

# BIOTECHNOLOGY!

*Skyline College pathway leads to exciting career!*

## What is Biotechnology?

The use of biological knowledge and modern techniques to make useful products from living organisms and processes. Advances in biotechnology improve lives through new vaccines, pharmaceutical and gene therapies, diagnostics tests, sustainable agriculture, food innovations and bio-based manufacturing.

## The Bay Area Life Sciences industry

- Largest cluster of life science companies in the world
- 4,028 life sciences establishments\*
- Employs 178,958 workers\*
- Entry-level jobs pay \$19-25+ to start






\*BIOCOM 2021 California Economic Impact Report



**Skyline's program** State of the art facilities and equipment similar to the workplace • small classes taught by experienced professors and industry experts • no entrance exams • no GPA requirements • emphasis on team collaboration, quality, and following procedures • financial aid and Promise Program (2 years free college) • internships • resume preparation and job placement assistance.

Specialized coursework includes: PCR • cell culture process • ELISA • protein purification • HPLC • Quality Control • cGMP • GLP • SOP • and many other hands-on techniques.

## Our Students

-  **High school graduate**
-  **Dual-enrollment student**
-  **4-year college graduate** seeking hands-on training
-  **Currently employed in life sciences** and seeking new skills
-  **Exploring new careers/fields** and interested in improving lives and benefitting the environment, animals, and plants.



**Skyline College CERTIFICATES**  
(2-3 semesters)

- Biotechnology Manufacturing Assistant
- Biotechnology Manufacturing Technician



**Skyline College ASSOCIATE of SCIENCE**

- Biotechnology degree (2 years full time)
- Skyline's AS is transferrable to Solano Bachelor's

**BACHELOR of SCIENCE in Biomanufacturing at Solano College**

(2 years full time • part-time option)

**Credential Tuition Cost:** \$46/unit.

- Biotechnology Manufacturing Assistant \$782 (17-19 units)
- Biotechnology Manufacturing Technician \$1,518 (33 units)
- Associate of Science degree: \$2,760 (60 units)
- Bachelor of Science degree Solano: (Total units 60 incl. 48 units upper division and 12 elective units). 60 x \$130/unit = \$7,800.



**JOBS**

- Biomanufacturing Associate
- Manufacturing Lab Associate
- Production Technician
- Bioprocessing Technician
- Lab Assistant/technician
- Research Assistant
- Research Associate Technician
- Quality Control Technician
- Biological Technician

**BACHELOR of SCIENCE in Biology or Biotechnology**

- CSU • UC • HBCU
- Other Colleges & Universities

## Where our graduates work



and other companies and labs throughout the Bay Area

Instructor Contact Information:

**Nick Kapp, PhD** Biotechnology Department Chair email: [kapp@smccd.edu](mailto:kapp@smccd.edu)

[www.skylinecollege.edu/biotechnology](http://www.skylinecollege.edu/biotechnology)

# CERTIFICATES AND DEGREES

DEGREE	YEAR/ SEMESTER	COURSE NAME		UNITS
<b>BIOTECHNOLOGY MANUFACTURING ASSISTANT CERTIFICATE</b>  CERTIFICATE OF ACHIEVEMENT	<b>YEAR 1 FALL</b>	BTEC 400	Foundations of Biotechnology	2 units
		MATH 200	Elementary Probability & Statistics	4 units
	<b>YEAR 1 SPRING</b>	BTEC 170	Principles of Applied Bioscience	3 units
		BTEC 171	Laboratory Principles of Applied Bioscience	1 unit
		CHEM 210	General Chemistry	5 units
	<b>YEAR 1 SUMMER</b>	COOP 670	Cooperative Work Experience	2-4 units
	<b>TOTAL REQUIRED UNITS: 17-19 UNITS</b>			
<b>BIOTECHNOLOGY MANUFACTURING TECHNICIAN CERTIFICATE/DEGREE</b>  *And required General Education coursework and electives as needed to meet the minimum 60 units required for the Associate Degree.	<b>YEAR 1 FALL</b>	BTEC 400	Foundations of Biotechnology	2 units
		MATH 200	Elementary Probability & Statistics	4 units
	<b>YEAR 1 SPRING</b>	BTEC 170	Principles of Applied Bioscience	3 units
		BTEC 171	Laboratory Principles of Applied Bioscience	1 unit
		CHEM 210	General Chemistry	5 units
	<b>YEAR 1 SUMMER</b>	COOP 670	Cooperative Work Experience	2-4 units
	<b>YEAR 2 FALL</b>	BTEC 150	Biotechnology Instrumentation: Quality Control and Genetic Engineering	4 units
		BIOL 230	Introduction to Cell Biology: Core II	5 units
	<b>YEAR 2 SPRING</b>	BTEC 210	Business and Regulatory Practices in Biotechnology	3 units
		BTEC 220	Cell Culture and Protein Recovery	4 units
	<b>TRANSFER</b>	Transfer Certificate in alignment with admission requirements for B.S. in Biomanufacturing at Solano and MiraCosta Community Colleges.		
	<b>TOTAL REQUIRED UNITS: 33-35 UNITS</b>			