LIFE SCIENCES/ BIOTECHNOLOGY SECTOR PROFILE

Key Findings from the Los Angeles County Sector Analysis Project

August 2021

C·O·E
CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

CALIFORNIA COMMUNITY COLLEGES
LAOC RC
los angeles | orange county regional consortium

POWERED BY
California Community Colleges

Prepared by:
Los Angeles County
Center of Excellence
for Labor Market Research

Introduction

To support the collaborative planning and development of career education (CE) programs and to inform regional investments in Los Angeles County, the Los Angeles County Center of Excellence has developed a series of sector profiles examining trends in the labor market and postsecondary education and training programs addressing local hiring needs.

These profiles highlight in-demand and well-paid middle-skill jobs—those jobs that typically require some form of education or training beyond a high school diploma, but less than a bachelor's degree. These occupations are a critical component of the workforce overall and support the economic vitality of the region and state.

This profile of the life sciences/biotech sector summarizes key findings on current and projected workforce demand, hourly wages, job postings, and program and training data from area community colleges and other training providers.

Quick Facts

Employment

33,720
Jobs in 2019

3,107
Annual Job Openings

-6%
5-year Projected Growth

$24.60
Average Hourly Earnings

Education

8
Community Colleges and Other Training Providers with Programs

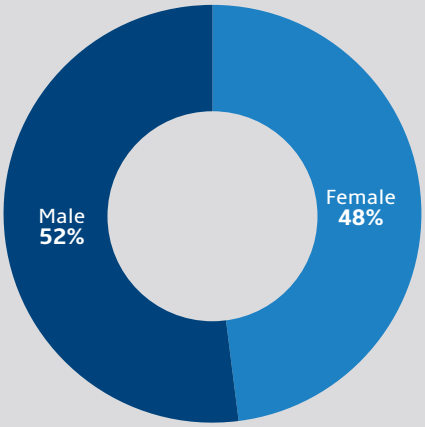
247
Community College Students Enrolled (2018-19)

93
Community College Awards (2019-20)

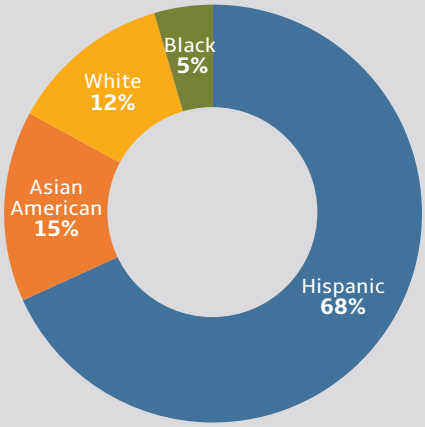
5
Awards from Proprietary Schools/Other Training Providers (2018-19)

Student Demographics

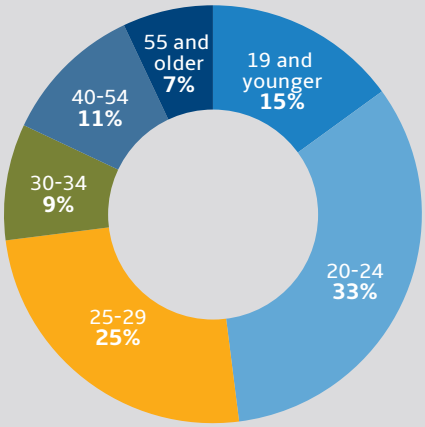
Student Gender



Student Race/Ethnicity[2]



Student Age



[1] **Impact of the COVID-19 pandemic:** This profile relies largely on 2019 employment and education data preceding the pandemic. The exception is job posting data from 2020. Due to severe economic impacts from the pandemic, job posting data should not be considered an accurate depiction of employer demand; however, the frequency of certain data points can provide insights into the types of workers and skill sets that employers are seeking. Annual job openings are derived from the labor market analytics firm Emsi whose projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy during the projection period will be at approximately full employment or potential output. At this time, it is not possible to quantify the economic impact of COVID-19 on projections of occupational employment. A complete list of data sources is provided on the last page of this profile.

[2] Please note: This report uses race and ethnicity data from LaunchBoard collected by the California Community Colleges. The terms in this document, including white, Hispanic, and Black, adhere to the terms and definitions the California Community Colleges use in collecting its data. For definitions, please refer to https://webdata.cccco.edu/ded/std/std10.pdf.

Student Employment Outcomes

Data on community college students exiting life sciences/biotech programs in Los Angeles County shows a steady increase in those who obtained employment in a job closely related to their field of study, rising from 69% to 82% during the last three years of available data. On average, these students earned a median income of $52,106 after exiting a life sciences/biotech program.

Exhibit 1. Students with a job closely related to their field of study

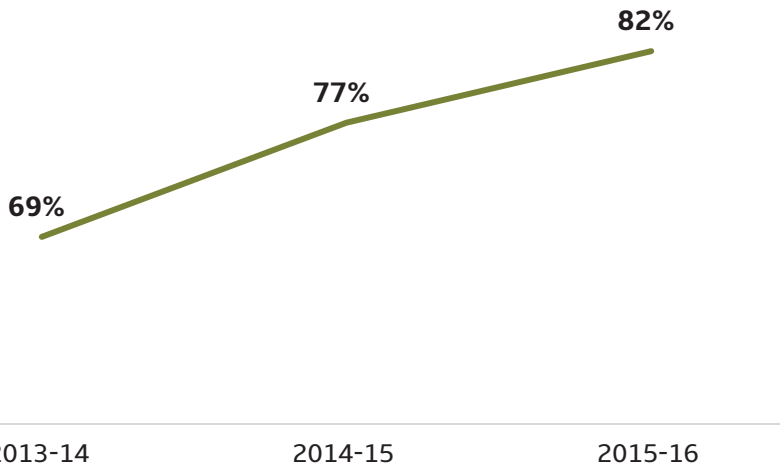
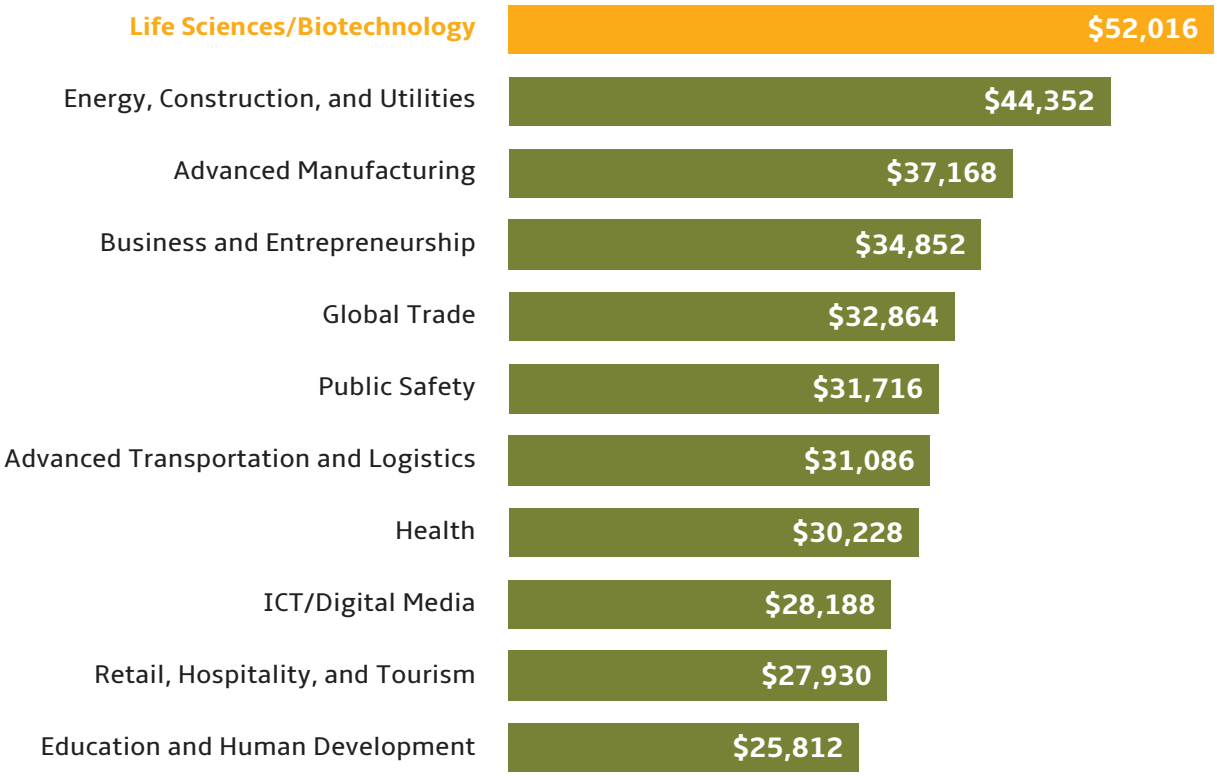


Exhibit 2. Median annual earnings for exiting students, 2017-18



Employment Demand Analysis

Nine life sciences/biotech occupations account for 33,720 jobs in Los Angeles County. Combined they have 3,107 projected annual openings (new + replacement jobs). The largest occupation, in number of 2019 jobs, is inspectors, testers, sorters, samplers, and weighers. This occupation is projected to have the most annual job openings, 1,647.

Exhibit 3. Occupational employment, annual openings, and wages

Occupation (SOC Code)	2019 Jobs	Average Annual Openings	Entry-Level 25th Percentile Hourly Earnings	Median 50th Percentile Hourly Earnings	Experienced 75th Percentile Hourly Earnings
Clinical Laboratory Technologists and Technicians (29-2018)	8,563	561	$19	$26	$40
Medical Equipment Repairers (49-9062)	1,565	149	$19	$27	$37
Life, Physical, and Social Science Technicians, All Other (19-4099)	2,361	273	$19	$26	$32
Biological Technicians (19-4021)	1,662	181	$18	$23	$29
Chemical Equipment Operators and Tenders (51-9011)	820	78	$18	$23	$28
Chemical Technicians (19-4031)	1,374	121	$17	$23	$32
Agricultural and Food Science Technicians (19-4011)	536	62	$15	$18	$25
Inspectors, Testers, Sorters, Samplers, and Weighers (51-9061)	16,464	1,647	$14	$19	$26
Chemical Plant and System Operators (51-8091)	375	34	$13	$16	$20

$15.04/hour Living Wage

Life Sciences/Biotech Occupations

Job Posting Finding

Quality control and assurance features very highly among advertised job titles for the nine life sciences/biotech occupations. Quality control and assurance roles include technician, associate, inspector, analyst, coordinator, and specialist.

A search of online job postings shows 6,356 postings related to this group of occupations in 2020 in Los Angeles County. The top five job titles for life sciences/biotech occupations were listed in 991 postings. The job title that occurred most frequently, quality assurance specialist, appeared in nearly 250 postings.

Exhibit 4. Top job titles in job postings

Job Title	Job Postings
Quality Assurance Specialist	245
Quality Inspector	216
Quality Control Inspector	201
Quality Assurance Technician	191
Quality Control Technician	138

In Los Angeles County, employers who posted the most ads for life sciences/biotech occupations were Anthem Blue Cross, University of California, and Prime Healthcare Services.

Exhibit 5. Top employers in job postings

Employer	Job Postings
Anthem Blue Cross	72
University Of California	68
Prime Healthcare Services	53
Laboratory Corporation of America	50
Integrated Resources Incorporated	50

Life Sciences/Biotech Occupations

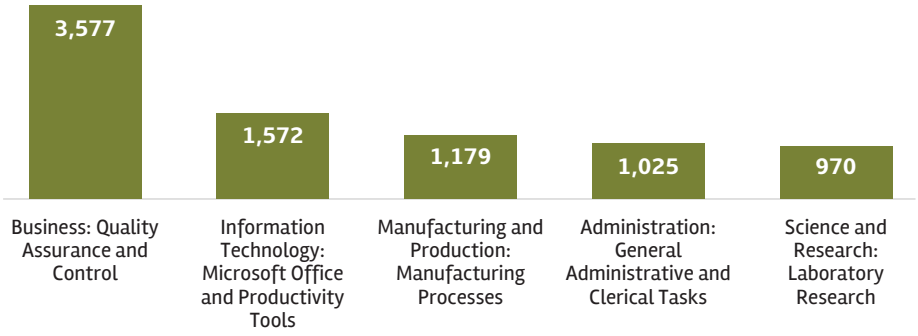
Local area job postings show how employers of the life sciences/biotech occupations are grouped by industry. In Los Angeles County, general medical and surgical hospitals posted the most job ads, a total of 221, followed by colleges, universities, and professional schools (88 job ads) and direct health and medical insurance carriers (81 job ads).

Exhibit 6. Top industries in job postings

Industry	Job Postings
General Medical and Surgical Hospitals	221
Colleges, Universities, and Professional Schools	88
Direct Health and Medical Insurance Carriers	81
Pharmaceutical Preparation Manufacturing	73
Research and Development in Biotechnology	68

One way to determine how in-demand skills coalesce across occupations and industries is to look at skill clusters which can offer a broader picture of employer needs. The skill cluster areas for life sciences/biotech occupations is varied across business, information technology, manufacturing and production, administration, and science and research.

Exhibit 7. In-demand skill clusters



Education & Training Supply Analysis

In Los Angeles County, seven community colleges and one proprietary school/other training provider offer programs related to the life sciences/biotech occupations. In the 2019-20 academic year, community colleges conferred 93 awards, and in the 2018-19 academic year, proprietary schools and other training providers conferred five awards.

Exhibit 8. Total awards by academic year[3]

	2017	2018	2019
Community Colleges	88	90	93
Proprietary Schools & Other Training Providers	19	9	5

Exhibit 9. Education and training programs

Community Colleges	· Biotechnology and Biomedical Technology (TOP 0430.00) · Biomedical Instrumentation (TOP 0934.60) · Electron Microscopy (TOP 0934.70) · Chemical Technology (TOP 0954.00) · Laboratory Science Technology (TOP 0955.00)
Proprietary Schools and Training Providers	· Biomedical Technology/Technician (CIP 15.0401)

[3] Due to different data collection periods, the most recent three-year period of available data for community colleges is 2017-18 to 2019-20 while the three-year period for proprietary schools and other training providers is 2016-17 to 2018-19.

More About the Centers of Excellence

The Centers of Excellence (COE) for Labor Market Research deliver regional workforce research and technical expertise to California Community Colleges for program decision-making and resource-development. This information has proven valuable to colleges in beginning, revising, or updating economic development and Career Education (CE) programs, strengthening grant applications, assisting in the accreditation process, and in supporting strategic planning efforts.

The Centers of Excellence Initiative is funded in part by the Chancellor's Office, California Community Colleges, Economic and Workforce Development Program. The Centers aspire to be the leading source of regional workforce information and insight for California Community Colleges. More information about the Centers of Excellence is available at coeccc.net.

Prepared by:
Luke Meyer
Director, Los Angeles County Center of Excellence for Labor Marker Research
Hosted by Mt. San Antonio College
909-247-8510
lmeyer7@mtsac.edu

To download a copy of this, visit LA/Orange County under *Studies by Region* coeccc.net.

Sources

Emsi 2021.1, QCEW, non-QCEW, Self-Employed; Centers of Excellence Skill/Occupation Crosswalk; Burning Glass Technologies' Labor Insight Real-time Labor Market Information tool; CalPASS Plus/LaunchBoard; California Community Colleges Chancellor's Office Data Mart; Integrated Postsecondary Education Data System (IPEDS); Chancellor's Office Curriculum Inventory System (COCI).

Important Disclaimer

All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. This study examines the most recent data available at the time of the analysis; however, data sets are updated regularly and may not be consistent with previous reports. Efforts have been made to qualify and validate the accuracy of the data and the report findings; however, neither the Centers of Excellence for Labor Market Research (COE), COE host college/district, nor California Community Colleges Chancellor's Office are responsible for the applications or decisions made by individuals and/or organizations based on this study or its recommendations.

Please consider the environment before printing.
This document is designed for double-sided printing.

C·O·E
CENTERS OF EXCELLENCE FOR LABOR MARKET RESEARCH

CALIFORNIA COMMUNITY COLLEGES
LAOCRC
los angeles | orange county | regional consortium

POWERED BY
California Community Colleges

coeccc.net laocrc.org cccco.edu