

NOTES		ACADEMIC PROGRAM OF STUDY	CORE COMPETENCIES	JOBS & WAGES
ADVANCED LEVEL	Transfer to the CSU/UC system requires completing articulated coursework. An Associate of Science Degree may be obtained by completing General Education requirements, in addition to the required courses for the major.	<i>University Degree</i>	Further research in progress	<i>Advanced Level Employment:</i> *Manufacturing Assistant *Production Technician *Laboratory Technician *Quality Control Technician \$23 - 25/hr *Biotechnician *Research Technician *Staff Research Associate \$18 - 23/hr
		<i>Advanced Level Certificate/A.A./A.S. Degree/Transfer</i>		
		AS Biotechnology (55 units) BIOL 3 Microbiology (5 units) BIOL 10 Introduction to Biology (4 units) BIOL 32 Scientific Literature (2 units) BIOL 33 Applied Immunology (6 units) BIOL 34 Applied Molecular Genetics (6 units) BIOL 230B Introduction to Instrumentation II (2 units) CHEM 30A Introductory Inorganic Chemistry (4 units) CHEM 30B Introductory Organic and Biochemistry (4 units) CIS 1 Introduction to Computer Information Systems (4 units) ENGL 1A Composition and Reading (4 units) ENGL 53 Technical Writing (3 units) HUMAN 30A/PHIL 30A Human Values - Ethics (3 units) MATH 1 Pre-Calculus (4 units) PHYS 10 Introduction to Physics (4 units) Plus General Education Requirements (6 units)		
MID LEVEL		<i>Mid Level Certificate</i>	Further research in progress	<i>Intermediate Level Employment:</i> *Research Assistant *Research Technician \$18 - 23/hr *Instrumentation and *Calibration Media Prep *Assistant Laboratory *Assistant Laboratory Technician *Quality Control Technician or Assistant \$18 - 20/hr
		Certificate of Achievement: Biotechnology (48 units) BIOL 3 Microbiology (5 units) BIOL 10 Introduction to Biology (4 units) BIOL 32 Scientific Literature (2 units) BIOL 33 Applied Immunology (6 units) BIOL 34 Applied Molecular Genetics (6 units) BIOL 230B Introduction to Instrumentation II (2 units) CHEM 30A Introductory Inorganic Chemistry (4 units) CHEM 30B Introductory Organic and Biochemistry (4 units) CIS 1 Introduction to Computer Information Systems (4 units) ENGL 53 Technical Writing (3 units) MATH 1 Pre-Calculus (4 units)		
ENTRY LEVEL		<i>Entry Level Certificate</i>	Further research in progress	<i>Entry Level Employment:</i> *Glassware washing *Documentation Coordinators *Laboratory Support Workers \$16 - 18/hr *Laboratory Technician \$18 - 20/hr *Laboratory Assistant *Media Prep Technician \$15 - 18/hr
	BRIDGE	Certificate Of Proficiency: Biotechnology (17.5 units) BIOL 230A Scientific Instrumentation I (2 units) BIOL 232 Readings in Science (2 units) CIS 200 Computer Concepts and Applications (1.5 units) COPEL 484A Occupational Work Experience, Biotechnology (2 units) COUN 224 College Preparedness (2 units) ENGL 201B Preparation for Composition and Reading (3 units) MATH 201 Elementary Algebra (4 units) MATH 218 Math Workshop (1 unit)		

○ Transportation & Logistics Programs in development ➔ Pathways (within Programs)
○ Advanced Manufacturing DBS Programs ➔ Optional Pathways
○ BioSciences * Prerequisites Certificates/Permits



BIOTECHNOLOGY

The Biotechnology Sector translates into high paying jobs for individuals with post-secondary education.

**HIGH DEMAND
HIGH GROWTH
HIGH WAGE**

What is driving growth in the Biotechnology Sector?

Investments in bioscience development initiatives

Advancing commercialization of research discoveries

Building research and development capacity

Actively addressing bioscience's need for early-stage capital

Biotechnology Workers EARN MORE:



\$7.25/hr

National Minimum Wage



\$8.00/hr

California Minimum Wage

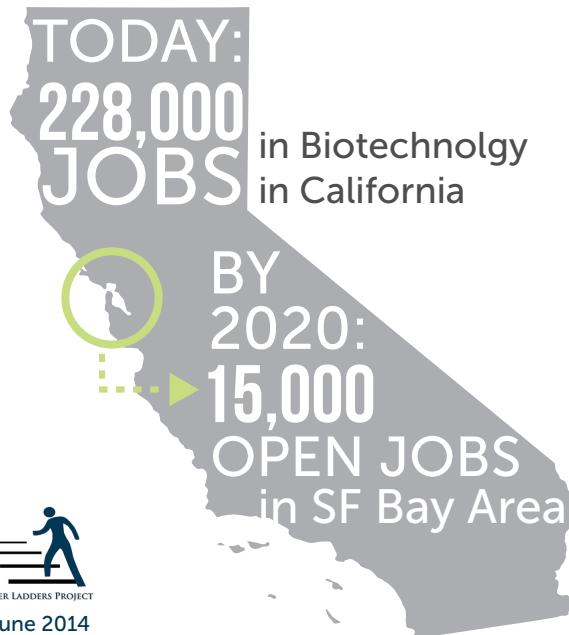


\$23.23/hr

Median Wage for Biotechnology Occupations* in SF Bay Area

*those occupations that require more than a high school degree and less than a 4-year degree

Biotechnology is GROWING FAST



What jobs are in the Biotechnology Sector?

Research



Pharmaceuticals



Medical Devices



Distribution



BAY AREA SNAPSHOT

What can workers with some post-secondary experience expect?

\$29/hr

761 open jobs by 2022



Production Specialist

\$25/hr

266 open jobs by 2022



Laboratory Technician

\$22/hr

367 open jobs by 2022



Technical Services Assistant

\$20/hr

434 open jobs by 2022



Manufacturing Assistant



June 2014

Data and information sources: CCC Doing What Matters for Jobs and the Economy, California Employment Development Department, Economic Modeling Specialists International (EMSI), Alameda County WIB