County Workforce Investment Board has developed a partnership to develop career pathways in biotech manufacturing, facilities management, quality control, and product engineering. Key partners include: Alameda and San Mateo County Workforce Investment Boards; Genentech; Alza; Baxter; Chiron; Abgenix; Skyline College; Ohlone College; Opportunities Industrialization Center West; Adecco; and Gruber and Pereira Associates.




The program will further expand the award winning bio-manufacturing training partnership underway by Skyline College, Genentech, and the San Mateo County WIB to train more entry-level biotech manufacturing workers.

This program will take laid-off workers from the aerospace, airline, and IT industries and retrain them for biotechnology positions including quality control and product engineering. Another partner in this program..... **continued on page 5**

**BASIC SKILLS FOR WORKFORCE DEVELOPMENT**  
**Skyline College & Cañada College**



**SKYLINE COLLEGE CENTER FOR WORKFORCE DEVELOPMENT**  
 3300 COLLEGE DR SAN BRUNO CA 94066 WWW.SKYLINECOLLEGE.EDU/WORKFORCE

## A Learning Community Developing Education and Careers

The Gateway Program is designed to prepare transitioning foster youth and adults for education programs in allied health and bioscience. Students may opt to pursue an A.A. degree and prepare for transfer to universities. The program will consist of 14 weeks of intensive contextualized basic skills preparation in math and English.

### This 14-week 13-15 variable unit program:

- prepares students to satisfy math and English pre-requisites needed for education programs in allied health and bioscience;
- equips students with the necessary English and math skills needed to succeed in bioscience or allied health studies;
- nurtures the soft skills needed to succeed in college and the workplace such as consistent and punctual attendance and appropriate preparation for the task at hand;
- features a **Learning Community** design to enrich the learning experience;
- includes dedicated counseling and program coordination for student support.

Enrollment in this learning community will satisfy the financial aid requirement for being enrolled in a fulltime course of study. (There may be other requirements, such as timely application, family need, or residency.) Additionally, students may access pre-arranged after school employment while enrolled. The program includes field trips to hospitals and leading biotechnology companies and incorporates ropes course training to enhance community cohesion.

### Description of Courses

In higher education, curricular learning communities are classes that are linked or clustered during a program term, often around an interdisciplinary theme, and enroll a common cohort of students. Instructors plan the program collaboratively.

- **MATH:** The math course is a basic skills class that leads to Elementary Algebra, a basic requirement for entrance into allied health degree programs.
- **ENGLISH – READING:** The reading and English courses are remedial courses one level below transfer-level. Course content and context is contextualized to address the learning needed to succeed in an allied health program and at work in an allied health profession.
- **LEARNING SKILLS:** The learning skills class provides either individualized or small group instruction by tutors or instructional aides to address problems in English, reading, and math. In addition to one-on-one and small group tutorial, this class provides computer assisted learning programs and on-line tutorials.
- **CAREER PREPARATION:** The Career Class is a comprehensive approach to life and career planning that includes self-assessment, career exploration, and job seeking strategies.

The Gateway Program is funded by the Walter S. Johnson Foundation, The William and Flora Hewlett Foundation, The San Mateo County Workforce Investment Board, Skyline College and Cañada College. Additional Partners include: Gruber & Pereira Associates, LLC., CA School Age Consortium, and the California Community College Board of Governors' Career Ladders Project.



# Bio-Manufacturing

CERTIFICATE PROGRAM



12 WEEK INTENSIVE CAREER PREPARATION EARNING 9 UNITS OF COLLEGE CREDIT

SKYLINE COLLEGE CENTER FOR WORKFORCE DEVELOPMENT  
3300 COLLEGE DR SAN BRUNO CA 94066 WWW.SKYLINECOLLEGE.EDU/WORKFORCE

## INTENSIVE 12 WEEK BIOMANUFACTURING CAREER PREPARATION

A CA COMMUNITY COLLEGE ASSOCIATION FOR OCCUPATIONAL EDUCATION "EXCELLENCE IN PARTNERSHIP" WINNER

**B**iototechnology is a term used to cover the utilization of living things in industry, the environment, medicine and agriculture.

Biotechnology is used in the production of foods and medicines, the reduction of wastes and the creation of renewable energy sources.

Bio-Pharmaceutical Manufacturing training prepares graduates for work in Biotechnology and Pharmaceutical Manufacturing.

These positions include Bio-processing Technicians, Labeling and Packaging Operators, Instrument and Media Prep Technicians and positions in manufacturing pharmaceuticals. Graduates perform tasks such as preparing buffer solutions, operating filtration and column chromatography, cleaning and preparing glassware, operating autoclaves and performing under sterile conditions and utilizing Good Manufacturing Practices (GMPs). Starting salaries range from \$30k - \$40k per year.

The Program includes a twelve-week daytime biotechnology classroom and laboratory format that meets on MWF from 9:00 a.m. - 2:00 p.m. Additional instruction in Mathematics will be offered by arrangement. Upon completion of this 12-week certificate program, students may compete for a 12-week paid work experience at a local biotechnology company. The twelve-week Classroom & laboratory section will include topics in chemistry (measurement systems, molecules, acids and bases, volume and density and safe laboratory practices), mathematics, mechanical systems, microbes, Good Manufacturing Practices and regulations. Students will be expected to complete and document laboratory activities



appropriately, access and document information on a computer and communicate information effectively with a team.

Skyline's Center for Workforce Development and the Science Math and Technology Division partner to deliver the bio-manufacturing certificate program. The Science, Mathematics, & Technology Division offers courses required for General Education, technical, and majors-level to assist

students in achieving their individual educational goals, prepare students for transfer to four-year institutions, and help students in career planning and development. The division dean is *Michael Williamson* who led the development of the curriculum for the bio-manufacturing program.

The program is team taught by instructors *Nick Kapp*, Ph.D. (Biochemistry) and *Mousa Ghanma*, M.S. (Medical Biology). Contextualized math is taught by *Evan Leach*. The Center for Workforce Development is directed by *William Watson*. The Program Services Coordinator for this program is *Adolfo Leiva*. The Science, Math and Technology Division and the Center for Workforce Development enjoy the leadership of Skyline College Vice President of Instruction, *Regina Stanback-Stroud* and Skyline College President, *Dr. Victoria Morrow*. San Mateo County Workforce Investment Board President is *William Allen*. Additional support for this program is provided by San Mateo County Workforce Development 's *Fred Slone*, *Emma Gonzales*, *Eduardo Kiryczun*, and *Claudia Andrade*.

Students admitted to this program should be prepared for an intensive, high quality educational experience. Over 90% of students admitted to this program complete the program successfully and approximately 80% of those successfully complete for placements at Bay Area Biotechnology companies. 100% of recent program graduates rated their overall experience at Skyline College as "Excellent" and designated an "Excellence in Teaching Award" for instructor Mousa Ghanma. Students must first establish eligibility for the program by contacting San Mateo County Workforce Development at 650-802-3349.

..... continued from page 2

Opportunities Industrial Centers West, will support this effort by providing remediation skills in English, math, and employment readiness. The project is expected to:

- Train up to 150 individuals for entry-level, pathway positions as biotech manufacturing technicians at wages of \$35,000 - \$40,000 per year;
- Retrain 40 dislocated engineers from the airline, aerospace, and IT sectors for career pathway positions in facilities management, quality control, and product engineering at wages of \$50,000 - \$80,000 per year.

### Skyline College Receives over \$700,000 to Enhance Bay Region Community College Bio-Manufacturing Training

The California Community College Chancellor's Office awarded Skyline College over \$700k to enhance bio-manufacturing education throughout the Bay Area through 2006. The award represents the California Community College system wide commitment to economic development through the support of regionally designed initiatives called Industry Driven Regional Collaboratives.

Located just south of San Francisco, Skyline College serves primarily the northern portion of San Mateo County, which includes South San Francisco, the birthplace of biotechnology. The life sciences industry has grown steadily in South San Francisco with over 80 biotech firms in a two-square mile industrial zone making the area arguably the highest concentration of biotechnology firms in the world.

the unprecedented number of FDA approvals for new Bay Area Bio-manufacturing products creates an increased demand for bio-manufacturing workers over the next two years.

To meet the Bay Area's regional bio-manufacturing workforce needs, this Bay Biotech Workforce Collaborative will



work with industry, education, workforce development agencies, labor, government partners and community based organizations to:

- collaborate with leading Bay Area Bio-manufacturing firms to create an expansive and well-coordinated industry driven regional collaborative;
- work with Northern California Biotechnology Center and community to build a regional career ladders approach to bio-manufacturing that is articulated with and recognized by industry;
- facilitate Bio-manufacturing workforce education throughout the region;
- work with Bio-link to provide training to community college faculty to deliver skill-based training for dislocated and underemployed workers;
- collaborate with Career Ladders Project to inform statewide policy that fosters the development and sustainability of career ladders programs.

In the spirit of innovation and commitment to regional economic development, The Center for Workforce Development at Skyline

College partners with the San Mateo County Workforce Investment Board, Genentech and others to deliver an intense bio-manufacturing certificate program for workers from a variety of industries. Since the advent of the Workforce Investment Act of 1998, workforce investment boards and community colleges throughout the nation have blazed new trails to create these collaborations without clear and effective policy to guide them.

The Skyline - San Mateo WIB collaboration has proved so successful for Genentech, that the model is being studied and replicated throughout California and the United States. Colleges in California like Ohlone College, Mira Costa College, and the College of the Canyons report success in replicating the model.

Key features of this model include WIB and college coordination to create college-credit training in manageable time frames for high demand jobs with career ladder opportunities. Skyline College Vice-President of Instruction, Regina Stanback-Stroud, board member of the national policy group, Workforce Alliance, said, ***"The model demonstrates how California Community Colleges serve the California economy."*** William Watson, director of the Center for Workforce Development said, ***"This award will ultimately lead to great jobs for Bay Area workers and support a phenomenal industry that is saving lives."***

The successful partnership that led to this award has been featured at conferences including: The California Workforce Association, California Community College Association of Occupational Education, the Academic Senate for the California Community Colleges, the League for Innovation in the Community College and featured in the Journal of the American Association of Community Colleges and on CNN.

## The Center for Workforce Development at Skyline

[www.skylinecollege.edu/workforce](http://www.skylinecollege.edu/workforce) 650-738-7035

Skyline College contributes to the regional economy by creating and delivering effective career programs that allow workers to earn college credit while preparing for upwardly mobile careers. The Center for Workforce Development represents an institutional commitment across departments to prepare a highly skilled workforce for the new economy. The Center's programs feature model programs in bioscience and allied health including both certificate and degree programs that provide strong links to workplace skills including ESL when needed, and workplace communication. Programs are enriched by a wide array of student services that provide the support needed to ensure success.

Programs are developed in collaboration with employers and industry associations so that curriculum content reflects labor market needs and industry occupational standards. Additional partners include workforce development agencies, social service agencies, and community-based organizations including organized labor. The CA Community College Association for Occupational Education awarded the Skyline Bio-Manufacturing Partnership with Genentech and the San Mateo County Workforce Investment Board the prestigious 2005 statewide

**"Excellence in Partnership Award."**



## Skyline College

3300 COLLEGE DRIVE  
SAN BRUNO, CA 94066  
WWW.SKYLINECOLLEGE.EDU



**Victoria Morrow, Ph.D.**  
PRESIDENT

Skyline College opened in 1969 and is one of three community colleges in the San Mateo County Community College District. The 111-acre site, just west of Skyline Boulevard in San Bruno, CA is conveniently available to residents of South San Francisco, Daly City, San Bruno, Pacifica, and other North County communities.

Skyline College offers many cultural, education, and vocational opportunities for students of all ages. Many Skyline graduates transfer to the numerous colleges and universities in the area. The needs of these students who transfer to upper-division work are carefully provided for in the curriculum. Other Skyline

college students, having achieved the Associate in Arts (A.A.) or Associate in Science (A.S.) degree or a vocational certificate find either employment or advancement in business and industry. Serving the birthplace of biotechnology, Skyline is a good neighbor to the largest concentration of biotechnology companies in the world!

Skyline College is a comprehensive community college that provides learner-centered education in a culturally rich and socially responsible environment. The College is proud of its tradition of open access and its climate of innovation. Technology, community partnerships, and economic development are hallmarks of the College. Skyline offers an array of services and instructional programs to support students in achieving their educational goals and to prepare them for a rapidly changing world.



**SAN MATEO COUNTY COMMUNITY COLLEGE BOARD OF TRUSTEES**  
Helen Hausman, Richard Holober, Dave Mandelkern, Karen Schwarz,  
Patricia Miljanich, Patrick Burns, *Student Trustee*, **Ron Galatolo, Chancellor**

THIS PUBLICATION IS FUNDED IN PART BY THE CHANCELLOR'S OFFICE, CALIFORNIA COMMUNITY COLLEGES



## Center for Workforce Development

3300 COLLEGE DRIVE  
SAN BRUNO, CA 94066  
[www.skylinecollege.edu/workforce](http://www.skylinecollege.edu/workforce)  
650-738-7035

**William Watson**  
DIRECTOR

**Adolfo Leiva**  
PROGRAM SERVICES  
COORDINATOR