FALL 2025

Life Sciences / Biotech

Los Angeles County Sector Profiles Project

Prepared by the Los Angeles Center of Excellence

POWERED BY

California Community Colleges

FOR LABOR MARKET RESEARCH

LOS ANGELES

A project supported by funding from the California Community Colleges Chancellor's Office Workforce and Economic Development Division

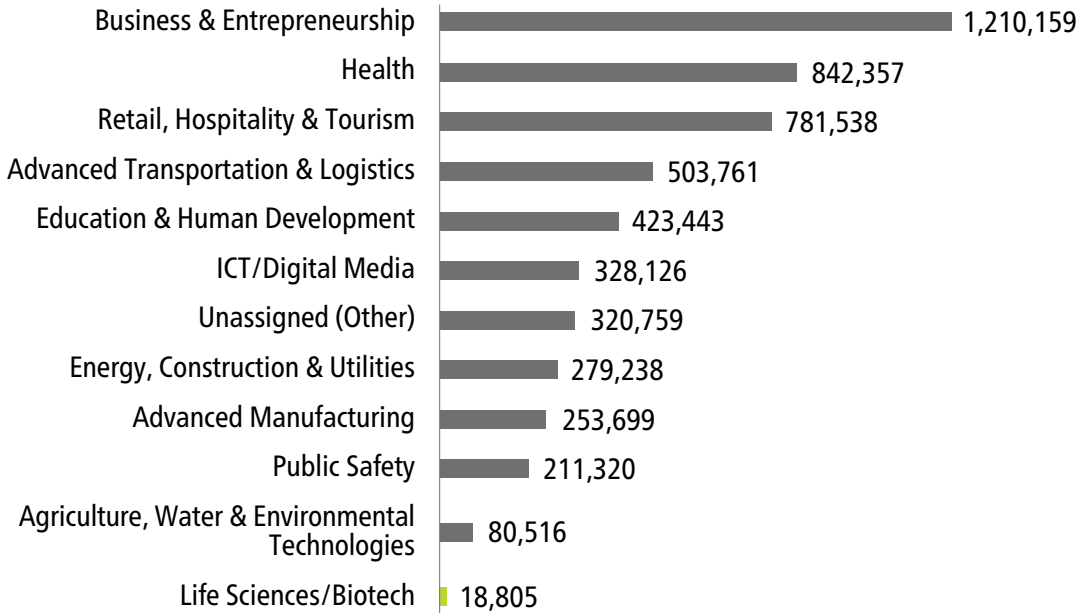
Introduction

To support the collaborative planning and development of career education (CE) programs and to inform regional investments in Los Angeles County, the Los Angeles Center of Excellence developed a series of sector profiles examining labor market and community college program data that identify opportunity areas for workforce development in the region.

These sector profiles highlight middle-skill occupations—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 overall workforce and support the economic vitality of the county and state.

The profiles bring attention to community college programs aligned with key middle-skill occupations and by analyzing the number of awards being conferred by postsecondary institutions, identify whether a shortage or oversupply of workers exist for these priority occupations in the sector.

2024 Sector Employment



Life Sciences / Biotech
IN L.A. COUNTY

18,805 **Jobs in 2024**	19,296 **Projected Jobs in 2029**
491 **New Jobs by 2029**	3% **Projected Job Growth, 2024-2029**
$101,911 **Median Annual Earnings, 2024**	0.4% **Of Los Angeles County Employment, 2024**

Regional Importance

The life sciences/biotech sector was selected as a priority sector by the Los Angeles Regional Consortium due to its economic growth potential, its concentration of well-paid jobs, and the county's extensive research and development infrastructure. Substantial crossover exists between the life sciences/biotech sector and the advanced manufacturing sector, which suggests employment in life sciences/biotech may be underrepresented. According to a 2025 Biocom California report, 81,692 life sciences workers were employed in the county in 2024, and the county's largest life sciences subsectors in terms of employment were research and testing with 35,222 workers, biopharma with 15,380 workers, and medical devices and equipment with 14,235 workers. Leading research institutions that contribute to employment in the county include Altasciences, Beckman Research Institute of City of Hope, Caltech, Cedars-Sinai Medical Center, Children's Hospital of Los Angeles, the Lundquist Institute, UCLA, and the University of Southern California.

Source:

- Biocom California, "2025 Life Science Economic Impact Report," Biocom California, 2025, https://www2.biocom.org/l/54352/2025-06-26/n6hmrm/54352/1750947700ZrzgIiLo/2025_Biocom_California_EIR_Databook.pdf.

L.A. Jobs First:

"The Los Angeles County Regional Report," which is part of the Governor's "California Jobs First" initiative, identifies economic priorities for the region. The report sets forth three reasons for the selection of bioscience as a target sector, noting its job growth as an emerging industry in the county, average wages that are almost 20% higher than the county average, and the sector's ability to capitalize on currently competitive clusters. The report also describes barriers to growth that include shortages in terms of "access to talent, unifying industry vision and public awareness, and public incentives to attract new and expanding businesses." The Los Angeles Collaborative's "Bioscience Activation Plan" identifies next steps that include expanding incubators, accelerators, and other programs as well as developing education pathways by partnering with local community colleges and intermediaries to provide capacity to support standardization of certification for manufacturing operators and other related efforts.

Sources:

- California Jobs First, "Los Angeles County Regional Report, Part 2," California Jobs First, September 2024, https://24053461.fs1.hubspotusercontent-na1.net/hubfs/24053461/LA%20County%20CJF%20Regional%20Report%E2%80%93Part%202_093024.pdf.
- L.A. Regional Collaborative, "Bioscience Activation Plan," June 30, 2025, https://24053461.fs1.hubspotusercontent-na2.net/hubfs/24053461/Activation%20Plans/Bioscience_Activation%20Plan.pdf.

Top Occupations

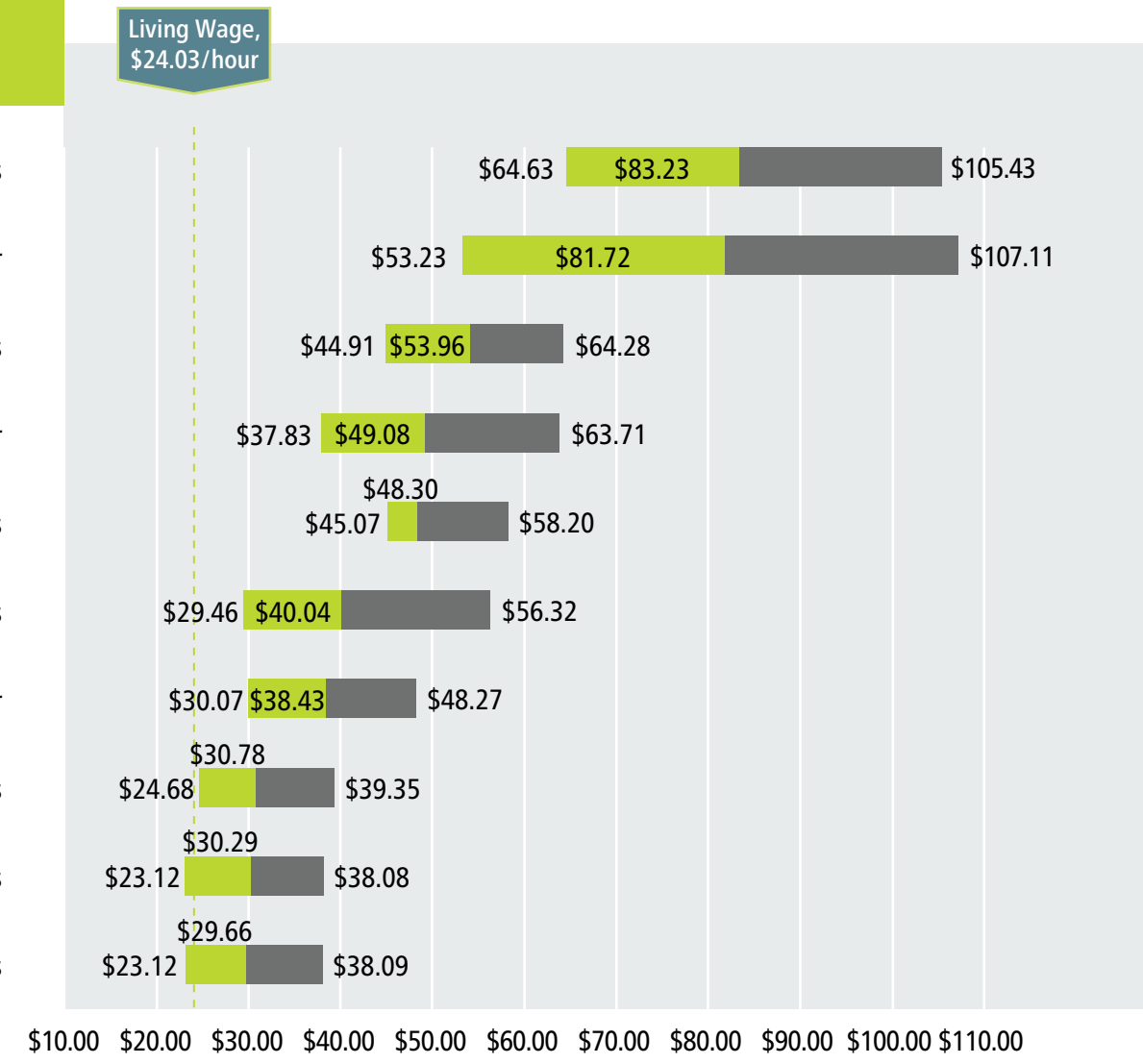
By applying specific criteria to an analysis of employment in the sector, the L.A. COE identified the top 10 occupations in the sector in the county.

- Middle-skill and above-middle-skill occupations were included to highlight jobs aligned with community college training.
- To bring attention to jobs that are in demand by employers, only occupations with more than 15 annual openings in the county were selected.
- Finally, to underscore the importance of connecting students with job opportunities that offer sustainable wages, occupations that pay above the region's living wage of $24.03 were chosen for inclusion. However, it is important to note that two of the top occupations in the sector have entry-level wages that fall below the region's living wage threshold.

Occupation (SOC Code)	2024 Jobs	2029 Jobs	5-Year % Change	Annual Openings	Entry-Level Education
Clinical Laboratory Technologists and Technicians (29-2018)	7,632	7,802	2%	523	Bachelor's degree
Life, Physical, and Social Science Technicians, All Other (19-4099)	2,342	2,406	3%	308	Associate degree
Biological Technicians (19-4021)	1,410	1,476	5%	177	Bachelor's degree
Natural Sciences Managers (11-9121)	1,924	1,979	3%	154	Bachelor's degree
Medical Equipment Repairers (49-9062)	1,468	1,506	3%	132	Associate degree
Biological Scientists, All Other (19-1029)	1,601	1,633	2%	127	Bachelor's degree
Microbiologists (19-1022)	482	490	2%	38	Bachelor's degree
Bioengineers and Biomedical Engineers (17-2031)	496	488	(2%)	30	Bachelor's degree
Zoologists and Wildlife Biologists (19-1023)	214	229	7%	19	Bachelor's degree
Life Scientists, All Other (19-1099)	356	362	2%	18	Bachelor's degree

Note: Occupations are grouped by sector according to the occupational titles and codes assigned by the Bureau of Labor Statistics' Standard Occupational Classification (SOC) system.

Hourly Wages



Note: The hourly wage ranges include the 25th percentile (entry-level), median, and 75th percentile (experienced) hourly earnings for workers employed in these occupations Los Angeles County.

Job Postings

Job postings can provide insights into workforce trends and employer hiring preferences. Analysis can reveal which competencies and skills employers most value for new hires, areas in which employers are hiring more aggressively than others, and changes in demand for certain types of workers or specific skillsets.

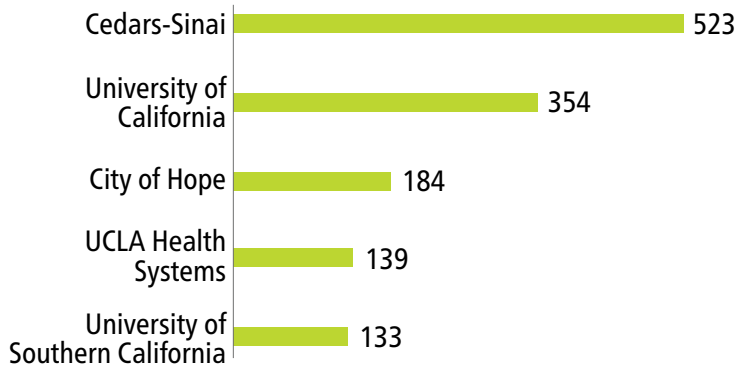
Earnings

Occupational Title	Number of Job Postings	Median Annual Earnings
Clinical Laboratory Technologists and Technicians	2,608	$66,816
Natural Sciences Managers	1,533	$91,392
Biological Scientists, All Other	662	$85,248
Life, Physical, and Social Science Technicians, All Other	242	$84,736
Medical Equipment Repairers	170	$72,960
Microbiologists	126	$79,616
Bioengineers and Biomedical Engineers	93	$117,504
Zoologists and Wildlife Biologists	74	$61,440
Biological Technicians	54	$47,616
Life Scientists, All Other	0	N/A

In-Demand Skills

Specialized Skills	Soft Skills	Software and Technical Skills
• Biology • Medical Laboratory • Clinical Research • Clinical Laboratory Science • Laboratory Equipment	• Research • Communication • Quality Control • Management • Operations	• Microsoft Office (Excel, Outlook, PowerPoint, Word) • Spreadsheets • R (Programming Language) • Python (Programming Language) • Laboratory Information Management Systems

Top Employers

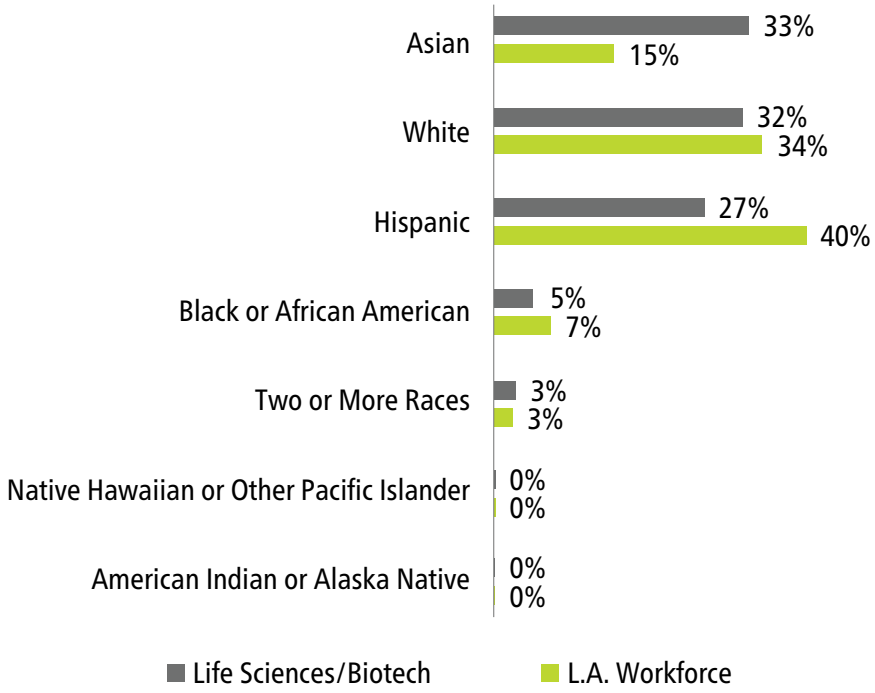


Note: Job posting data was analyzed for the top 10 middle-skill occupations in Los Angeles County from August 1, 2024 to July 31, 2025. Postings are limited to in-state employers and exclude staffing companies.

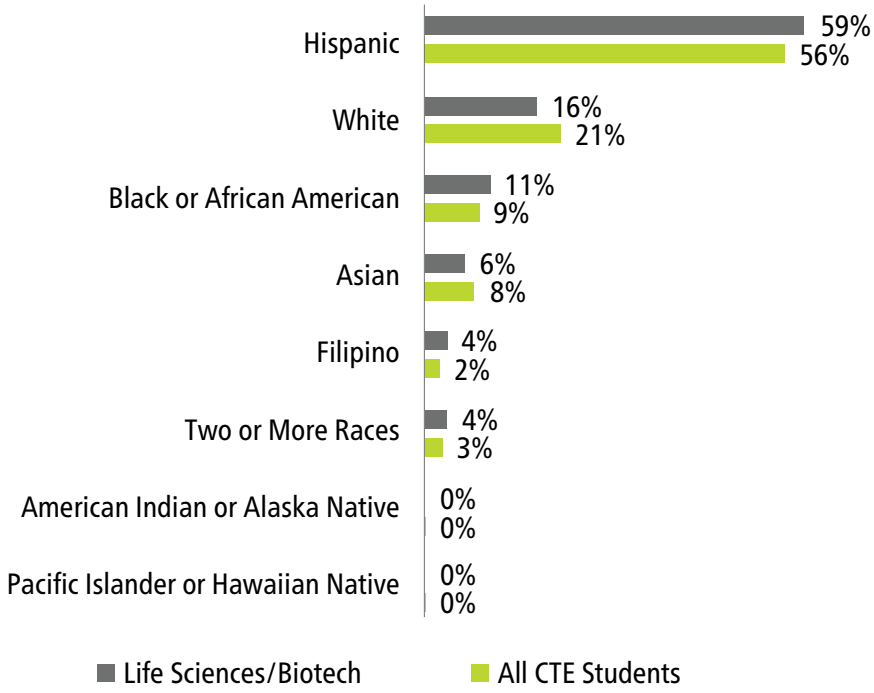
Workforce & Student Demographics

Due to the diversity of their student populations, community colleges play an important role in actively addressing equity gaps and disparities in the labor market while encouraging access to in-demand, well-paid career opportunities for students. Examining workforce race and ethnicity alongside student race and ethnicity can be useful for assessing whether students from diverse backgrounds are equitably transitioning into the workforce and securing opportunities that align with their education. This type of data analysis can assist with identifying barriers to employment or advancement for certain groups and can highlight employment areas that might benefit from promoting inclusive hiring practices.

Workforce Race & Ethnicity



Student Race & Ethnicity



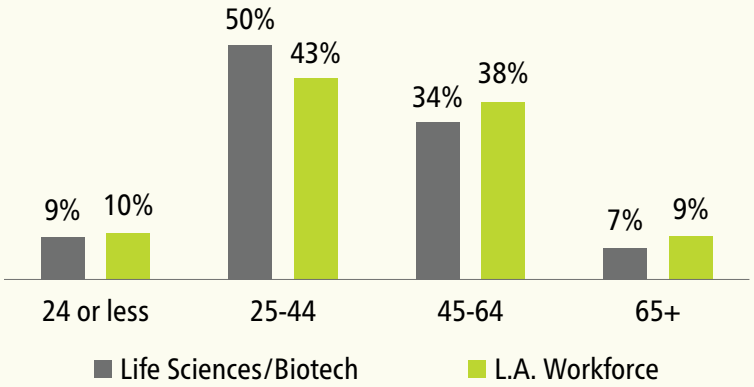
Note: For student data, "All Masked Values," "Unknown," and "Multiple Values Reported" are not included in the above charts. Data shown is from the 2023-24 academic year.

Examining demographics can lend insights into barriers to employment and assist with addressing impending workforce shortages or calibrating institutional allocation of resources.

The L.A. COE recommends three strategies to address equity gaps for community colleges:

- Collaborate with employers to promote diversity in priority jobs and boost interest among underrepresented groups for these roles.
- Develop targeted recruitment and retention strategies for priority programs with significantly underrepresented groups.
- Focus on closing equity gaps in programs that also have existing disparities in high-demand, well-paid jobs.

Workforce Age



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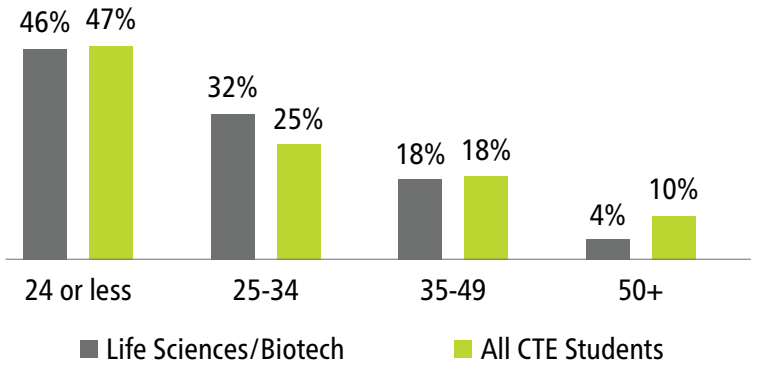
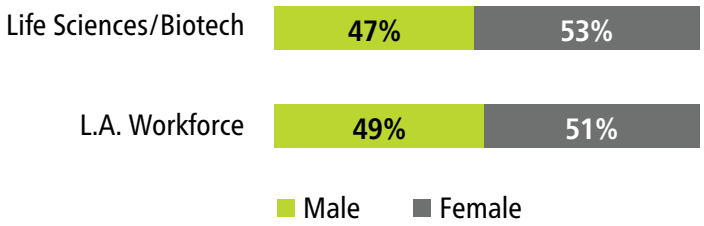
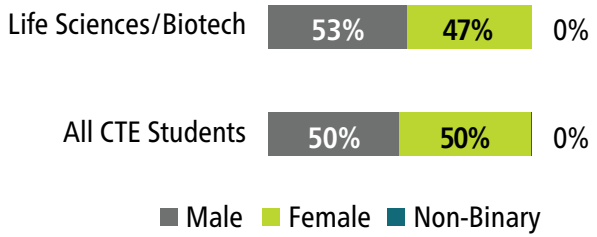
Student Age



Workforce Gender



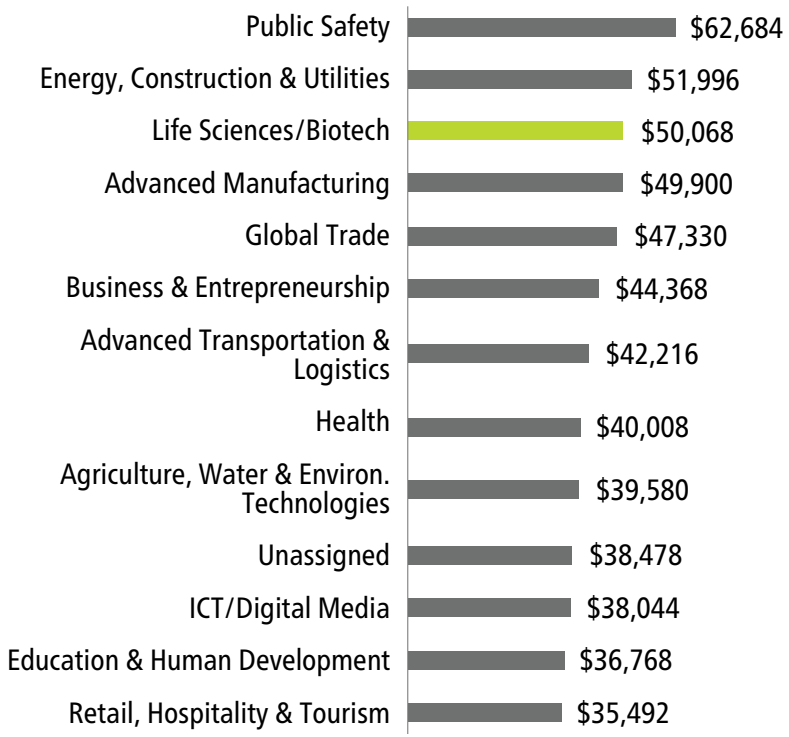
Student Gender



Student Outcomes

Tracking Strong Workforce Program outcomes is critical for evaluating whether regional community colleges are effectively preparing students for in-demand, well-paid jobs. This type of data-driven analysis can assist colleges in assessing whether students are successfully completing programs, securing employment related to their field of study, and increasing their earnings as they transition into the workforce.

Median annual earnings for exiting students, 2022-23



Strong Workforce Program Metrics

	2023-24	2022-23	2022-23	2021-22
Sector	Number of SWP Students	Median Change in Earnings	Percent Earning a Living Wage	Percent with a Job Related to Field of Study
ICT/Digital Media	60,820	29%	34%	68%
Business & Entrepreneurship	59,779	23%	42%	73%
Public Safety	38,218	26%	59%	54%
Health	36,256	38%	35%	83%
Education & Human Development	30,660	32%	27%	76%
Unassigned	14,883	30%	31%	74%
Energy, Construction & Utilities	14,621	35%	51%	77%
Retail, Hospitality & Tourism	11,234	32%	30%	66%
Advanced Manufacturing	9,945	40%	49%	81%
Advanced Transportation & Logistics	7,075	50%	37%	80%
Agriculture, Water & Environmental Technologies	3,641	39%	34%	67%
Global Trade	1,439	25%	48%	59%
Life Sciences/Biotech	**376**	**93%**	**47%**	**N/A**

Note: SWP metrics were the most recent year available.

Program Inventory

Analysis of academic offerings and the average number of awards conferred by community colleges in the county can be used by administrators for strategic planning to address program gaps to meet regional workforce needs, to make informed decisions about resource allocations, and to ensure students have access to programs that lead to promising career outcomes.

Program Awards by Community College

Community College	3-Year Average
Cerritos	-
Citrus	14
Compton	0
East LA	5
El Camino	-
Glendale	9
LA City	-
LA Harbor	-
LA Mission	42
LA Pierce	2
LA Southwest	-
LA Trade-Tech	11
LA Valley	20
Long Beach	-
Mt San Antonio	3
Pasadena	29
Rio Hondo	-
Santa Monica	-
West LA	5
TOTAL	**140**

Program Awards by Taxonomy of Programs (TOP) Code

TOP	Program	3-Year Average
0430.00	Biotechnology and Biomedical Technology	110
0934.60	Biomedical Instrumentation	20
0954.00	Chemical Technology	7
0955.00	Laboratory Science Technology	3
	TOTAL	**140**

The above program inventory provides awards data by TOP code and features a three-year average for the academic years 2021-22 to 2023-24.

TOP codes without existing programs are included below to highlight potential opportunities for program development in the sector.

TOP Codes without Existing Programs

TOP	Program
0934.70	Electron Microscopy

Demand & Supply Analysis

Occupations with similar knowledge areas, skills, and abilities (KSAs) have been grouped together to evaluate workforce demand and student supply in Los Angeles County. The table compares workforce demand as measured by annual job openings in the county with the supply of unduplicated students as measured by the number of awards conferred by community colleges and other postsecondary institutions.

Note: Due to variations in employer demand and awards conferred each year, it is important to take into consideration that the over- or under-supply of students may be an underestimation or overestimation.

Occupation	Demand (Annual Openings)	Community College Supply	Other Postsecondary Supply	Undersupply (-) / Oversupply (+)
Clinical Laboratory Technologists and Technicians (29-2018)	523	25	7	-491
Life, Physical, and Social Science Technicians, All Other (19-4099)	308	110	0	-198
Biological Technicians (19-4021) Medical Equipment Repairers (49-9062)	309	136	0	-173
Microbiologists (19-1022) Zoologists and Wildlife Biologists (19-1023)	57	2	0	-55
Bioengineers and Biomedical Engineers (17-2031)	30	0	0	-30
Biological Scientists, All Other (19-1029) Life Scientists, All Other (19-1099) Natural Sciences Managers (11-9121)	299	728	0	+429

Appendix: Sector Comparison

Sector	Number of Middle-Skill Occupations	Number of Degrees and Certificates Offered	Number of Los Angeles Community Colleges Issuing Awards
Advanced Manufacturing	46	254	16
Advanced Transportation & Logistics	41	176	14
Agriculture, Water & Environmental Technologies	19	83	9
Business & Entrepreneurship (and Global Trade)	45	510	19
Education & Human Development	6	215	19
Energy, Construction & Utilities	49	235	17
Health	40	318	19
ICT/Digital Media	25	808	19
Life Sciences/Biotech	4	49	11
Public Safety	21	122	19
Retail, Hospitality & Tourism	19	178	17
Unassigned (Other)	12	138	19

Data Dashboard

To further assist with regional planning and strategic investments, the L.A. COE has prepared an interactive online dashboard featuring labor market and community college program data.

Access the dashboard: https://bit.ly/2025LAdata

SCAN TO LEARN MORE

Data Sources:

- Lightcast 2025.3, QCEW, non-QCEW, Self-Employed
- Centers of Excellence Skill/Occupation Crosswalk
- California Community Colleges Chancellor's Office DataVista
- California Community Colleges Chancellor's Office Data Mart
- Integrated Postsecondary Education Data System (IPEDS)
- Chancellor's Office Curriculum Inventory System (COCI)

Accessibility:

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Important Disclaimer:

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